Technological Forecasting & Social Change 121 (2017) 119–125

Contents lists available at ScienceDirect

Technological Forecasting & Social Change

Building resilience: The relationship between information provided by municipal authorities during emergency situations and community resilience

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ARTICLE INFO

Article history:
Received 15 March 2016
Received in revised form 28 September 2016
Accepted 15 November 2016
Available online 5 December 2016

Keywords:
Community resilience
Emergency preparedness
Municipal information
CCRAM

ABSTRACT

Community resilience denotes a community's capacity to lead itself in order to overcome changes and crises. Leadership is a central element of community resilience. One of the responsibilities of municipal authorities and leadership during emergencies is to provide effective information that meets the population's needs. This cross-sectional study presents the relationship between satisfaction with information provided by the local municipality and community resilience scores measured using the Conjoint Community Resilience Assessment Measure (CCRAM). The study included 1139 adults (mean age 40.7 years) living in small to midsized communities. The CCRAM score was positively correlated with satisfaction with the information received from the municipality ($r(1139) = 0.528$, $p < 0.001$). Linear regression modeled the dependent variable CCRAM score. After adjusting for general covariates, municipal information satisfaction was positively associated with the CCRAM score ($B = 0.265$, $p < 0.001$, 95% CI = 0.231–0.299), meaning that the more suitable the information was for population needs, the higher the community resilience. These results highlight the importance of the information provided by the municipal authorities to the population as a means to develop or enhance resilience for emergencies. This information is of utmost importance for decision makers and local leadership when developing policies for resilience building and planning communication with the population.

1. Introduction

Disasters and emergencies expose the civilian population to damage, injury and various challenges. During the first hours of large scale emergency situations, the population often has to cope on its own with providing urgent lifesaving care. In addition, the role played by the community is a key mediator in the subsequent mental health impact on populations exposed to ongoing emergencies (Beiser et al., 2010) and forced migration experiences (Siriwardhana et al., 2014). A major strategy for coping with emergencies is to increase the community's resilience capacity (Buergelt and Paton, 2014). Community resilience denotes a community's ability to lead itself in order to overcome changes and crises (Leykin et al., 2013). Community resilience is comprised of factors such as leadership, collective efficacy, social cohesion and place attachment. Physical components such as infrastructure and resources are additional aspects (Cutter et al., 2008; Cohen et al., 2013; Ungar, 2011).

1.1. Building of community resilience capacity

Local, international and global frameworks have been developed over the last decade with the aim of achieving improved coping with emergencies. These frameworks tackle the problem from different perspectives. Some seek to shape the resilience approach itself (e.g. Strategic National Framework on Community Resilience (UK Cabinet Office, 2011)). Others integrate resiliency within a broader structure of societal, economic, infrastructure or disaster risk reduction (e.g. Sendai Framework for Disaster Risk Reduction (UNISDR, 2015)). These frameworks differ one from the other, but all agree on the need to incorporate different arenas, including the public arena, and to establish ongoing action over the crisis cycle, encompassing the daily routine, the crisis, and the rehabilitation period. The Sendai Framework for Disaster Risk Reduction represents a step in the direction of global policy coherence with explicit reference to health, development, and climate change

Abbreviations: CCRAM, Conjoint Community Resilience Assessment Measure.

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http://dx.doi.org/10.1016/j.techfore.2016.11.008

(Aitsi-Selmi et al., 2015).The Planning Guide (NIST, 2015) provides a methodology for local government to bring together all of the relevant stakeholders to establish performance goals to maintain the social and economic fabric when disruptive events occur. The Strategic National Framework on Community Resilience is intended to provide the national statement for how individual and community resilience can work. It should be relevant to all hazards and threats, and all communities. Over all those frameworks, there is agreement regarding the importance of the resiliency approach for dealing with crises, especially at the local level.

