

PLACE ATTACHMENT AND VOLCANIC RISK PERCEPTION OF OLDER ADULTS IN ÑUBLE, CHILE¹

APEGO AL LUGAR Y PERCEPCIÓN DEL RIESGO VOLCÁNICO
EN PERSONAS MAYORES DE ÑUBLE, CHILE

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Chile presenta un alto grado de exposición y susceptibilidad ante escenarios de riesgo de desastre y es, además, uno de los cinco países con más volcanes activos a escala global. A lo anterior, se suma el sostenido aumento del envejecimiento poblacional, lo que convierte a las personas mayores en un grupo vulnerable ante potenciales desastres socio-naturales. Sustentado en lo anterior, el presente trabajo busca comprender la relación entre el apego al lugar y la percepción del riesgo volcánico de personas mayores residentes en la zona de exposición del complejo volcánico Nevados de Chillán, en el sur de Chile. Por medio de un diseño de caso cualitativo, de corte fenomenológico, se aplicaron 15 entrevistas semiestructuradas y un grupo focal, cuyo análisis se realizó bajo la teoría fundamentada. Los resultados señalan que las personas mayores presentan una baja percepción del riesgo volcánico, lo que conlleva i) minimización de los peligros naturales del entorno, ii) conocimiento informal basado en experiencias previas, y iii) desconocimiento de las características del riesgo natural y sus consecuencias negativas. Por otra parte, el apego al lugar y la vulnerabilidad social no solo actúan como obstaculizadores contextuales de la aceptación del riesgo volcánico, sino que también impactan en la falta de implicancia, adquisición y despliegue de capacidades de afrontamiento individuales y colectivas. Como conclusión, sostenemos la importancia de incorporar tanto el “envejecimiento en el lugar”, como el agenciamiento activo de la población adulta mayor en los procesos de planificación y gestión local del riesgo de desastre socio-natural.

Palabras clave: riesgo volcánico, percepción de riesgo, apego al lugar, vulnerabilidad social, personas mayores.

Chile has a high degree of exposure and susceptibility to disaster risk scenarios, and it is among the top five countries in the world regarding active volcanoes. Meanwhile, sustained population aging is making the older population vulnerable to potential socio-natural disasters. This article, using these concepts, seeks to understand the relationship between place attachment and the perception of volcanic risk among the older population, focusing on older adults residing in the hazard zone of the Nevados de Chillán volcanic complex in the Ñuble Region in southern Chile. Using a phenomenological qualitative case design, 15 semi-structured interviews and a focus group were applied, with the analysis carried out based on grounded theory. The results indicate that the older population has a low perception of volcanic risk, entailing i) the minimization of the surrounding natural hazards, ii) informal knowledge based on previous experiences, and iii) ignorance of the natural risk characteristics and their negative consequences. On the other hand, it is seen that place attachment and social vulnerability act not only as contextual barriers to accepting the volcanic risk but also lead to a lack of engagement, acquisition, and deployment of individual and collective coping mechanisms. In conclusion, the authors outline the importance of including “aging in place” and the active agency of the older population in socio-natural disaster risk planning and local management processes.

Keywords: volcanic risk, risk perception, place attachment, social vulnerability, older people.

I INTRODUCTION

Natural disasters have become one of the main obstacles to development (UN Office for Disaster Risk Reduction [UNDRR], 2015). In 2019 alone, there were 317 global catastrophes, resulting in the death and/or disappearance of 11,497 people and an economic impact of over US\$146 billion (Swiss Re Institute, 2020).

Given the importance of climate change and the intensification of extreme events, the study of remote probability risks, such as volcanological ones, has been displaced (Favereau, Robledo & Bull, 2018). Since the turn of the century, more than 2,000 deaths from volcanic disasters have already been recorded, in addition to the exposure of approximately 800 million people living within a radius of 100 km from a volcano (Marín, Vergara-Pinto, Prado & Fariás, 2020). However, despite their high intermittency, the effects of volcanic eruptions can be long-lasting and become a sustained problem for human settlements (Davis, Ricci & Mitchell, 2005; Marín *et al.*, 2020).

