

Clients' Satisfaction on Public Disaster Assistance Services in Pak Kret Municipality, Thailand

Chairat Wongkitrungruang

Kasetsart University, Thailand

E-mail: wchairat@hotmail.com

Sirikorn Kanjanasuntorn

Kasetsart University, Thailand

E-mail: fsocptk@ku.ac.th

Sanit Ritmontri

Kasetsart University, Thailand

E-mail: sanit_rit@yahoo.com

Matrini Ruktanonchai

Office of the Royal Society, Thailand

E-mail: matrini.r@outlook.com

Abstract

This research aimed to examine the level of satisfaction and to compare the level of clients' satisfaction in regard to public disaster assistance services in Pak Kret Municipality, Thailand. The samples consisted of 186 clients. The data were collected with the questionnaires. Descriptive statistics included the percentages, the arithmetic mean, and the standard deviation. Hypotheses were tested with the t-test and the one-way analysis of variance. Statistical significance level was set at 0.05. Research results indicated that most of the clients had high level of satisfaction in regard to public disaster assistance services in Pak Kret municipality. Hypothesis testing revealed significant differences of satisfaction towards public disaster assistance services amongst the clients with different education, occupation, income, residence, frequency of utilization, and reception of information services both overall and in all aspects.

Keywords: Satisfaction, Disaster, Pak Kret Municipality

Introduction

Disasters, both natural and man-induced, have been on the increase and might impose damages to the property and persons (Pak Kret Municipality, 2018a). Relevant agencies, therefore, have increasingly paid much attention to the prevention and amelioration of various disasters. Thailand, in particular, had developed a defensive solution to disaster prevention and mitigation before 2002 especially for immediate disasters emphasizing disaster relief for the victims without the key national agency in charge. Between 2002-2006 the pro-active disaster management led to the establishment of the Department of Disaster Prevention and Mitigation (DDPM) through the integration of related agencies focusing on an all-encompassing disaster management: before, during, and after the disaster. Special emphasis has been placed on the defense, prevention, and impact mitigation before the actual disaster. From 2007 to 2016 the integrated disaster management designated the agencies in charge and the ones with power of command at all levels. Such management was linked with the Sendai Framework and the national disaster prevention and mitigation that were translated to local level practice. From 2017 to 2036, public-private collaboration will be involved to drive the

disaster management through innovation, technology, and research to strengthen national disaster management potential (Department of Disaster Prevention and Mitigation, 2018a).

The Decentralization Law, 1999 stipulated that the municipality and Tambon Administrative Organization will have the power and duty in public service system provision for their respective locality. One of their duties is the prevention and mitigation of public disasters (Office of the Commission on Local Government Personnel Standards, 2018). Pak Kret Municipality in Nonthaburi Province is a large municipality adjoining Bangkok Metropolis. The Municipality, therefore, is a local administrative organization that is close to the people and also a government agency that provides public services according to its mission and area in charge. The Municipality has adopted the result-based management (RBM), focusing on the people, emphasizing both efficiency and effectiveness of public service provision pertaining to the people's lives and livelihood. Its purpose is to create the best service satisfaction for the people (Pak Kret Municipality, 2018b). Public disaster assistance services include fire prevention and firefighting, installing community fire extinguishers, supplying water for people in need, capturing dangerous animals such as snakes and wasps, cutting fallen trees that obstruct the traffic and damage people's houses, and issuing certified letter for disaster victims. People can report any public disaster to the authority by telephone or in person, twenty-four hours a day. Moreover, the Municipality's public disaster service center has held regular fire drills, provided training on public disaster assistance for the people, and supplied necessary items as well as other facilities for public disaster victims (Pak Kret Municipality, 2018c, 2018d). Pak Kret Municipality, therefore, needed to survey the result of such services.

The researchers, thus, were interested in examining the level of satisfaction and to compare the clients' level of satisfaction on Pak Kret Municipality's public disaster assistance services, classified by their basic personal characteristics, service utilization, and reception of information on service provision. Research results could be used as the data for Pak Kret Municipality to improve the quality of its services pertaining to the prevention and mitigation of public disaster in the locality with more efficiency and effectiveness.

Research Objectives

This research aimed to examine the level of satisfaction and to compare the level of satisfaction amongst those who had utilized Pak Kret Municipality's public disaster assistance service, based on their personal characteristics, service utilization, and the acquiring of information on such services.