There is no clear consensus in the literature about the ways to strengthen the resilience of a community. The lack of empirical research (Castleden et al., 2011; Chandra et al., 2010) and the diverse disciplines that are involved hamper and complicate developing and understanding mechanisms for enhancing community resilience. Generally, the common perception is that after determining the components of a community's resilience, enhancing them will lead to building its capacity. The concept of community resilience is discussed on many levels (Wilson, 2012). According to Canyon et al. (2015), the focus of enhancing resilience to changes must be on understanding and developing local-level capacity to adapt, respond to and describe the institutional frameworks. One of the core elements of community resilience at the local level is leadership (Cox and Perry, 2011; Castleden et al., 2011; Wilson, 2012; Ayala et al., 2016).

Leadership plays a critical role in industrial, educational, military or social arenas. There are hundreds of definitions of the term leadership (Kouzes and Posner, 2006). According to Bass and Stogdill (1990), effective leadership is the interaction among members of a group that initiates and maintains improved expectations and the competence of the group to solve problems or attain goals. Types of leaders differ depending on role and functional or institutional differences (Bass and Stogdill, 1990). Kouzes and Posner (2006) mentioned that leadership is not just about leaders. Nor is leadership about some position or place in an organization or community. In today's world, leadership must be everyone's interest. Many types of leadership have roles that modulate the resiliency of a community in the face of emergencies. In this particular study, we focused on the local municipal authority. Moreover, the character of the municipal authorities is defined as a function of community type and as reflecting the size of the community: small communities of up to 10,000 inhabitants and midsize communities of up to 50,000 residents. Commonly, among small communities, the municipal authority provides services to several homogenous communities that are geographically close. Medium-size towns, on the other hand, are heterogeneous.

The municipal authorities are considered a cornerstone in the leadership paradigm (Amundsen, 2012). One of the functions of municipal authorities concerns the provision of effective information that meets the population's needs.

1.2. Transparent communication between leaders and populations

The role of transparent communication between leaders and populations has been noted in many domains, including psychology, sociology and administration. Important as it is during routine times, such communication assumes immense importance during emergencies. Fairbanks et al. (2007) stress the importance of transparency for the very existence of democratic governance. According to the latter, in addition to communication elements such as openness, the use of a variety of channels to disseminate information, and seeking feedback from public agencies, there is a need to involve principles of stakeholder management. Currently, the use of internet platforms and social media as channels of communication between the government and the public is increasing constantly, leading to improved communication, especially in crises (Ulmer et al., 2013). Piotrowski and Van Ryzin (2007) describe the impact of e-government and e-governance on engaging citizens in the process of democracy and rebuilding trust-based relations between citizens and state. The possibilities opened up by the development of two sided communication are significant. Indeed, two sided messages have been found to command enhanced credibility and persuasiveness as compared with one sided messages (O'Keefe, 1999). Chen (2009) noted the need for the "institutionalization" of public relations as a strategic-management function relating to effective communication in crises. Special attention has been given to the role of communication in the building of trust between citizens and public. According to Bonelli et al. (2016), trust can promote compliance and cooperation, and it is a fundamental construct for social interaction, especially in the context of risk perception. Designing effective communication strategies and thereby promoting cooperation between citizens and institutions is of unique importance (Bonelli et al., 2016). Hilyard (2008) points to the trust that is manifested between institutes and public during emergency situations, reflecting the willingness of the public to obey orders issued by the authority in order to mitigate the consequences of the emergency (Hilyard, 2008). Ivanov et al. (2016) found inoculation to be effective as a strategy for pre-crisis messaging. Olsson et al. (2015) reported that honest communication between the public and authorities creates a dialog which in turn enhances community resilience in dealing with extreme situations.

Based on the value of the information provided by the authorities, Girard et al. (2014) analyzed the disaster response communicated to the public in near real time, in order to identify potentially critical disaster response information when it can still be modified. Sharing information through various channels, including social media, was found to have significant positive impact (Neely, 2014; Houston et al., 2014). In other studies, information is perceived as an essential resource for community disaster readiness (Uscher-Pines et al., 2013; Bajayo, 2012).