Although exposure is a necessary condition, it is not enough to set up disaster risk scenarios, but rather the different root causes of vulnerability (Wisner, Blaikie, Cannon & Davis, 2004) need to be incorporated, such as i) poverty, ii) racial/class/ gender oppression, iii) chronic diseases and/or disabilities, iv) immigration status, and v) critical ages, such as childhood and older adulthood (Cutter, Boruff & Shirley, 2003). The latter lacks research, despite having a high susceptibility to natural hazards (Rodríguez, Donner & Trainor, 2018; Sandoval, Monsalves & Vejar, 2022; Sandoval & Cuadra, 2020)

Regarding places where risks are located, older people tend to manifest greater attachment, developing an "extensive interiority of the self" (Hidalgo & Hernández, 2001) and attaching great importance to the home, both in terms of daily security, and the memories that living there entail (Shenk, Kuwahara & Zablotzky, 2004). According to Aceros (2018), the concept of "aging in place" has highlighted the socio-physical dimension of space, contributing to the construction of autonomy, security, and well-being (Costa-Font, Elvira & Mascarilla-Miro, 2009).

However, complex relationships emerge from this experience, such as the development of attachment with structurally inadequate spaces and/or ones that are exposed to natural risks (Berroeta, Pinto de Carvalho, Di Masso & Ossul Vermehren, 2017), which negatively affect the perception and acceptance of risk (Kelman & Mather, 2008), hindering evacuation processes and/or the abandonment of homes during disasters (de Dominicis, Fornara, Cancellieri, Twigger-Ross & Bonaiuto, 2015).

In the case of communities displaced after volcanic disasters, Berroeta, Ramoneda, and Opazo (2015) reported a lower place attachment for the population resettled elsewhere (compared to their neighborhood of origin); a phenomenon reaffirmed

by Maldonado, Kronmüller, and Gutiérrez (2020). Along the same lines, Ruiz and Hernández (2014) analyzed socio-spatial links before and after underwater volcanic eruptions, concluding that feelings of identity loss could be linked to place attachment.

Based on the above, this article seeks to understand the relationship between place attachment and volcanic risk perception among the older residents in Ñuble, Chile (Figure 1). The different facilitating/hindering characteristics of the perception of volcanic risk will be analyzed, considering vulnerability and place attachment. In terms of relevance, although the relationship between perceived risk and place attachment in the general population has been researched, studies on older people are scarce. It should also be mentioned that Chile has an accelerated population aging (National Institute of Statistics [INE], 2020) and is home to about 10% of the world's most active volcanoes (Chilean National Geology and Mining Service [SERNAGEOMIN], 2020a).

II CONCEPTUAL FRAMEWORK

One of the underlying factors of disaster vulnerability is the "perception of risk" (hereinafter PR), understood as the dispositional judgments about the probability, course, and mechanisms that affect decisions regarding a natural hazard (Dzialek, 2013). On the other hand, "risk acceptance" refers to the estimation of benefits, losses, and gains between options (Wachinger, Renn, Begg & Kuhlicke, 2013).

Although PR has been studied for a wide range of threats, few investigations focus on natural hazards, compared to those of the sanitary, safety, and anthropo-technological types (Dzialek, 2013).

According to Favereau *et al.* (2018), the following are found among the main factors that affect the perception and acceptance of volcanic risk: i) confidence, ii) experience, iii) knowledge, iv) religion, v) sense of community, vi) social vulnerability, and vii) citizen participation (Table 1). In summary, the volcanic risk assessment is influenced by different elements, which vary depending on the person, group, position of power, and place (Perry & Lindell, 2008; Rodríguez-VanGort & Novelo-Casanova, 2015).

Regarding "place attachment", there are varied perspectives at conceptual, methodological, and evaluative levels, which understand it as the "symbolic relationship of people towards a particular environment, manifested through culturally shared emotional and affective meanings, of a home that is physical and symbolic, simultaneously material and imaginative, multiscale, individual, public and political" (Pinto de Carvalho & Cornejo, 2018, p. 4).

