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A Study on The Chief of Village Expectation of Self - role in Disaster Prevention–A Case Study in ZhongShan District, Taipei

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Abstract. Strengthening disaster prevention, the grassroots unit absolutely cannot be careless, if can find the difficult point of disaster prevention operations, put forward a relative approach to the proposal, the power of disaster prevention to store in the grassroots units, to improve the resiliency of disasters. Based on the Role Theory and the in-depth interview method of purchasing quality research, this paper explores the expectation of the chief of village's self-playing role in the implementation of disaster prevention works and discusses the actions that can be implemented, and analyzes the expectations and actions of different types of chiefs. Then discuss its role model, the study found that the professional background, self-expectation, work execution and other factors that affect the implementation of disaster prevention works willingness, so put forward the implementation of disaster prevention works synergy model and extension of 5 implementation recommendations, looking forward to providing reference and follow-up research continues to implement, thereby improving the ability of grassroots units to implement disaster prevention.

1.Introduction

1.1Background and motivation

From 1980 to 2015, there were 8,866 disaster events recorded, with 4,283,767 deaths. The death toll from 23 major disasters is as high as 40%. According to this disaster, 78.2% of deaths were caused by disasters. The average annual economic loss was US$250-300 billion, and most of them occurred in developed countries (UNISDR, 2016). The impact of climate change, the frequency of extreme weather is increasing, and the intensity is getting bigger and bigger. (Figure1. the number of global disasters 1980-2016), coupled with the current development of land in Taiwan and the rapid development of urban and rural areas are becoming more frequent. The scale of the disaster has become more and larger, and the content of the disaster has become more complicated and complex, which seriously threatens the safety of the people and the whole society. However, a disaster management system that can function effectively and function properly is well-organized and a system with clear roles and division of labor, top-down support and funding, bottom-up cumulative operational experience and ability, continuous training and continuous updating and education, shared common understanding and consensus among residents Strengthening soft and hard-working facilities and recognizing the disaster environment in which they are located also enhances resilience to disasters. Therefore, if we explore the leading mode of operation of grassroots communities and

identify the difficulties in promoting disaster prevention, we look forward to finding out the usual prevention and disasters. The effective response, if it is used to improve its resilience, can reduce losses and shocks.

This paper selects Zhongshan District as the research site. It is a three-level administrative district developed in the early northern part of Taiwan. It covers an area of 13.68 km^2 and has a population of 231,068 (107,678 males and 123,390 females, male and female ratios is 4.66:5.34), divided into 42 village, the total family is 99,855 (Zhongshan District Office, 2017), and the population aging index is 179.88% higher than the average of Taipei City 158.72% (Department of Civil Affairs, Taipei City Government, 2017). After the city develops, it becomes a commercial and residential area, which's the most prosperous of Taipei City. In terms of the natural disaster potential, the Keelung River is runs through, and the middle area of the basin (administrative area) is a medium-high flooding potential area. The adjacent Shanchiao fault is only about 8 km, and there is potential debris flow torrent (Figure2. Introduction to the Zhongshan District Taipei), The buildings in Zhongshan District are densely populated and highly commercialized, but the proportion of old buildings is high (61,281 buildings in Zhongshan more than 30 years, accounting for 10.25% compared with Taipei City)(Taipei Department of Urban Development, 2017). The earthquake resistance coefficient of the building is insufficient and the soil liquefaction value is mostly high potential area (PL>15), and its disaster crisis is complex, which is suitable for studying urban disaster prevention.
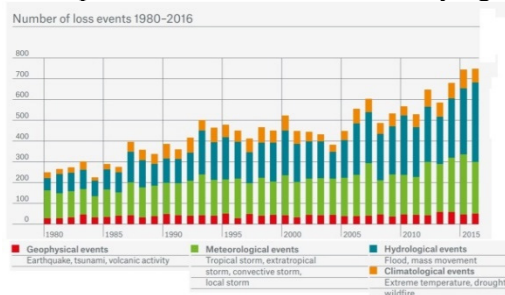