Conceptual Framework

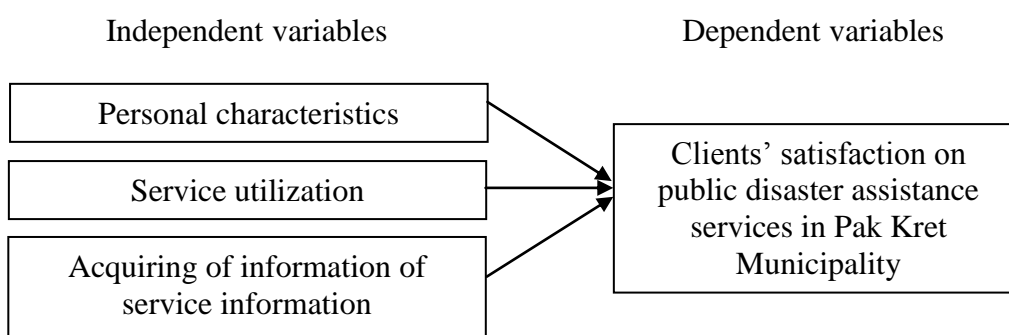


Figure 1 Conceptual Framework

Research Method

Population and sample group

Study population consisted of 349 clients of public disaster assistance services of Pak Kret Municipality. Application of Yamane's formula (Prasithrathasin, 2001: 127) yielded a sample group of 186 that was further selected by a simple random sampling through a lottery. The data were collected with the collaboration of Pak Kret Municipality.

Research tool

A questionnaire utilized by this research was in five parts: the basic personal characteristics, service utilization, reception of service information, and clients' satisfaction on public disaster assistance service of Pak Kret Municipality. The questionnaire was structured as a check list in most parts. For the problems, obstacles, and recommendation for Pak Kret Municipality's service the questions were open-ended. Both sets of close-ended and open-ended questions were constructed from the review of concepts concerning service satisfaction and the municipal public disaster management.

Research tool validation test

The researchers presented the structured questionnaire to the representatives of Pak Kret Municipality's Public Disaster Prevention and Mitigation Work for review so that it would cover all the research issues. The revised questionnaire was tried out amongst twenty clients of Nonthaburi Municipality's public disaster assistance service. The gathered data were analyzed for its validity by applying the KR-20 that yielded 0.92 for the reception of information regarding the services and the Cronbach's alpha coefficient of 0.99 for the overall satisfaction (0.97 for service stages, 0.97 for service channels, 0.96 for service personnel, 0.97 for facilities, and 0.97 for publicity).

Data analysis

Quantitative data analysis included the descriptive statistics, namely the percentages, the arithmetic mean, and the standard deviation. Hypotheses were tested with the t-test and the one-way analysis of variance. Paired differences were tested with the Scheffé method. The level of statistical significance was set at 0.05.

Research Result

Basic personal characteristics

Most of the clients were female (58.1%), with an average age of 46.16 years; earned a bachelor degree or higher (28.0%), followed by primary education (25.3%) and early secondary education (24.2); leading occupation was trading and/or private business (38.7%), followed by government and/or state enterprise, and employee and/or laborer (18.3% equally); earned an income of 15,001-30,000 baht (40.9%), followed by 5,000-15,000 baht (39.8), and below 5,000 baht (10.2%). Most of the sample lived in Tambon Bang Talat (54.8%), followed by Tambon Pak Kret (42.5%) and Tambon Bang Phut (2.7%).

Service utilization

Most of the clients utilized other services, namely water supply, capturing dangerous animals, tree cutting, or fire extinguisher installation (84.4%) followed by fire prevention and firefighting (15.6%). Most services were given in less than 30 minutes (87.6%), followed by more than 31 minutes (12.4%). Most clients utilized the service more than once (62.4%), followed by 2-5 times (33.3%) and more than six times (4.3%). Such statistic indicated that the clients only had mild and sporadic public disaster problems.

Service information reception

Information media: Most of the clients had acquired service information from personal sources (80.1%), namely community leaders (61.8%), municipality officials (33.3%), and friends (19.4%). They also received information from mass media and/or special media

(55.9%) such as village public relations announcement (33.9%), billboard and/or municipality public relations board (19.4%), and mobile municipal public relations (7.5%).