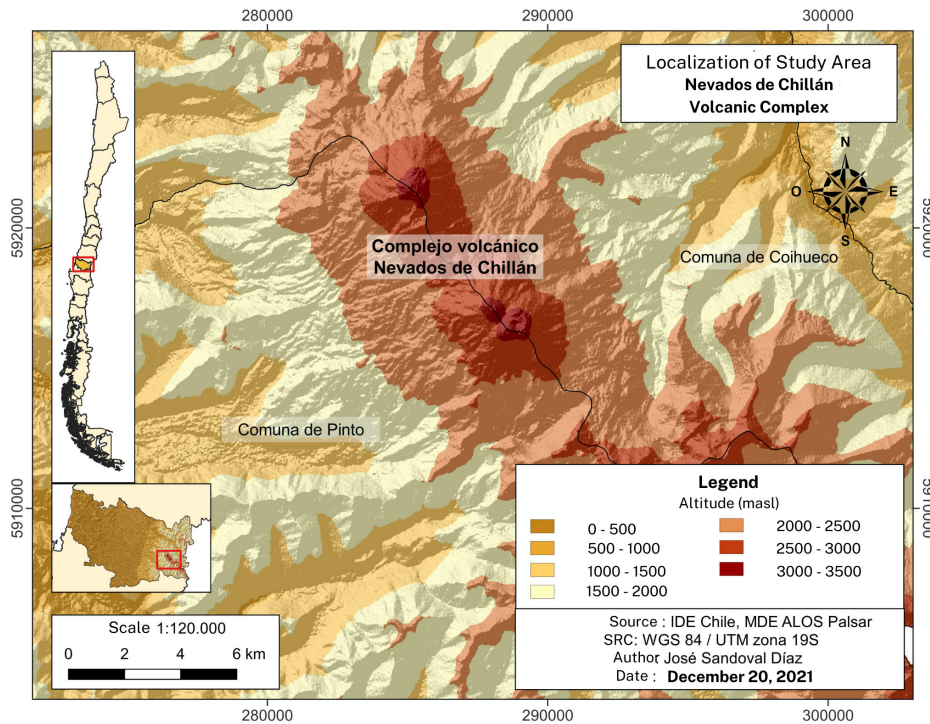


Figure 1. Location map of the case study. Source: Prepared by José Sandoval-Díaz

Factors	Definitions
Confidence	Internal confidence: People perceive themselves as self-effective and capable (or not) of acting appropriately in the face of a threat. External confidence: the trust or confidence people and communities have in scientists and/or local and government authorities.
Experience	Previous experiences of exposure to, suffering, and damage from previous disasters.
Formal knowledge	Formal information that the people and/or communities have regarding volcanic risk and emergency plans.
Religion	Beliefs about volcanic hazards and their impact on decisions and actions.
Sense of community	Feeling of belonging in a community where there are affective and cognitive ties, and shared common interests.
Social vulnerability	Levels of susceptibility and differentiated capacities among social groups to prevent, respond, and recover from a disaster.
Citizen participation	The collaborative process between the community and the authorities which strengthens their sense of self-efficacy and their trust in the authorities.

Table 1. Factors that influence the perception and acceptance of volcanic risk. Source: Preparation by Saron Monsalves-Peña using Favereau et al. (2018).

For Seamon (2014), “place attachment” emerges and develops from contextual everyday life, promoting the generation of a significant space of affection and interpersonal-community reciprocity, with the ensuing impact on socio-spatial links. Scannell and Gifford (2010) include the concept in the conglomerate of socio-spatial ties related to action, classifying it into three dimensions: i) personal, ii) process, and iii) place.

The “personal dimension” includes the following levels: i) individual (associated with experiences and biographical memory, contributes to the formation of socio-spatial meanings), and ii) group (as shared meanings and ties). The “processes dimension” considers three psychological links: i) affective: positive and/or unsettling-traumatic link; ii) cognitive: co-construction of meanings and spatial senses through memory and ways of thinking; and iii) behavioral: the decision to stay and/or recover settlements.