Figure1.The numbers of global disasters
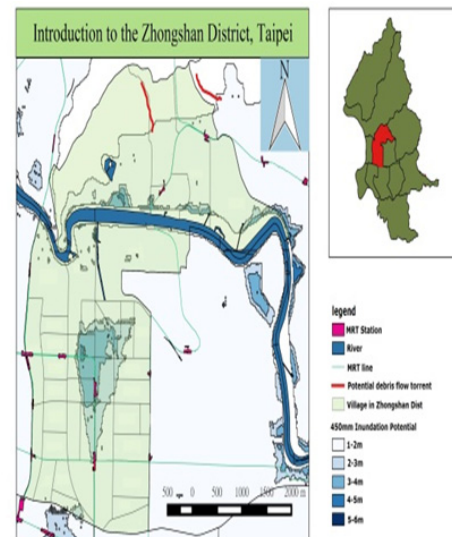(1980-2016)
Source:: Modify from (Munichre, 2017)

Figure2.Introduction to the Zhongshan District,
Taipei
Source: Consolidation (National Development
Council, 2015)

1.2Research purposes and values

1.2.1Studies include the role expectations of disaster prevention works, enhance the effectiveness of disaster prevention works
Enhance community resilience, and reduce the risk of exposure disasters, reduce losses and casualties during disasters are the key factors for disaster prevention. However, the community must be able to grasp the disaster risks faced, and even implement disaster reduction measures and maintenance work. The execution of the grassroots level is the key to the work. The current disaster prevention structure and work plan of Taiwan are reviewed. The disaster prevention works cannot fully exert the most basic disaster prevention function. However, chief of village is the most basic legal cadre under the Taiwan local autonomy system. He should perform community-related affairs and should play an important role in disaster prevention. If he can explore the role of chief in disaster prevention works, he can propose relative work promotes advice.

1.2.2Strengthening the relationship between the chief and the community disaster prevention chain, and improving the legal power
Each region has different architectural characteristics, population culture, and geographical environment differences. When faced with self-disaster prevention works, it is not universal to adopt a set of standards. If the above components are used, the grassroots units should promote the disaster prevention works belonging to their own communities. Therefore, this paper hopes to explore whether there should be only one set of standard processes or different differences in the implementation of disaster prevention works. The disaster prevention works of the living circle, so that it can be implemented and suitable for the people.

1.2.3The grassroots promotion unit for strengthening disaster prevention operations – "Village Chiefs"
Taiwan's current organization of disaster prevention agencies at all levels is based on top-down supervision and implementation assessment. Should disaster prevention agencies at all levels adopt cooperative relations rather than "individual issues, individual operations? Is village's current disaster prevention works only focused on education or hardware construction on basic paper? The sustainability of disaster prevention community operations is questionable? However, whether the legalization of grassroots disaster prevention organizations is based on the promotion of the disaster prevention communities and the establishment of disaster prevention grades, so that the disaster prevention organizations can promote the disaster prevention works with legal power, instead of automatically preventing disasters by residents, and whether the rule of law power can be formulated. Make disaster prevention works more effective? It is indeed worth exploring.

2.Literature review and Research purposes
This paper is based on the role of chief in disaster prevention works. Therefore, based on the Role Theory, it will explore the roles, expectations, fulfillment, and conflicts of the chiefs, promote the evolution of disaster prevention communities, and the related disaster prevention works in Taiwan. The literature is researched and analyzed, and the problems that are suitable for this paper are summarized.