Level of reception: Most of the clients had high level of reception of information regarding public disaster assistance service ($\bar{x} = 0.87$). They were mostly aware of the Municipality cutting down trees that were obstructing the traffic and damaging people's houses ($\bar{x} = 0.90$); followed by the Municipality offering a service to capture dangerous animals as requested by the people ($\bar{x} = 0.89$); people could report public disaster by telephone or in person ($\bar{x} = 0.89$); public disaster assistance services consisted of fire prevention and firefighting as well as other public disaster assistance services ($\bar{x} = 0.88$); the Municipality had installed fire extinguishers in the community ($\bar{x} = 0.88$); and municipal officials would attend to the fire as soon as it was reported ($\bar{x} = 0.88$).

Research results indicated that personal sources were very important, albeit the community leaders, municipal officials, or friends since they were living in the same community as the clients particularly community leaders who attended the monthly meeting with municipal officials. These leaders would coordinate matters between the municipality and the people in the development of various localities that furnished them with major roles in disseminating municipal information to the people. As for the mass media and/or special media such as village public relations announcement, billboard and/or municipal public relations boards, and mobile public relations of the Municipality were also important media. This was due to the fact that they were directly issued by the Municipality and carried clear messages that could very well support the personal sources. It could be argued that public relations through personal sources were of high quality and enabled the people to have high level of reception of public disaster assistance services. However, reception of information concerning services in various aspects covered only the missions that the Pak Kret Municipality had troubles with and had to manage at the present time that might not involve severe public disasters similar to those occurring in other cities or will take place in the future.

Clients' satisfaction

Most clients were highly satisfied with Pak Kret Municipality's overall public disaster assistance services ($\bar{x} = 4.05$). They were satisfied with the facilities the most ($\bar{x} = 4.13$), followed by service personnel ($\bar{x} = 4.04$), service stages ($\bar{x} = 4.03$), and service channels ($\bar{x} = 4.01$), respectively. Details are as follows.

Service stages: The clients were satisfied with the time involved in getting serviced, starting from the beginning of the public disaster assistance service until its completion and thought that it was appropriate the most ($\bar{x} = 4.06$). Public disaster assistance service stages were easy to understand and were not complicated ($\bar{x} = 4.05$). Each stage of the public disaster assistance service was convenient and fast ($\bar{x} = 4.05$). Lastly, public disaster assistance service had clear steps ($\bar{x} = 4.01$).

Service channels: The clients were satisfied with the service channels and thought that they were appropriate ($\bar{x} = 4.02$), modern ($\bar{x} = 4.02$), convenient ($\bar{x} = 4.01$), diverse ($\bar{x} = 4.01$), and could be handled very quickly ($\bar{x} = 4.00$), respectively.

Service personnel: The clients were satisfied with the service personnel and thought that they were very attentive ($\bar{x} = 4.08$), enthusiastic and quick to serve ($\bar{x} = 4.08$). Service personnel were skilled and had appropriate expertise in public disaster assistance service ($\bar{x} = 4.07$). Service personnel could give useful recommendation and answered the questions very clearly ($\bar{x} = 4.07$). Finally, the numbers of service personnel were adequate to provide the assistance ($\bar{x} = 4.04$).

Facilities: The clients were satisfied with the facilities because they were easily accessible ($\bar{x} = 4.20$). The agency providing the public disaster assistance service was appropriate and orderly ($\bar{x} = 4.19$). Tools and equipment in service were modern ($\bar{x} = 4.15$).

Public relations: The clients were satisfied with the publicity especially with easily comprehensible public relations media such as public relations board and pamphlets ($\bar{x} = 4.19$). Publicity media were modern such as the website ($\bar{x} = 4.09$). Diverse publicity media were utilized ($\bar{x} = 4.06$).