“Place dimension” highlights physical-spatial aspects of the environment, such as material and environmental goods, through the interactional links that these facilitate and/or have (Berroeta *et al.*, 2015).

To sum up, the development of place attachment is a daily experience, which is beneficial in multiple aspects, such as quality of life, physical-mental health, satisfaction with the environment, and interpersonal relationships. It also promotes community participation, involvement, protection, and self-regulation (Anton & Lawrence, 2014). However, evidence has also been found that these attachment ties can negatively impact the lack of preparation for risk situations (Mishra, Mazumdar & Suar, 2010). Likewise, when a threat is imminent, a greater attachment to the place tends to mean that people do not leave and/or accept the risks involved (Anton & Lawrence, 2014).

III. CASE STUDY

The Commune of Pinto

Pinto is a commune located 30 km from the regional capital of Chillán. Regarding population aging, the commune has 10,827 inhabitants, 14.8% of which are elderly, and has an Older Adults Index (IAM, in Spanish)⁶ of 81.67, way above the national average of 56.85 (INE, 2017). As for social indicators, it has an income poverty rate of 25.06 and a multidimensional⁷ rate of 37.13; values that are above the regional and national average (Ministry of Social Development and Family, 2018). In



Figure 2. Nevados de Chillán volcanic complex. Source: Files of Saron Monsalves-Peña.

⁶ The Older Adult Index (IAM, in Spanish) is defined as the number of older adults per hundred under 15s. This is the ratio between the population aged 60 and over and the one under 15 years of age.

⁷ The Multidimensional Poverty Index (IPM, in Spanish) identifies multiple deficiencies at household and individual levels in the areas of health, education, and living standards.

N°	Gender	Age	Marital Status	Schooling	Place of Residence	Years of Residence	Housing	Members of the Household	Community Participation
No. 1	Man	73	Married	Seconding Schooling	Los Llleuques	22	Own	3	Seniors club Rayuela club ¹
No. 2	Woman	80	Married	3rd Year of University	Recinto	13	Own	2	Seniors club Craft workshop
No. 3	Man	85	Married	Finished university	El Rosal	24	Own	2	Seniors club Neighborhood Group
No. 4	Woman	83	Widow	Year 12	El Rosal	20	Own	2	Seniors club
No. 5	Woman	75	Widow	Year 11	El Rosal	75	Own	2	Seniors club
No. 6	Woman	68	Married	Year 12	Los Llleuques	43	Own	2	Seniors club
No. 7	Man	82	Widower	Year 8	Recinto	50	Own	1	Seniors club
No. 8	Woman	81	Single	Finished university	El Rosal	13	Own	1	Seniors club
No. 9	Woman	65	Married	Finished university	Pinto	40	Own	2	Seniors club Workshop Church
No. 10	Woman	86	Married	Year 12	El Rosal	24	Own	2	Seniors club
No. 11	Woman	74	Widow	Year 4	Recinto	37	Own	2	Seniors club
No. 12	Man	79	Married	Year 12	El Valle	33	Own	2	Seniors club
No. 13	Woman	74	Widow	Finished university	Pinto	50	Own	1	Seniors club
No. 14	Woman	75	Married	Year 8	El Valle	67	Own	2	Seniors club
No. 15	Man	71	Divorced	Technical Studies	El Rosal	8	Own	2	Seniors club

Table 2. Characterization of the study participants. Source: Preparation by Viviana Vejar-Valles.

¹ Rayuela is a typical Chilean sport, where the players throw either coins or a disc toward a line made on the ground or a wooden container with mud, where the winner is the one closest to the line.

geographical terms, the western sector of the intermediate depression is a suitable place for crops and livestock, while the east is characterized by its mountainous and wooded geography, perfect as a great tourist attraction (Figure 2) thanks to its Hot Springs and the Nevados de Chillán Volcanic Complex [CVNCh] (Municipality of Pinto, 2015).