2.1Definition and concept of Role Theory
Role Theory is activities that analyze and study social behavior from the perspective of the role of the researcher. It is about how their attitudes and behaviors are influenced by social positioning and expectations in society. It's a theory of social psychology (Sarbin, Allen, 1954). Role is defined in its so-called status, which refers to the social space occupied by individuals in the social system. There are many norms required for a status, including due diligence, entitlements, and even behaviors and attitudes. The norm is called the role (Solomon, Surprenant, Czepiel, and Gutman, 1985). It is the standard behavior that must be carried out in the role relationship model (Biddle, 1986), and the role will have behaviors that they think, and the behavior will change due to changes in the scene environment, and the change in identity is the role perception (Li Jing Fen, Li Yating, Zhao Mufen, and Robbins, 2002); However, the information obtained by individuals is insufficiently confused or ambiguous about their own behavior (Kahn, Wolfe, Quinn, Snoek, and Rosenthal, 1964), for example, at work. The indication does not understand that its role is relative to its own work behavior, that is, the situation is vague. In summary, it can be found that the Role Theory is that each role's status and identity in society is shown in Figure3. Therefore, the behavior of each character must also accept the interaction of other roles and the norms in society. In the concepts of role perception, expectation, cognition and ambiguity.
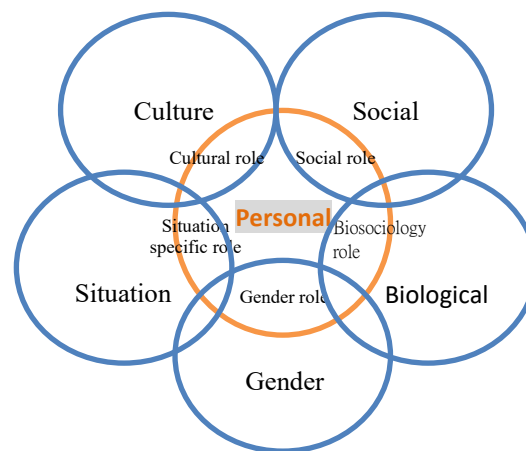
Figure3. Situation The relationship of role theory to
society
Source:: Modify from (Biddle, 1986)

2.2Research on the role of the chief of village

Is a "promotion of the promotion of public construction in village" and "promotion of mutual assistance and mutual assistance and help"; "development and implementation of annual work" and "promotion of mutual assistance and mutual assistance?" However, the people think that the chief should be able to have discretion on his own affairs. Even if the intention of the district office is inconsistent with the people, the people who still take the interests of the people should pay attention to it. The most important condition for the chief is "the skill of guiding and communicating." (Lin Shuzhen, 2007; Xie Minfeng, 2004). Therefore, due to their different positions and positions, the two have different priorities for each other. Chief's role expectation is related to the development and construction of the promotion. The disaster prevention related work is closely related to the construction and community development. The lieutenant can serve the people and be guided by the work instructions. When the expectation of work is different from the expectations of the people in its jurisdiction, the expectations of the community's people on the disaster prevention role of the community will also make the people's awareness of disaster prevention fall, and whether the relationship between the disaster prevention works and the lieutenant is so vague, these relations are worth exploring.

2.3The performance of the chief of village role and the conflicting

The chiefs should play the administrative functions of politics, economic construction, society, culture, etc., and the role of the chief role can be improved and the function of the village organization. However, when the function of business execution is played, its role overlaps with the Community Development Association and with the apartment building management committee competes (Wang Qidong, 2002; Chen Yijun, 2006). However, today's disaster prevention community work is the same, and there is for community development association. However, although the roles of these two roles are similar, their background, role status, and funding sources are very different. If you can analyze the differences and similarities between the two, you can explore the positioning of each other in the community disaster prevention works. In the promotion of disaster prevention works, the role of its disaster prevention works may cause confusion or conflict of roles due to different expectations, and the relationship between these expectations and conflicts, the relationship between these expectations and conflicts will affect the village chief 's role and action in disaster prevention works.

2.4The chief of village in disaster prevention role of the regulatory level (Taipei City)

The role definition of the village chief in the disaster prevention works discussed in this article is based on the current local institutional law in Taiwan. According to the "Taipei Village Chief Service Key Points" ("Taipei Village Chief Service Key Points", 2012), the disaster prevention matters for the lieutenant are listed as follows:

● Official matters: The planning and execution of the annual work. The village people conference, the grassroots construction symposium and work conference were held. Municipal propaganda and public sentiment. Command and supervision of the work. The promotion of public construction. The reflection and response of the emergency disaster.

● Matters assigned: Visiting and assistance for abused children, women and elderly people living alone in the country. Social welfare and assistance in emergency assistance. The neighborhood park assists in the maintenance and mobilization of the people. The assistance of the regional environmental transformation plan was promoted. Other district offices to handle matters.