Table 1
Major study population characteristics with mean CCRAM and municipal information provision scores.

Variable	N	%	CCRAM score	*p*-Value (*t*-test or ANOVA)	Municipal information ranking	*p*-Value (*t*-test or ANOVA)
Total	1139	100	3.5		3.3	
Gender						
Female	679	59.6	3.5	0.186	3.3	0.735
Male	422	37.1	3.4		3.3	
Family status						
In a permanent relationship	888	78.0	3.5	<0.001	3.4	<0.001
Not in a permanent relationship	231	20.3	3.2		2.9	
Community type						
Midsize town (up to 50,000)	518	45.5	3.0	<0.001	3.0	<0.001
Small community (up to 10,000)	621	54.5	3.8		3.5	
Income						
About average	316	27.7	3.5		3.3	
Below average	317	27.8	3.0	<0.001	3.0	<0.001
Above average	424	37.2	3.7		3.4	
CERT volunteer						
No	974	85.5	3.4	<0.001	3.2	<0.001
Yes	139	12.2	3.9		3.6	
Physical or mental disability						
No	950	83.4	3.5	0.005	3.3	0.912
Yes	178	15.6	3.3		3.3	
Previous involvement in an emergency situation						
No	555	48.7	3.4	0.165	3.2	0.077
Yes	395	34.7	3.5		3.4	

Table 2
Frequencies of different degrees of satisfaction with municipal information according to sociodemographic variables.

	Disagree (A) Row		Slightly agree (B) Row		Somewhat agree (C) Row		Strongly agree (D) Row		Very strongly agree (E) Row	
	n	N %	n	N %	n	N %	n	N %	n	N %
Community type										
Midsize town ($n = 518$)	77[BCDE]	14.9%	101[D]	19.5%	138	26.6%	133	25.7%	69	13.3%
Small community ($n = 621$)	23	3.7%	96[A]	15.5%	175[A]	28.2%	214[AB]	34.5%	113[A]	18.2%
Income level										
Below ($n = 317$)	47[CDE]	14.8%	65	20.5%	84	26.5%	78	24.6%	43	13.6%
About average ($n = 316$)	28	8.9%	51	16.1%	80	25.3%	105	33.2%	52	16.5%
Above ($n = 424$)	16	3.8%	73[A]	17.2%	135[A]	31.8%	122[A]	28.8%	78[A]	18.4%
Family status										
In a permanent relationship ($n = 888$)	63	7.1%	145	16.3%	244[A]	27.5%	288[AB]	32.4%	148[A]	16.7%
Not in a permanent relationship ($n = 231$)	37[CDE]	16.0%	51[D]	22.1%	61	26.4%	52	22.5%	30	13.0%

Note: Pairwise comparison with chi-square < 0.05.

1.3. Measuring community resilience

The Conjoint Community Resilience Assessment Measure (CCRAM) is an empirically based instrument developed via a thorough scientific process and recognized as a valid tool for assessing community resilience by household sampling (Cutter, 2016; Bonanno et al., 2015). CCRAM encompasses the factors determining a community's resilience identified through statistical and content validation by mixed methods research; these factors, however, are also anchored in the professional literature surrounding the concept of community resilience (Leykin et al., 2013; Cohen et al., 2013). The factors identified are the basis for building intervention plans. Studies using CCRAM analyze a community's resilience by exploring potential strengths and weaknesses in order to build comprehensive intervention plans (Cohen et al., 2016a, 2016b).

This study is part of set of studies conducted in Israel for the purpose of elucidating the factors associated with community resilience and the characteristics of community resilience in different sub-populations (Cohen et al., 2016a, 2016b; Leykin et al., 2015). The Israeli population is characterized by familiarity with and exposure to emergency situations, including man-made terror attacks and threats to confidence at various levels. Based on the positive association described in the literature review, which highlights the importance of ongoing fostering of both community resilience and the information system linking authorities and public, the current study explores the relationship between satisfaction with information provided by the local municipality, community resilience scores, and community resilience factors, measured by CCRAM.

