Original article

Resilience and related factors among volunteers of Thai Red Cross Society at King Chulalongkorn Memorial Hospital

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Background: Volunteers of the Thai Red Cross Society have contributed valuable helps to the Thai Red Cross Society and King Chulalongkorn Memorial Hospital. However, there was still a lack of studies on mental health aspects in this group, especially positive psychological resources, i.e., resilience.

Objectives: To examine the levels of resilience quotient (RQ) and associated factors among volunteers of the Thai Red Cross Society at King Chulalongkorn Memorial Hospital.

Methods: We recruited 287 subjects who were currently working as volunteers of the Thai Red Cross Society during 2021 - 2022. The subjects were asked to complete five questionnaires including personal information questionnaires, resilience quotient questionnaire, Thai Hospital Anxiety and Depression Scale (Thai-HADS), personal resource questionnaire, and burnout questionnaire.

Results: Most subjects had a normal level of RQ (54.7%), followed by a high level of RQ (39.4%), and a low level of RQ (5.9%). The subjects with high RQ levels tend to have no history of medical illness ($P = 0.022$) and higher satisfaction with their volunteer job ($P < 0.001$). Moreover, the total RQ score in this group of subjects is correlated with years of education ($r = 0.150, P = 0.011$), personal income ($r = 0.146, P = 0.014$), the levels of help received from the Thai Red Cross Society officers ($r = -0.171, P = 0.004$), and the levels of satisfaction with volunteer job ($r = 0.321, P < 0.001$)

Conclusions: Most volunteers of the Thai Red Cross Society had normal to high resilience which was associated with healthy physical status, high level of education and income, high levels of help received from the Thai Red Cross Society officers as well as higher levels of satisfaction toward them.

Keywords: Resilience, Thai Red Cross Society, volunteers.

Volunteers of the Thai Red Cross Society are individuals from various professional fields of educational level, status, aptitude, and interest. They have compassion and faith in their work and want to serve society with their prosocial behavior. Generally, the Thai Red Cross Society has defined the roles and duties of volunteers as: 1) to attend a consultation meeting and/or assess the situation and acknowledge information to support operational planning; 2) to participate in defining the details of the work process to know objectives, project plans and activities; 3) to coordinate with the staff of the Thai Red Cross Society and/or the Red Cross provinces responsible for that mission; 4) to perform the tasks assigned following the regulations of the Thai Red Cross Society Volunteers; 5) to report the performance to the relevant agencies and/or provincial red cross; 6) to participate in training according to specific expertise; and, 7) to network to receive additional volunteers.

Thus, the volunteers of Thai Red Cross Society are mainly to help the underprivileged people, giving an opportunity to the pauper, the elderly, and the people with the risk situation, e.g., normal situations, emergencies, and disaster situations, as well as performing assistance activities in various aspects. The major job responsibilities of these groups of volunteers are to work according to the main mission

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of the Thai Red Cross Society such as medical and health service (provide medical and public health services by participating in the team that provides medical services rehabilitation, disease prevention, health promotion, or support other activities, such as visiting patients at home, setting a mobile medical unit, etc.), disaster relief (operation to alleviate the suffering of people who have suffered from natural disasters and human-caused disasters such as the preparation of food, clothing, medicines, and assistance during disasters in the form of providing first aid fundamentals, visiting disaster victims), blood, organ and eye donation (assist the operations of public relations campaigns with the public and private sectors in organizing to promote those who are interested in donating blood, eye, and organ, also educate them about the procedure before, during, and after donation), social work and promotion the quality of life (participate in helping the project or campaign related to promoting the well-being of the elderly, the underprivileged children, the pauper, the patient, and the various risk groups).

Resilience, being able to recover yourself from a hard situation, is the ability to regain mental health within a short time that express through adaptation. Individuals who have resilience will be protected from various mental health issues, i.e., depression, anxiety, or burnout. Kim KO. and Yoo MS.[1] found that resilience to burnout was the greatest effective factor on meaning in life.

Thus, mental health issues such as resilience and burnout among this group of volunteers are important to the quality of their work. A previous study[2] that study among general health volunteers in Rayong Province showed a moderate level of overall fatigue and 51.2% reported a high level of exhaustion 51.2%. Suwannaboon's study[2] revealed that factors that were relevant to fatigue and exhaustion were organization support and psychological endurance. Volunteers had to face tough situations to deal with human suffering, i.e., compassion fatigue.[3] Therefore, resilience is an effective factor for volunteers' mental health. To the best of our knowledge, there is still no study in the group of the volunteers of the Thai Red Cross Society, who are working in a more specific and critical health setting, especially in the aspects of resilience. Our research aimed to assess the levels of resilience and associated factors among this group of volunteers at King Chulalongkorn Memorial Hospital.