The volcanic complex has seventeen emission centers, spread over two sub-complexes (Cerro Blanco and Las Termas). At a height of 3,216 m.a.s.l., its basal area is 14 km², and its estimated volume is 148 km³. Its last major eruption occurred in 1973 (Dixon *et al.*, 2010). Its main hazards are detritus flows, lava flows, and lahars; the latter being the most significant due to its proximity to the channels (Orozco, Jara & Bertin, 2016). Since April 5th, 2018, an “orange technical alert” has

been decreed by the National Volcanic Monitoring Network (RNVV, in Spanish), given the important eruptive pulse seen, which registered its greatest magnitude (height of 3,300 meters) at the start of 2020 (SERNAGEOMIN, 2020b).

IV. METHODOLOGY

Design and participants

The research uses a qualitative case study of a phenomenological nature aimed at producing the meanings of situated experiences and practices (Coller, 2005). 15 older people took part (Table 2), selected “according to the relevance of the cases, rather than by their representativeness”

(Flick, 2007, p. 80). The sample inclusion criteria were: i) age equal to or greater than 65, ii) residing in Pinto, iii) residential time equal to or greater than eight years, and iv) residing in the exposure area (in this case, the SERNAGEOMIN hazard map was used (Figure 3), which points out that the communes of Pinto and El Rosal are sensitive to secondary lahars, and Recinto and Los Lleuques, to volcanic eruptions.

Procedures: production and analysis

The fieldwork was carried out between July and October 2019. Regarding the data, the *semi-structured interviews* took 60 minutes on average. Their thematic script addressed: i) volcanic risk assessment, ii) affective ties with the place and iii) previous experiences with disasters. Subsequently, a *focus group* with ten participants was set up. This began with reading a journalistic piece about the local volcanic pulses.

After the complete transcription of the data, the grounded theory coding process was used, validating the coding through cross-auditing between researchers. Finally, to organize and support the coding process, the ATLAS ti. V7 Software was used.

IV RESULTS

The results are divided into the following two thematic lines: i) perception of risk, and ii) place attachment. Each narrative result is accompanied by anonymous textual quotations. Finally, an integrated outline of both lines is presented.

Perception of volcanic risk

The low perception of volcanic risk noticed throughout the study is manifested in the limited importance assigned to natural risks, where, in addition, a physicalist, contingent, and uncontrollable conception of socio-natural disasters prevails. In addition, the direct and continuous neighborhood experience with the Volcanic Complex, and its constant, but “harmless” eruptive pulses, have not had disastrous consequences so far. This subjective experiential immunity to risk has led not only to ignorance about the extent of the surrounding dangers, but also to limited community involvement in building comprehensive risk management plans, impairing the acquisition and development of coping skills regarding the response, emergency, and subsequent recovery. The following extracts from the opinions collected express this:

“I’m not afraid, because volcanoes are things of nature”

“I get up and I don’t even think about the volcano, I don’t even look over there, it’s not my concern”

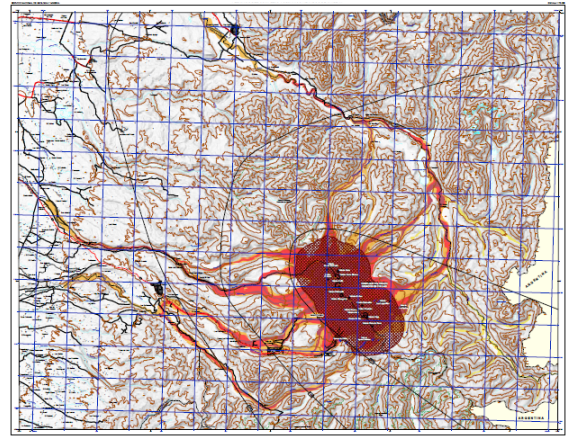


Figure 3. CVNCH hazard map. Source: Geological Chart of Chile, Environmental Geology Series 28: 34 pg.1 map scale 1:75.000 (Orozco et al., 2016).