2.5 Implementation of community disaster prevention in Taiwan

Taiwan at present, in order to strengthen residents' awareness of disasters and enhance community disaster prevention and rescue capabilities, Taiwan has established a rescue mechanism since 1996 to actively promote the development of disaster prevention communities and target disaster prevention communities. The policy promotion process is shown in Figure4. It is concluded that the promotion model of disaster prevention communities in Taiwan is mostly a disaster-responsibility authority, and it is mainly driven by government departments. Most of the operations and execution methods have been top-down, and the promotion time is short. Because there is no chief operation mechanism and follow-up supporting measures, the implementation of the disaster prevention community and the content tend to be one-way education promotion, and the part of education promotion also emphasizes the strengthening of emergency response skills; Disaster prevention continued to operate independently (Liu Yijun, Chen Liangquan, 2015). In addition to the implementation of policies that rely on government departments, the combination of community leaders and organizational leaders to promote willingness, the ability of non-government organizations to promote and the partnerships among stakeholders, etc. The key factors are all successful in the prevention of disaster prevention communities (Zhou Ruisheng, Wu Jiahui, 2014). Therefore the promotion of disaster prevention communities should be promoted by the public and private departments in parallel and with the grassroots organizations such as villages and regions, the grassroots organizations and the grassroots organizations should continue to handle them in order to make the disaster prevention communities have vitality and toughness. Therefore, the relevant cooperative mode of the disaster prevention community is shown in Figure5. (Liu Yijun, Chen Liangquan, 2015)
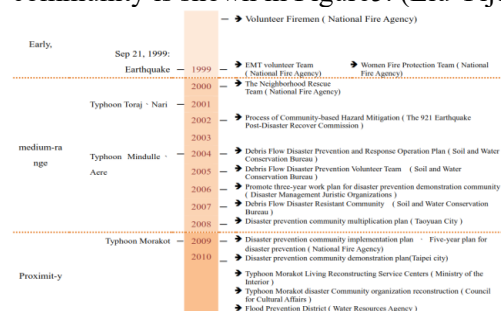

Figure 4.Taiwan Disaster Prevention policy development Course
Source: Modify (Kozhao, Lin Master, Chen Yijun, Weng Yu Xiang, and Shao Junhao, 2016)

Figure 5. Disaster prevention Community cooperation model
Source: (Liu Yijun, Chen Liangquan, 2015)

3.Methodology and Architecture

This paper aims to explore the situation of the self-role expectations of the implementation of disaster prevention works and the factors affecting the role expectations. It is a qualitative research method, using semi-structured deep interviews as the main research method to achieve research purposes.

3.1Research object and interview outline setting

This paper to investigate explores the sampling or involvement of people in disaster prevention. The principles of the selected interviewees are as follows:

- The location of multiple disaster potential areas
- The area where the earthquake is vulnerable is long (no disaster potential)
- There are a lot of old buildings in the community.

The interview outline is set up by the four major frameworks of Role Theory (Role perception, expectation, identification, fuzzy) and the related interview topics of disaster prevention works. The four frameworks can be expected to have the following information content (disaster prevention system awareness, self-awareness, regional geographic awareness, institutional expectations… work difficulties and conflicts).