The above results indicated that the clients were satisfied with Pak Kret Municipality's public disaster assistance service since the Municipality is a large urban area adjoining the Bangkok Metropolis resulting in good infrastructure, public utilities, and public assistance. Most of its population have modern urban lifestyle. The Municipality also has a riverfront that suffers flooding annually; its people have to face various forms of public disasters. Pak Kret Municipality, hence, is fully aware of its problems and the people's needs and has planned and managed public disaster in various forms with efficiency, especially the guideline for flood mitigation. It has created "Nakhon Pak Kret... Emergency Planning for Flood Prevention Model" to manage the water that proved to be successful in flood mitigation (Pak Kret Municipality, 2014). Furthermore, the Municipality also has the Civil Volunteers for Hazard Prevention that has a major role in public disaster prevention and mitigation in the area with close collaboration with municipal personnel. Such results were in tandem with the works of Yaemkong et al. (2009), Huadlim et al. (2009), Khoryuengklang (2008), Udomsuk (2013), and Somphakdi (2015) that studied the satisfaction of the people and disaster victims concerning assistance provided by local administrative organization and the Office of Disaster Prevention and Mitigation in different areas. These studies looked at various aspects of satisfaction such as on public utilities, personnel, work stages, facilities, assistance approaches, assistance system, assistance quality, as well as satisfaction prior-to-during-and-after-disaster management. They also found that the people and disaster victims were highly satisfied with the assistance.

Hypothesis Testing

Table 1 Hypothesis testing results

Variables	Client's satisfaction on public disaster assistance services					
	Service stages	Service channel	Service personnel	Facilities	Public relations	Overall
Basic personal characteristics						
- gender	x	x	x	x	-2.761**	x
- age	x	x	x	x	x	x
- education	x	4.244**	3.043*	x	5.358***	3.049*
- occupation	3.110**	3.808**	5.429***	4.8080***	5.870***	5.976***
- income	4.738**	6.639***	8.183***	8.409***	6.277***	9.078***
- residence in housing registration	3.796*	7.166**	4.181*	x	x	3.587*
Service utilization						
- duration	x	x	x	x	3.614***	x
- frequency	5.387**	6.165**	7.582**	4.259*	7.016**	7.465**
Information reception	77.080***	61.543***	70.046***	74.488***	26.65***	104.418***

*statistically significant at 0.05 level, **statistically significant at 0.01 level, ***statistically significant at 0.001 level, x not statistically significant

Basic personal characteristics: Overall, the clients with different educational attainment, occupation, income, and residence had significantly different satisfaction regarding public disaster assistance services at the 0.05 level and the 0.001 level. When paired differences were tested with the Scheffé method, it was found that the clients with the bachelor degree

education and higher, had higher satisfaction than those with early secondary education. Clients who were traders and/or in private business had higher satisfaction than the clients who were government officials and/or worked in a state enterprise. Clients with high income also had higher satisfaction than the ones with lower income. Finally, clients who lived in Tambon Pak Kret had higher satisfaction than those living in Tambon Bang Talat.

Service utilization: Overall, clients with different frequency of service utilization had significantly different satisfaction regarding the public disaster assistance services of Pak Kret Municipality at the 0.01 level. When paired differences were tested with the Scheffé method, it was found that first time clients together with those who used the services 2-5 times were more satisfied with the services than those who used them more than 6 times.

Service information reception: Overall, clients with different service information reception had significantly different satisfaction on public disaster assistance services of Pak Kret Municipality at the 0.001 level. When paired differences were tested with the Scheffé method, it was found that clients with more information on the services had higher satisfaction than the ones with less information.

The above-mentioned hypothesis testing results reflected the fact that only a few of the clients had higher satisfaction because they did not have to face a lot of problems. Similarly, clients with more information would certainly understand the format, stages, details, and limitations of Pak Kret Municipality's public disaster assistance services and would also be highly satisfied. Therefore, clients with higher educational attainment and rather high income were able to access the information on public disaster assistance services and could request assistance from the Municipality in a more convenient and expedited way than those with lower educational attainment and income. So the former group of clients would have higher satisfaction. Such findings were in tune with the work of Sompakdi (2015) that pointed out that people with different educational attainment and monthly income also differed in their satisfaction on public disaster assistance services.

However, overall clients with different gender, age, and service utilization duration did not differ in their satisfaction regarding Pak Kret Municipality's public disaster assistance services. Such finding agreed with the works of Mabangyang (2007), Khoryuengklang (2008), and Udomsook (2013) that reported that people with different gender and ages had no significantly different satisfaction pertaining to assistance.