“I would just stay in my little house. I’ve seen that everyone talks about the volcano and everything... but running away, that’s too much”

Added to this, on one hand, is the lack of formal knowledge about volcanic risks, which is (over) compensated by the vast direct experience acquired, as informal knowledge; and, on the other, the perception of institutional shortcomings regarding communicational management of communal emergency plans, either due to lack of interest, coverage problems and/or issues related to the gap in digital literacy:

“No one has told us about them, and I think there are very few who know about them [...] they should get us together and show us all the escape routes, but they don’t”

“I don’t use a phone, WhatsApp, or a computer, only the TV and I keep myself informed using the radio. I don’t like modernity.”

These communication problems are accompanied by a lack of trust in authorities and technical institutions, due to the perception of there being few spaces for participation focused on effective local risk management:

“The authority needs a constant agreement with the citizens, with their neighbors, ... they are the ones who handle the evacuation measures in case of an eruption, and those measures have to be given in advance [...] here we are in diapers”

However, this group perceives and accepts other daily risks, such as roads in disrepair, which, in an emergency, could complicate an evacuation:

"I'm old and I have to leave on foot ... and the road is in a bad way"

Another influential element behind the low PR is social vulnerability, which increases the susceptibility to damage in the older population. As a first condition, access barriers and inequalities in the treatment they receive at the institutional level are identified, exemplified by the lack of specialists in local health services. This socio-demographic vulnerability is counterproductive in the face of potential risk scenarios, since health access constitutes a determinant for reducing disaster risk, even more so in this population. This is revealed by the following comment:

"...I would still be waiting for them to attend me, because at the hospital, heck, they take an hour to give you an appointment, how many people are there on TV who have died ... And since then, I haven't done any more tests, why? Because I gave up waiting for an answer."

Finally, although the old-age pension is identified as the main economic resource, it is perceived as insufficient to cover the basic needs of food, transport, and health. To generate extra income, older people must take sporadic jobs (selling products and craft workshops) that are harmed by what they call "local disaster sensationalism", which affects not just local tourism but also the possibility of earning extra money to mitigate their economic vulnerability: "... the TV overplays it..., they are deceiving people, that's the truth; because it doesn't exist, ... they are cornering people".

The place

Another conditioning element, according to the results, is place attachment, where four dimensions are identified: i) personal, ii) behavioral, iii) physical, and iv) social. The first dimension is linked to personal experiences and memories, associated with the idea of the effort involved in getting their homes and the family-community *memories* there: "I suffered a lot, moving from house to house, so I value this land so much ... it's mine, it had to sacrifice a lot".

Secondly, the behavioral dimension is linked to the insistence on continuing to live in a risk area, despite the acceptance of a potential disaster. This is accentuated if we consider the stage of the life cycle these people find themselves in: living day to day and, therefore, avoiding medium and long-term plans: "Leave! No, I'd die first...

the volcano can explode, but I'm not moving from my house."

The physical dimension is described as those topographic space features (structure of the house, yard, transport access, etc.), signified as familiar, safe spaces and, above all, of high personal-communal consequence. Likewise, the landscape features of the inhabited environment stand out, in terms of tranquility and relative autonomy, compared to the regional capital. This landscape valuation of the place is expressed in the appreciation and valuation of the natural environment's resources, which foster a relationship of well-being between older people and the built environment, where the aesthetic beauty of the landscape, the climate, the vegetation, and, especially, the bond with pets and livestock is highlighted: "The tranquility... because I would never go back... even if they gave me an apartment. ...I would be like a caged bird... here I have all the freedom in the world."

The social dimension is manifested not just in community and family ties, but also through the sense of belonging and identity of those who were "born and raised here", highlighting the reciprocity and relational familiarity that the social support of a familiar environment promotes:

"I feel good. Although I live alone, I have many friends ... friends who are practically family, they are always looking out for me".