Table 1. In-depth interview topic list

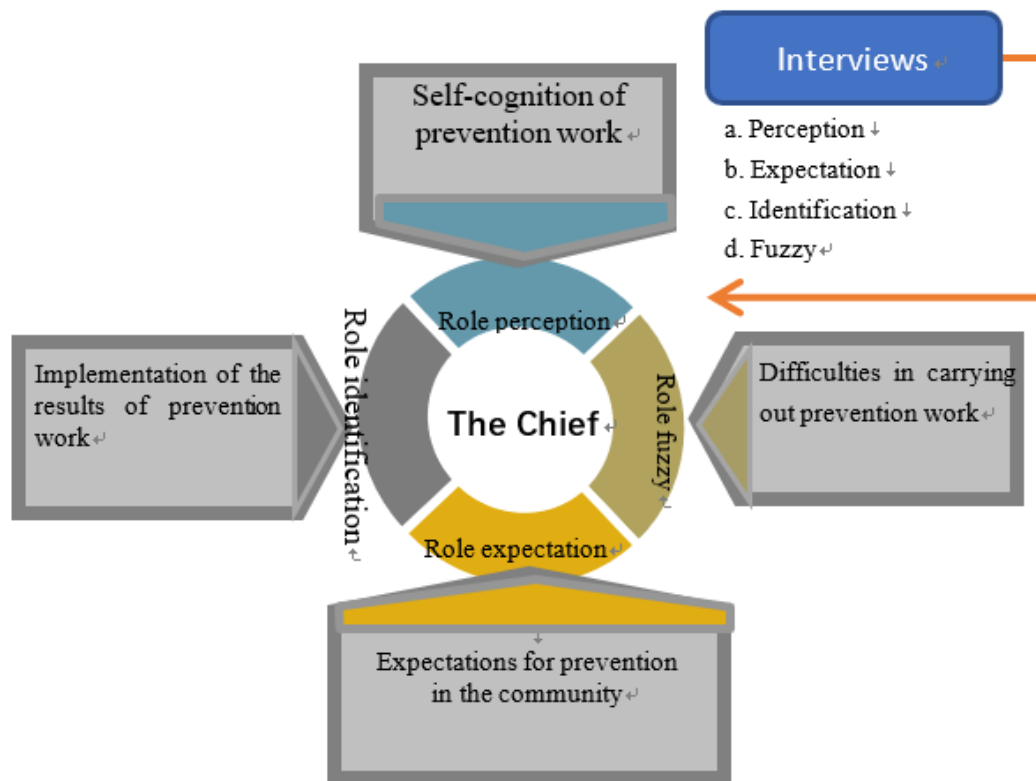| Title	Role Theory framework	Theme outline	Expected to obtain data content
1		Disaster system design cognition	Prevention system disaster prevention system awareness
2	Role perception	Chief of Village located in the disaster prevention system positioning	Self-aware
3		Jurisdiction area disaster	Area geography Cognitive
4		Cognitive Of disaster prevention works	Self-awareness
5		Disaster prevention vision	System Expectation
6		Community disaster prevention works expectation	Work expectation
7	Role expectation	Usual disaster reduction work expectation	Work expectation
8		Reduction of vulnerability expectation	Work expectation
9		Recovery work ideal	Job expectation
10	Role identification	Existing energy assessment	Work performance situation
11		Disaster reduction work description	Work performance situation
12	Role fuzzy	Disaster reduction work to promote difficulties in difficult	Work difficulties
13		Failure experience of disaster reduction work	Work conflicts

Source: This study

3.2Research architecture

This paper discuss the role of the rationale in the focus of disaster prevention operations, we have developed work items such as "self-awareness of disaster prevention works", "difficulties in implementing disaster prevention works", "results of implementing disaster prevention works", and "expectations for community work". Implement the recommendations for promotion. The structure of the study in this paper is illustrated in Figure 6.

Figure6. Research architecture
Source: This study

3.3 Research data processing and collection

This paper, of semi-structured in-depth interviews conducted using qualitative research methods, and data processing and analysis. In the course of the interview, the researcher will confirm and check the data with the research object, and amend it at any time. After completing the verbatim draft, the file will be managed centrally after confirmation, which is beneficial to the review and comparison of the data. In addition, when organizing the materials, the in-depth interview notes and the recording records will be checked to avoid the leakage of the notes, in order to complete the record, and finally, the information is rewritten into the interview draft, try to maintain the tone of the respondents and keep the original intention.