Table 3
Association between covariates and CCRAM score, linear regression model.

Variable	B	Beta	*p*	95% Confidence interval	
				Lower boundary	Upper boundary
Gender					
Female	1				
Male	−0.027	−0.017	0.507	−0.107	0.053
Age (per year)	**0.003**	0.056	0.052	0.000	0.007
Permanent relationship					
Yes	1				
No	−0.019	−0.009	0.738	−0.128	0.091
Physical or mental disability					
No	1				
Yes	−0.015	−0.007	0.786	−0.125	0.095
Community type					
Midsized city	1				
Small community	**0.696**	0.445	0.000	0.597	0.794
Income					
Average					
Below	−0.022	−0.013	0.698	−0.133	0.089
Above	−0.069	−0.044	0.170	−0.166	0.029
CERT volunteer					
No	1				
Yes	**0.242**	0.109	0.000	0.130	0.354
Satisfaction with municipal information	**0.265**	0.395	0.000	0.231	0.299

2. Materials and methods

A cross-sectional survey using the CCRAM tool to measure community resilience was performed during a relatively calm period. CCRAM is a self-report questionnaire with 28 items, of which the first 21 comprise the community resilience score. Responses can range from 1 to 5 on a Likert scale Seven items (22–28) provide additional important information on issues related to community resilience, one of which focuses on the information provided by the municipality. The respondent is requested to rank agreement with the statement: "The information I receive from the municipal authority during emergency situations fulfills my needs".

2.1. Data collection

Data were collected between September 2012 and January 2014 in small communities (up to 10,000 residents) and midsized towns (up to 50,000 residents) in Israel. Data were obtained by door to door surveys at randomly selected addresses and by distributing electronic questionnaires in small communities with a complete electronic mailing list. Qualtrics (www.qualtrics.com) web-based survey software was used. The study was approved by the Institutional Review Board (IRB) of the Faculty of Health Sciences at Ben-Gurion University of the Negev. A brief introduction at the beginning of the questionnaire described the objectives of the study and specified that completing the questionnaire was voluntary and could be terminated at any time, and that the questionnaires were anonymous. Continuing to answer the questions represented informed consent, as approved by the IRB.

2.2. Statistical analysis

The reliability of the CCRAM score and its factors was examined using Cronbach's alpha. Pearson correlation coefficients were calculated and used to examine the association between CCRAM factors and assessment of adequacy of municipal information, and background variables. An independent *t*-test and analysis of variance (ANOVA) followed by *post hoc* tests were used to compare mean CCRAM scores between sub-groups of participants and satisfaction with information provided by the municipality. The scoring of satisfaction with municipal information on a five point Likert scale (from very strongly agree to disagree) is presented for selected socio-demographic variables with descriptive statistics (n, row n%) and *post hoc* pairwise comparisons with

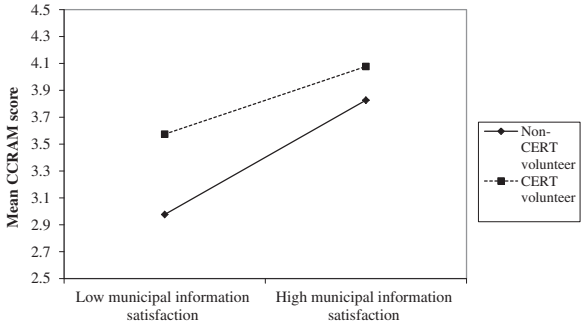

Fig. 1. Interaction between satisfaction with municipal information and CERT volunteering.

Bonferroni correction were detailed. All other *p*-values are reported at a significance level of $p = 0.05$ with no correction for multiple testing.