Research Recommendation

Policy implication

1. The Municipality should survey various communities to better plan for the prevention and mitigation of public disaster particularly areas with high disaster risk. However, if any place is found to be too small and inconvenient to provide the assistance, efforts should be made to create better understanding. Cooperation with such community should be sought to enlarge parts of the public areas to accommodate suitable assistance should disaster strike.
2. The Municipality should be staffed with adequate number of personnel who are capable and have the expertise in the prevention and mitigation of public disaster. If limitation in staffing arises, then training of civil defense volunteers as well as people in the community should be carried out so that they could promptly assist the officials.
3. The Municipality should develop a two-way communication channel in terms of providing necessary and clear information about disaster notification to the people, how to properly cope during the disaster, and the people's role in prompt notification to the municipality or relevant agencies so that they could act in an expedited manner.

Suggestion for further research

Researches should be carried out on people's needs and problems, participation of the people and the civil defense volunteers, as well as the integrated guidelines for the prevention and

mitigation of public disaster particularly in risk areas. Such researches are in tune with the National Public Disaster Prevention and Mitigation Plan, B.E. 2558 (Department of Prevention and Mitigation of Public Disaster, 2018b).

References

- Department of Disaster Prevention and Mitigation. 2018a. **Po Pho 4.0**. Retrieved from www.disaster.go.th/th/about_4_0.php.
- Department of Disaster Prevention and Mitigation. 2018b. **National Public Disaster Prevention and Mitigation Plan, B.E. 2558**. Retrieved from www.disaster.go.th/th/download-src.php?did=1129.
- Huadlim, K., Sakulpan, S., Kamprom, K. & Inthakaew, C. 2009. **Survey of People's Satisfaction towards Operation Time Decreasing Project of Public Disaster Prevention and Mitigation Process in Wang Din Sub-district Organization Administration Area, Uttaradit Province**. Uttaradit: Research Management and Academic Services Unit, Faculty of Management Science, Uttaradit Rajabhat University.
- Koryuengklang, R. 2009. **Satisfaction of Survivors towards the Assistance from the Office of Disaster Prevention and Mitigation, Chanthaburi Province**. Master of Public Administration Special Problem, Burapha University.
- Mabangyang, S. 2007. **People's Satisfaction with Prevention and Relief of Public Disasters by Banchatpawai Sub-district Municipality, Suan Phueng District, Ratchaburi Province**. Master of Arts Independent Study, Kasetsart University.
- Office of the Commission on Local Government Personnel Standards. 2018. **The Decentralization Act, B.E. 2542**. Retrieved from www.local.moi.go.th/2009/pdf/aumnat2542.pdf.
- Pak Kret Municipality. 2014. **2013 Annual Report**. Nonthaburi: Pak Kret Municipality.
- Pak Kret Municipality. 2018a. **Announcement of Pak Kret Municipality on Accepting Applicants for the Civil Volunteer for Hazard Prevention Training**. Retrieved from www.pakkretcity.go.th/images/pdf/news1473-2.pdf.
- Pak Kret Municipality. 2018b. **Basic Data of Pak Kret Municipality**. Retrieved from www.pakkretcity.go.th.
- Pak Kret Municipality. 2018c. **Public Disaster (Fire/Flood/Snake Capture)**. Retrieved from www.pakkretcity.go.th/index.php/2017-07-22-09-08-48/2017-07-24-09-05-32.html.
- Pak Kret Municipality. 2018d. **Public Disaster Service Process**. Retrieved from www.pakkretcity.go.th/index.php/2017-07-22-09-08-48/2017-07-24-09-02-33.html.
- Prasithrathasin, S. 2001. **Social Sciences Research Methodology**. Bangkok: Phoungpha Printing.
- Sompakdi, C. 2015. **Satisfaction of People towards Services of the Public Hazard of Nong-Ta-Kein-Bon Sub-district Administration Organization, Sakaeo Province**. Master of Political Science Thesis, Burapha University.
- Udomsook, T. 2013. **Satisfaction of Survivors towards the Quality of Assistance from the Office of Disaster Prevention and Mitigation, Trat Province**. Master of Public and Private Management Special Problem, Burapha University.
- Yamkong, S., Suchakam, S. Sanusit, W. & Pantang, P. 2009. **Survey of People's Satisfaction towards Public Disaster Assistance Project in Pha Lueat Sub-district Area, Pha Lueat Sub-district Organization Administration, Tha Pla District, Uttaradit Province**. Uttaradit: Research Management and Academic Services Unit, Faculty of Management Science, Uttaradit Rajabhat University.