3.4 Analysis of the research data

This paper extracts the abstracts from the verbatim drafts of the interviews and gives each abstract an open code. Based on the results of the interviews, we find out the four medium-oriented implementations of disaster prevention works based on the Role Theory structure. In the role situation, 46 open codes, 15 spindle codes, and 3 core codes are analyzed. The relationship is also discussed and the results are summarized in Figure7.
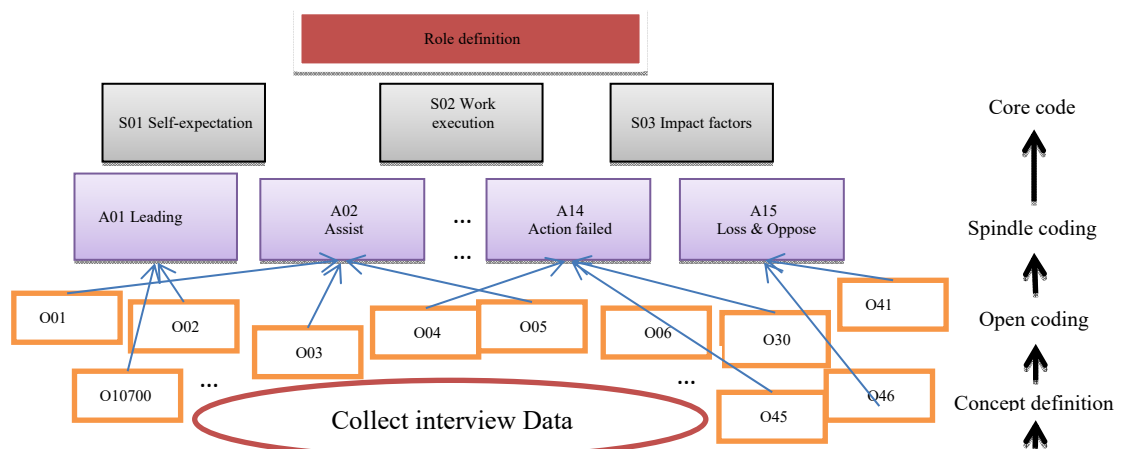
Figure7. Grounded theory data collection code
Source: This study

3.4.1 Open coding

Will collect the interview data description this article based on the interview content to summarize the open code of O01-O46. (Because of limited cannot login open code O01-O46, the reader can contact the first author)

3.4.2 Spindle coding

The similar concepts compiled by the above 46 open codes are generalized into a concept of higher level. In this stage, the paper summarizes 15 spindle codes (due to limited space), omitting the code registration, the reader can contact the first author), according to the relationship between the spindle codes, this article organizes and constructs a role of the execution of the role of the disaster prevention works. The relationship between the role behavior patterns of the construction is as shown in Figure8.

Figure8. Spindle coding relationship diagram of chief of village work's research.

3.4.3 Core code

To summarize the concept developed by the spindle coding, and develops the core of the role performance of the chief implementation of disaster prevention works. Shown in the conceptual meaning of the respective core coding represented by the spindle encoder and the table contain:

Table 2.Core coding table

No	Core code	Instructions	spindle encoder
S01	Community cooperation Self-role expectation of disaster prevention works	Refer chief of self-expectations in the field of disaster prevention of and vision for disaster prevention of expectations	A01, A02, A03, A04, A05、A06
S02	Case of execution of disaster prevention role	Finger role cognition and role conflicts in the chief arising in the role of the practical implementation of disaster preparedness	A07, A08, A09, A10,
S03	Factor of self-role of influence	Refers to the influence of variables in chief change it for the character to perform the disaster prevention	A14, A15
	Source: This study		