A linear regression model was constructed to examine the association between the dependent variable CCRAM score and the independent variable municipal information ranking.

The association between CCRAM and municipal information ranking was studied by means of a correlation analysis and again by means of a multiple regression analysis. Included in the model were gender, age, being in a permanent relationship, physical or mental disability, community type, reported income level, and volunteering with the community emergency response team (CERT). All pairwise interactions between main effects were entered in the initial model. However, the significant interaction (municipal-information and CERT-volunteer) was not included in the final model due to a multi collinearity effect. The final model was adjusted for the sociodemographic and other covariates. The estimates of the final regression model with 95% confidence interval (95% CI) were presented in a table and for illustration the impact of municipal-information and CERT-volunteer interaction on CCRAM was graphed.

Data were analyzed using Statistical Package for the Social Sciences (SPSS) version 21.0.

3. Results

The study included 1139 adults (mean age 40.7 years, range 18–78, SD 13.07 years), living in small communities ($n = 621$, 54.5%) and midsize towns ($n = 518$, 45.5%). >95% of the responders where Jewish ($n = 1084$). The CCRAM questionnaire showed high reliability ($\alpha = 0.945$). Table 1 presents major study population characteristics. Additional information is presented in Tables A.1 and A.2. Satisfaction with information received from the municipality during emergency situations and the CCRAM score were positively correlated (r (1139) = 0.528, $p < 0.001$). The association among CCRAM factors were: leadership (r (1139) = 0.386, $p < 0.001$), collective efficacy (r (1139) = 0.516, $p < 0.001$), preparedness (r (1139) = 0.372, $p < 0.001$), place attachment (r (1139) = 0.504, $p < 0.001$), social trust (r (1139) = 0.518, $p < 0.001$). The association between satisfaction with information received from municipality and the CCRAM items is detailed in Table A.3.

Table 2 presents the distribution of scores for satisfaction with information during emergencies over the different sociodemographic variables that were found to be significant in the previous analysis. Significant interaction was found between satisfaction with municipal information and CERT volunteering, $p = 0.005$. This interaction is presented in Fig. 1.

3.1. Linear regression

A multiple linear regression model was constructed to predict the CCRAM score based on the independent variables detailed above. A significant regression equation was found $F(9,853) = 81.458, p < 0.001$), with an adjusted R^2 of 0.459. There was no evidence of multi-collinearity according to the tolerance values. Table 3 presents the association between covariates and CCRAM score for this model. Living in small communities, B = 0.696 (95% CI 0.597–0.794), CERT volunteering, B = 0.242 (95% CI 0.130–0.354), and satisfaction with information received from municipality, B = 0.265 (95% CI 0.231–0.299), were positively associated with the CCRAM score ($p < 0.001$). Age (per year) was found to have a borderline positive association with CCRAM score, B = 0.003 (95% CI 0.000–0.007), $p = 0.052$.

4. Discussion

This study found a positive relationship between community resilience scores and satisfaction with information received from the municipality during emergency situations in a study based on household sampling of communities. Our findings provide evidence regarding the connection between information provided by authority and the resilience of a community (e.g. Cutter et al., 2008; Norris et al., 2008, Pfefferbaum et al., 2013). The association was found to be significantly positive in all CCRAM factors and items (See Table A.3), and more importantly among participants that were not involved in CERT volunteering (see Fig. 1). Residents of small communities were found to be more satisfied with the information than residents of midsize towns (see Table 1), a finding that is attributable to the homogeneity of the population in small communities.

This study focused on the perception of the information provided and on community resilience and did not measure the actual flow of information between municipalities and citizens, nor the attitudes of participants regarding governance style and information formatting. Nonetheless, it was observed that all the municipal authorities involved in this study made considerable efforts to develop and maintain information channels with their residents. These included active web-based technology and social media, distribution of messages according to relevant conditions, and maintaining a resident contact center during emergencies. Social media play an important role in disseminating information, and their use by the public in emergencies is increasing (Simon et al., 2014). According to Taylor et al. (2012), during emergencies the public often uses social media to re-post or re-tweet links from government websites, distributing information felt to be of use to communities.