"I was born and raised here... if they came to get me, and took me somewhere else, I wouldn't get used to it."

Although the different socio-spatial dimensions identified produce greater well-being, it is in potential disaster risk situations where place attachment becomes maladaptive, making invisible not only the territorial exposure of volcanic hazards but also the relevance of having local risk management plans. In turn, this sustained permanence in place hinders the ability to adjust to other contexts or living conditions, in the potential scenario of a displacement process and/or post-disaster reconstruction:

"My brothers tell me: "Hey, how are you doing with the volcano? Go to Chillan." I tell them that I had no idea that the volcano was so angry... that things are going to happen with or without a warning."

"When you chat with neighbors, you realize that, if there's an eruption, you'll have to get out... what other choice is there."

"I would have to get to know new people, new places. It's so difficult to adapt at my age."

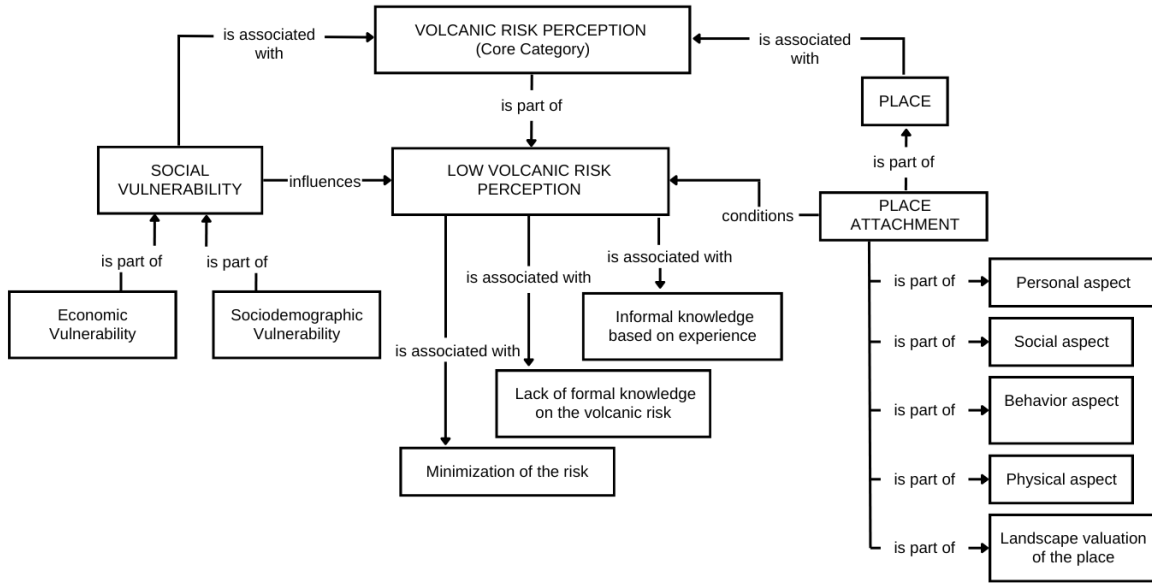


Figure 4. Integrated axial coding of the results. Source: Prepared by Saron Monsalves-Peña.

Synthesis of results

The volcanic PR (Figure 4) of older people is influenced both by i) *social vulnerability*, in terms of demographic susceptibility due to structural barriers to access and unequal treatment at a health and economic level, as well as by ii) positive evaluations of the personal, socio-spatial, and landscape dimensions of the “place” they inhabit. Although the literature reviewed highlights the positive relationship between “healthy aging” and place attachment, the latter, faced with a potential disaster risk scenario, becomes a negative determinant of the low perception and acceptance of volcanic risk. In dispositional terms, this entails a minimization of the surrounding dangers, associated with iii) direct experiential knowledge, where emergency and/or disaster situations have not been experienced, and iv) formal ignorance not just of the characteristics and types of volcanic hazards, but also regarding the acquisition and implication on individual coping strategies, as well as at household and institutional levels.

and achieve collective goals, as well as a strong identity of place, as an emotional space with symbolic ties that define the community “we” (Berroeta *et al.*, 2017; 2015; Maldonado *et al.*, 2020). This contributes to building autonomy, security, and physical and emotional well-being, a key to “aging in place” (Aceros, 2018). However, this plays a negative role in disaster risk situations, bypassing further still, the diminished perception and acceptance of volcanic risks (Kelman & Mather, 2008; Tobin & Whiteford, 2002).