By the core code, which can be found that the recognition of the chief implementation of disaster prevention works, he has produced the self-role expectations for disaster prevention works and expressed its role in the practice of disaster prevention works, in its background knowledge, work experience. The impact of the implementation of the disaster prevention works on the execution motivation and the variables of the decision-making process, so the interaction, and change of the cognitive structure, process and influencing factors of the research structure are as shown in Figure9. The results of the above summary studies will be explained in the next chapter.
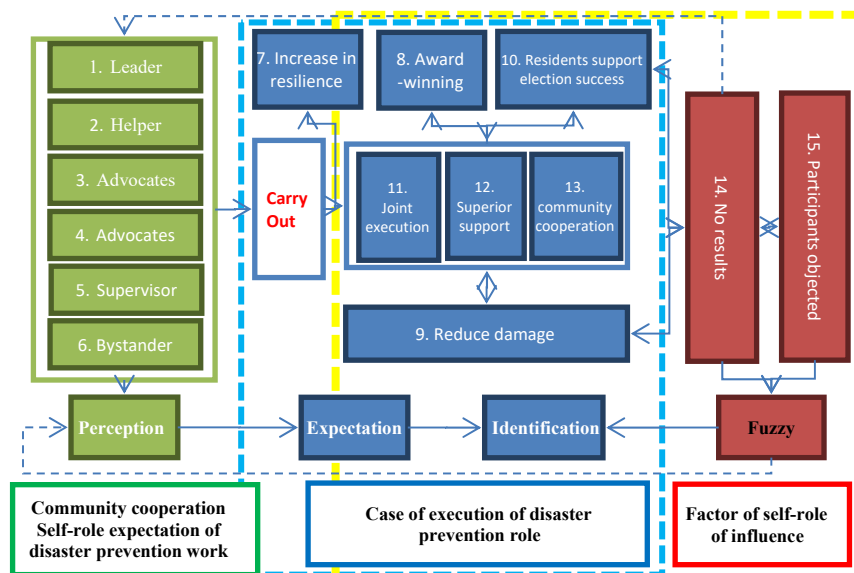

Figure9. Core coding relationship diagram of chief of village's disaster prevention work role

4. Research findings and discussions
This chapter will introduce the verbatim draft of the interviews of 12 respondents in this paper to be coded and classified in the process of data analysis. The concepts discovered and the self-character expectations of the disaster prevention works, the role practice situation and influencing factors of the disaster prevention works after the data analysis process are found, and the following research results are found:

4.1Research results

4.1.1Require relevant experience in the disaster prevention works background of professional training
There are many kinds of disaster prevention works in the. Because the chiefs academic experience has not further improved the knowledge related to disaster prevention, the concept of disaster prevention has changed, and the knowledge of the chief itself cannot keep up, resulting in the concept of disaster prevention not being updated. Disaster prevention works has also caused stagnation.

4.1.2The self-role expectations of the long-time disaster prevention works to gain the trust of the people
The disaster prevention works in most of village chief's cognition is to gain the people's trust and the result of re-election. However the link between people and the community, and the link between communities are neglected. This cause the result that disaster prevention works is only promoted by the government instead of co-operated by people to enhance the resilience of the community. If change of village chief's position into dispatch system, the disaster prevention works will be continue and rooted.

4.1.3No role-in-action strategy for disaster preparedness
They always passive work in disaster prevention. In addition to the experience of disasters, especially for this type of disaster, most of them are related to the disaster or the government's main promotion project. To carry out the disaster prevention works of the communities under its jurisdiction, there is almost no strategic improvement of the resilience of the community to the characteristics of its own community.

4.1.4People's satisfaction affects the chief expectations of the disaster prevention works.
The expectations of the people are the main factors affecting the expectations of the disaster prevention role. Whether it is the satisfaction of various disaster reduction activities, the results of disaster prevention works are praised or the people feel well, the environment that has been seen has improved etc. Factors related to people's satisfaction will affect whether the lieutenant will continue to perform in disaster prevention works.

4.2Research and discussion
The function of promoting disaster prevention in grassroots villages lies in the recognition and willingness of the villagers to the community. The lieutenant should be the closest bridge between the government and the people, and the biggest driving force for community disaster prevention. Through the village's disaster prevention consensus, villages mutual assistance between each other, the combination of the community and the non-government organizations, and the cooperation of the village enterprises and organizations, the government's attention to funds and the professional team's related disaster prevention knowledge, accumulate disaster prevention forces in the private sector, not only increase the ability of the villagers to resist disasters, It can also reduce the vulnerability of the community. In the face of natural or man-made disasters, it can show resilience and increase the protection of people's lives and property.