The impact of information provided during emergencies is reflected in the literature in various ways. Information increases the population's knowledge about the danger and behavioral options (Norris et al., 2008). Basolo et al. (2008) found a link between individuals' confidence in the local government's ability to manage a disaster and availability of sources of disaster information. They reported that both of these factors were associated with a higher level of perceived preparedness. Buergelt and Paton (2014) noted that providing reliable information about risks builds trust between residents and agencies, in turn leading to a positive social environment. Our findings about the correlation between satisfaction with municipal information and social components of community resilience, such as trust, collective efficacy and sense of belonging to the community, reinforced this assumption.

Amundsen (2012) mentioned that it is important to link the concept of community resilience to learning processes, and projected systemic changes about interacting processes. Based on the study, we recommend that decision makers in municipalities of small and midsized towns give priority to advancing a communication system that provides information during emergencies. The information has to target the needs of the citizens, including sub-populations such as low-income residents and minorities. Appropriate information could promote all the factors of community resilience: leadership, collective efficacy, preparedness, social trust and place attachment. This study focused on information provided in emergency situations. However, enhancing resiliency of a community should be based on continual activities (UNISDR, 2015), including strengthening ties between government and the community. Building a communication system could increase the ability of the population to cope with emergencies and improve daily level resilience, thereby enhancing the overall fabric of the society.

The CCRAM tool measures community resilience based on household sampling and expresses the voice of population regarding their communities. After CCRAM was developed it was translated into 14 languages and applied in different countries and communities. In addition, CCRAM was modified and adapted for high schools and organizational environment. The Sendai framework (UNISDR, 2015) mentioned the importance of integrating measurement in its implementation, especially at the local level. Integrating the CCRAM tool in longitudinal studies in order to assess the resiliency of the community could meet this call.

4.1. Limitations and further studies

This study was cross-sectional; thus, we were able to identify associations but not causality. Future longitudinal studies may shed more light on the effect of municipal information provided during emergencies and on building community resilience. In addition, this study represents a first step towards determining the correlation between information provided by authorities and community resilience scores. There was no opportunity to focus on the quality of the two sided information flow; it is recommended that further studies be carried out on this aspect. Another limitation was the lack of information regarding the response rate. Electronic mailing lists were used to approach some of the study population, and we were unable to detect an email which did not reach its destination or was not opened.

5. Conclusions

This study highlights the importance of the information provided by municipal authorities to the population when aiming to build or enhance community resilience to emergencies. The association between the information supplied and resilience was significant for all CCRAM factors, including collective efficacy and social trust, as described in the literature. This information is of utmost importance for decision makers and local leadership when designing policy for resilience building processes and planning communication with the population.

Formatting of funding sources

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Acknowledgement

The authors would like to thank Ms. Aviva Goral and Mr. Dmitry Leykin for their assistance with data analysis. The Conjoint Community Resiliency Assessment Measure (CCRAM) was developed through the group work of a multidisciplinary group of researchers from seven academic institutions in Israel, as detailed in Cohen et al. (2013). We thank them all.

Appendix A

Table A.1
Distribution of scores for individual CCRAM items.