Materials and methods

We conducted a cross-sectional descriptive study to examine the resilience quotient (RQ) and the associated factors among volunteers of the Thai Red Cross Society at Chulalongkorn Memorial Hospital. Our study protocol has been approved by the Ethics Committees, the Institutional Review Board (IRB) of the Faculty of Medicine, Chulalongkorn University. All subjects were informed of the objectives and methods of the present study before giving their consent (IRB no. 466/64).

Subjects

The volunteers were recruited from those currently active in the database system of volunteers of Thai Red Cross Society from 2021 to 2022. The sample size was calculated by using Taro Yamane's (Yamane, 1969) formula with a 95% confidence level. A total of 287 participants met the inclusion criteria as follows: 1) currently working as a volunteer of the Thai Red Cross Society; 2) able to read, write and understand the Thai language; and, 3) fully conscious with a good orientation of time, place and person. The subjects with vision or hearing problems or severe illness were excluded because the impairment might affect their ability to answer the questionnaires.

Measurements

All subjects were asked to complete five questionnaires including personal information questionnaires, resilience quotient questionnaire, Thai Hospital Anxiety and Depression Scale (Thai-HADS), personal resource questionnaire, and burnout questionnaire.

Personal information questionnaires consist of gender, age, years of education, occupation, history of medical illness, personal income (THB/month), adequacy of income, marital status, burden of parental care, burden of child care, occupation, duration of volunteers, type of volunteers, frequency of volunteering, help received from the officer of the Thai Red Cross Society, and satisfaction of volunteer job. A 20-item RQ questionnaires - Department of Health. The score ranged from 20 to 100. The higher score correlated with higher resilience. The normal RQ score ranged from 55 to 66. A score of more than 67 was considered as higher resilience. A 25-item personal resource questionnaires (PRQ) - Brand and Winert is translated into Thai by Anankunupakorn S. The score ranged from 25 to 125.

A higher score referred to higher social support. A 14-item Thai Hospital Anxiety and Depression Scale – Thai version (Thai-HADS) is translated from Zigmond and Snaith by Nilchaikovit T. Anxiety was assessed by item no. 1, 3, 5, 7, 9, 11, and 13, whereas depression was assessed by item no. 2, 4, 6, 8, 10, 12 and 14. Anxiety and depression score ranged between 0 - 21. A higher score correlated with higher anxiety/depression. Those who scored $\geq$ 8 was considered as "doubtful case" whereas score $\geq$ 11 indicated cases of anxiety/depression.[4] A 22-item burnout questionnaire developed from research project of Ministry of Public Health. This questionnaire was divided in to three parts, namely: 1) emotional exhaustion; 2) depersonalization; and, 3) personal accomplishment. Those who scored higher on emotional exhaustion and depersonalization, whereas scored lower on personal accomplishment were categorized as high burnout group.

Statistical analysis

Statistical analysis was performed by SPSS version 21.0 (Statistical Package for Social Science) statistical software. The descriptive data and resilience quotient of the subjects were analyzed as descriptive analysis and inferential statistic.

The descriptive statistic was applied to illustrate the general information questionnaires in terms of gender, age, years of education, occupation, history of medical illness, personal income (THB/month), adequacy of income, marital status, the burden of parental care, burden of child care, occupation, duration of volunteers, type of volunteers, frequency of volunteering, help received from the officer of the Thai Red Cross Society, the satisfaction of volunteer job, etc., by using frequency and percentage.

Psychosocial questionnaires were analyzed by using the mean and standard deviation (SD). The inferential statistic was applied to analyze the associated factors related to the RQ of the subjects by using the Chi-square independence test of variables, unpaired t - test, and Pearson's correlation coefficient. $P < 0.05$ was considered as statistically significant.

Results

The results showed that most of the 287 subjects were female (84.0%). Their average mean age was 59.3 ± 7.5 years. Most of them were married (49.1%). The mean years of their education was 16.2 ± 1.8 years. Approximately 62.7% of them had retired or unemployed at the time of the study. They were working as volunteers of the Thai Red Cross Society for the mean of 39.7 ± 25.0 months.