4.2.1The study found that the discussion-chief of village disaster prevention works cooperation model
The local disaster has not been thoroughly investigated and evaluated, which has made it difficult to plan, integrate and supervise the rescue work, and it has also affected the related work promotion. Disaster prevention professionals have become responsible for disaster prevention and rescue, and have been stationed in local offices to assist the governors in the management operators and the planning, integration, and management of the works, which will help the implementation of disaster prevention and rescue. In turn, we can gradually expand the work culture that attaches importance to disaster prevention within the organization, and naturally integrate into the planning and promotion of daily work of community groups or people. Based on the previous disaster prevention community cooperation model (Liu Yijun, Chen Liangquan, 2015), we joined the coordination and integration of the chiefs, and coordinated the disaster prevention community or the disaster prevention community in the cross-border community through the formulation of government unit policies and funding subsidies. Cooperate with the technical guidance and professional knowledge support of professional academic units and the joint operation of civil organizations, and the chiefs coordination and resource integration actions will effectively integrate the disaster prevention operations of various communities. The cooperation model of this paper is shown in Figure10.

5.Research recommendations and applications

5.1Government cooperation

To increase the village organization rules or operations in the meantime, instead of dispatching disaster prevention personnel, investing in funds to carry out disaster prevention operations, legalizing disaster prevention works and establishing a resource sharing platform and review mechanism, and forcing the lieutenant to perform disaster prevention works, so as to prevent the operation from flowing informality.

Figure10. Research Conception Collaborative Model of the Office in Disaster Prevention Work

5.2 The academic investigation conducted

In-depth discussions and investigations on regional special disaster issues, reviewed and assessed the disaster tolerance of the community, and assessed the importance of discussing disaster prevention-related work with the lieutenant after the planning, and enhanced the sense of disaster and the people's disaster. Start disaster prevention works.

5.3Deepen the link

Deepen the chain to link between village's chief and the government levels, strengthen the integration of civil organizations and resources, use the network to establish communication effectively, join the civil and Integrate (even professional units or enterprises and businesses), has been regularly the symposium, establish a dialogue platform, reduce communication barriers, and help the disaster prevention works in the region to wake up spontaneously, and residents will actively help promote disaster prevention forces.

5.4Organizing activities to promote people's participation

In the expansion of disaster prevention activities, and encourage the promotion of disaster prevention activities to various civic organizations and activities, such as local residents' organizations, patrol teams, and environmental protection teams, and use local environmental protection campaigns, crime prevention, etc. Activities, disaster prevention education and disaster prevention training and expanding the level of disaster prevention activities. Chief of village must play the role of initiation and promotion. In response to the planning of the disaster prevention living circle, he or she will conduct multiple disaster prevention activities independently or in conjunction with the neighboring lieutenant, and incorporate disaster prevention education into daily life education to implement disaster prevention works to the people's lives.

5.5Drumming local enterprises and households

Since most of the employees of the company are from the local people, in the event of disasters, employees, whether in the factory or in the local community, will start self-help and mutual assistance activities in the event of a disaster. Chief thinking, combined with local enterprises to promote corporate disaster prevention plans by the lieutenant is more appropriate.

5.6Research Restrictions and Future Research Suggestions

This paper sets the scope of research to be the position of the local lieutenant. The disaster prevention works should be performed by the private, government agencies, and enterprise groups. The scope of the disaster prevention works cannot be explained one by one. And to study it, so this article is only set as the self-expectation of the "Chief of Village" staff for disaster prevention works. As for other duties of the agency or the community, the follow-up study can continue to extend the role of the relevant disaster prevention staff in different positions.

The other disaster prevention works is divided into four stages: disaster reduction, conditioning, response, and recovery. The relevant stages of the disasters are different, and the scope is wide and nature is quite different. This article only considers the metropolitan area (Zhongshan District of Taipei) as the research area. The setting of the self-expectation for long-term disaster prevention works is the scope of the study. Due to the number of samples and the research time, only the 12 interviews in the 42nd district of Zhongshan District are used for in-depth interviews. The expectation of the region and the different urban types of the relevant village personnel, it is suggested that there will be more discussion and role research on the implementation of disaster prevention works in different regions, in order to combine the characteristics of the metropolitan area as disaster prevention reference for work execution.

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