No.	Phrase	Min	Max	Mean	SD
1.	The municipal authority functions well.	1	5	3.27	1.215
2.	There is mutual assistance and people care for one another.	1	5	3.65	1.130
3.	My community is prepared for an emergency situation.	1	5	3.44	1.105
4.	I am proud to tell others where I live.	1	5	4.06	1.092
5.	Good relationships exist between various groups.	1	5	3.59	0.948
6.	I trust the local decision makers	1	5	3.01	1.186
7.	I can count on people in my community to help me in a crisis situation.	1	5	3.75	1.133
8.	Residents are aware of their roles in an emergency situation.	1	5	3.13	1.138
9.	I have a sense of belonging to my community.	1	5	3.92	1.111
10.	Residents in my community trust each other.	1	5	3.59	0.978
11.	In my community, Appropriate attention is given to the needs of children.	1	5	3.59	1.134
12.	In my community, there are people who can help to cope with an emergency situation.	1	5	3.66	1.085
13.	There are sufficient facilities for public protection (e.g. shelters, etc.) in my community	1	5	3.36	1.186
14.	I remain in my community for ideological reasons.	1	5	2.86	1.373
15.	I have faith in my mayor's ability to lead the transfer from routine to emergency management.	1	5	3.22	1.210
16.	I have faith in my community's ability to overcome an emergency situation.	1	5	3.76	1.026
17.	My family and I are acquainted with the emergency system in my town (to be activated in times of emergency).	1	5	3.07	1.258
18.	I would be sorry to leave the town where I reside.	1	5	3.85	1.266
19.	The municipal authorities fairly provide services	1	5	3.16	1.187
20.	The residents are greatly involved in the community's activities.	1	5	3.21	1.065
21.	The residents of my community will continue to receive Municipal services even in an emergency situation.	1	5	3.37	1.027
22.	I feel safe in my place of residence.	1	5	3.42	1.049
23.	The Health services in my town will continue to function appropriately in an emergency situation.	1	5	3.21	1.145
24.	The information I receive from the municipal authority during emergency situations fulfill my needs.	1	5	3.28	1.180
25.	Many of my neighbors are my friends.	1	5	3.77	1.051
26.	I intend to leave my place of residence in an emergency.	1	5	2.21	1.310
27.	In an emergency, the public transportation where I live will function.	1	5	2.52	1.087
28.	Officials in my place of residence demonstrate leadership abilities.	1	5	3.14	1.183

Table A.2
Distribution of scores for CCRAM factors.

CCRAM factors	Min	Max	Mean	SD
CCRAM total score	1	5	3.45	0.791
Leadership	1	5	3.27	0.985

(continued on next page)

Table A.2 (*continued*)

CCRAM factors	Min	Max	Mean	SD
Collective efficacy	1	5	3.61	0.874
Preparedness	1	5	3.25	0.928
Place attachment	1	5	3.67	0.959
Social trust	1	5	3.59	0.876

Table A.3
Correlation between CCRAM items and satisfaction with municipal information.

No.	CCRAM's items	Correlation with satisfaction with municipal information
1	The municipal authority functions well.	0.263**
2	There is mutual assistance and people care for one another.	0.433**
3	My community is prepared for an emergency situation.	0.306**
4	I am proud to tell others where I live.	0.405**
5	Good relationships exist between various groups.	0.413**
6	I trust the local decision makers	0.324**
7	I can count on people in my community to help me in a crisis situation.	0.461**
8	Residents are aware of their roles in an emergency situation.	0.288**
9	I have a sense of belonging to my community.	0.526**
10	Residents in my community trust each other.	0.487**
11	In my community, Appropriate attention is given to the needs of children.	0.334**
12	In my community, There are people who can help to cope with an emergency situation.	0.370**
13	There are sufficient facilities for public protection (e.g. shelters, etc.) in my community	0.274**
14	I remain in my community for ideological reasons.	0.275**
15	I have faith in my mayor's ability to lead the transfer from routine to emergency management.	0.344**
16	I have faith in my community's ability to overcome an emergency situation.	0.367**
17	My family and I are acquainted with the emergency system in my town (to be activated in times of emergency).	0.298**
18	I would be sorry to leave the town where I reside.	0.421**
19	The municipal authorities fairly provide services	0.338**
20	The residents are greatly involved in the community's activities.	0.389**
21	The residents of my community will continue to receive Municipal services even in an emergency situation.	0.341**

** $p < 0.010$.

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