In this way, it is possible to classify the different hindering factors of PR into three levels: structural, institutional, and personal.

Structural: (i) economic vulnerability, as the main measure of access to resources, (ii) limited trust of authorities and the media, (iii) scarce participatory and recognition spaces for the older population, (iv) generational gaps in access and technological use. *Institutional:* (v) inadequate training and communication in local risk management. *Personal:* (vi) subjective immunity to remote probability risks, and (vii) physicalist conception of disasters (Favereau *et al.*, 2018; Sandoval *et al.*, 2022).

VI DISCUSSION

In line with Williams and Vaske (2003), the case study has a marked dependence on place, both because of the landscape characteristics (and the built environment) to do activities

On the other hand, the way of life instituted between the place and the community permeates not only the senses of belonging and attachment but also the levels of personal and collective well-being. From the urban point of view, according to Sánchez (2015), experts agree on the design of social policies

and territorial planning focused on the aging-in-place process, identifying three core elements: i) the social space of opportunities to deploy skills, ii) the positive perception towards the environment, in terms of attachment, community identity, and housing satisfaction, and iii) the positive influence on physical and mental health, social connection, life satisfaction, and healthy aging (Corbin & Pangrazi, 2001).

Regarding the limitations of the study, although the flexible and comprehensive nature of the qualitative approach used is noteworthy, future studies must incorporate subjective and objective measures of the built environment (Sánchez, 2015), methodologically triangulating not only the properties linked to exposure and vulnerability through geographic information systems (GIS), but also proposing a better integration, operationalization, and evaluation of the concept of "aging in place" under disaster risk scenarios (Aceros, 2018).

To conclude, to improve local risk management, it is essential to strengthen not just information channels and content, but also the degree of involvement, participation, and recognition of abilities that the older population possesses. In terms of living, although this group must adapt to a series of physical, cognitive, and participatory changes and barriers, this does not imply the absence of the capacity of agency in risk situations (Arriagada, Vallejos, Quezada, Montecino & Torres, 2016; Ojeda & López, 2017; Sandoval et al., 2022). Consequently, the situated change of collective capacities such as memory, local experience, local knowledge, community ties, and organizational capacity, will contribute to giving greater intelligibility to the scientific-technical knowledge of experts and, most especially, to the strengthening of trust and social capital of the different organizations linked to local risk management (Paton, Smith, Daly & Johnston, 2008; Sandoval & Martínez, 2021).

VII CONCLUSIONS

This article has questioned the relationship between place attachment and the volcanic PR of the older population, an age group identified as vulnerable to disaster risk processes (Rodríguez et al., 2018; Sandoval & Cuadra, 2020). In this way, based on a case from central-southern Chile, from a qualitative phenomenological approach, the perspectives of older people faced with a natural risk were analyzed, revealing their perceptions about exposure, vulnerability, and the place they inhabit. As the main result, the role of place attachment stands out, as a negative determinant of the perception of volcanic risk, and the consequent hindrance on the effect and deployment of coping strategies (de Dominicis et al., 2015), added to the multiple negative barriers of social vulnerability's structural and age conditions (Cutter et al., 2003; Wisner et al., 2004).

From this perspective, even though the literature highlights the benefits of place attachment on the quality of life, physical-mental health, satisfaction with the environment, and interpersonal relationships (Anton and Lawrence, 2014), this work reaffirms its negative influence not only on the perception and acceptance of natural hazards (Kelman and Mather, 2008) but also on the involvement and preparation for potential disaster risk scenarios (Mishra and et al., 2010) and/or the potential abandonment of areas under an imminent emergency.

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