Regarding type of volunteer job, most of the subjects were doing document job (91.3%), doing administrative job (69.7%), document job (8.7%), medical or health services, disaster victim help/blood bank (25.4%) and social welfare job (7.0%) respectively. Most subjects received helps from the officer of the Thai Red Cross Society *"every time"* they needed (53.3%). Their satisfaction mean score toward volunteer job was 9.01 ± 1.05.

Most subjects had moderate level of PRQ (70.2%), with PRQ mean score 101.0 ± 10.4. Most subjects had no anxiety (89.2%) and no depression (85.7%). According to Thai - HADS, for burnout section, most of the subjects were categorized in low burnout group (81.2%). The result showed no subject were categorized in the high burnout group (Table 1).

Table 1. Socio-demographic and associated characteristics of the subjects (n = 287).

Characteristics	Mean ± SD or n (%)
Age (years)	59.3 ± 7.5
Gender	
Female	241 (84.0)
Male	46 (16.0)
Education level (years)	
< = Bachelor Degree	215 (74.9)
> = Bachelor Degree	72 (25.1)
Marital status	
Single	92 (32.1)
Married	141 (49.1)
Divorced/separated	34 (11.8)
Widowed	16 (5.6)
Other	4 (1.4)

Table 1. (Cont.) Socio-demographic and associated characteristics of the subjects (n = 287).

Characteristics	Mean ± SD or n (%)
History of physical illness	
No	146 (50.9)
Yes	141 (49.1)
Duration of volunteer job (n = 283)	
≤ 12 month	38 (13.4)
13 - 24 month	72 (25.5)
> 24 month	173 (61.1)
(Mean ± SD = 39.7 ± 25.0)	
Help received from the officer of the Thai Red Cross Society	
Every time	153 (53.3)
Most of the time	100 (34.8)
Sometime	32 (11.2)
Never	2 (0.7)
Satisfaction of help received from the officer of the Thai Red Cross Society (score 0 - 10)	
≤ 6	6 (2.1)
7	15 (5.2)
8	66 (23.0)
9	79 (27.5)
10	121 (42.2)
Personal resource questionnaire (PRQ) score (n = 282)	
High	42 (14.9)
Moderate	198 (70.2)
Low	42 (14.9)
HADS – Anxiety score	
0 - 7	256 (89.2)
8 - 10	19 (6.6)
≥ 11	12 (4.2)
HADS – Depression score	
0 - 7	246 (85.7)
8 - 10	20 (7.0)
≥ 11	21 (7.3)
Burnout	
Low	233 (81.2)
Moderate	54 (18.8)
High	0 (0.0)

Regarding levels of resilience quotient (RQ), most of 287 subjects have normal resilience quotient (RQ) (54.7%). Approximately 39.4% had high RQ and 17 subjects, 5.9%, had low RQ. The average RQ score was 66.9 ± 7.7 (Table 2).

After categorized the subjects into those who have low-normal RQ group and high RQ group to examine the associated factors of resilience. We found that those with high RQ tend to be significantly healthy or have no physical illness ($P = 0.022$) (Table 3).

The Pearson's correlation was used to examine the correlation between RQ score and other related factors. The results shown that RQ score was statistically significant correlated with years of education ($r = 0.150$, $P = 0.011$), personal income in THB ($r = 0.146$, $P = 0.014$), amount of help received from the officer of the Thai Red Cross Society ($r = 0.171$, $P = 0.004$) and satisfaction of help received from the officers of the Thai Red Cross Society ($r = 0.321$, $P < 0.001$), all positively (Table 4).

Table 2. Levels of resilience quotient (RQ) among volunteers of the Thai Red Cross Society (n = 287).

Resilience quotient (RQ)	N = 287	Percentage
Low	17	5.9
Normal	157	54.7
High	113	39.4
Mean ± SD = 66.9 ± 7.7 (Min 35, Max 80)		

Table 3. The related factors with resilience quotient (RQ) among volunteers of the Thai Red Cross Society using Chi-square and *t* - test.

Variables	Low to normal RQ (n = 174) Mean ± SD or n (%)	High RQ (n = 113) Mean ± SD or n (%)	*P* - value
History of physical illness			0.022*
No	79 (45.4)	67 (59.3)	
Yes	95 (54.6)	46 (40.7)	
Duration of volunteer job			0.111
< = 48 months	138 (80.7)	81 (71.6)	
> = 48 months	33 (19.3)	31 (27.4)	
Type of volunteer job			0.523
Document job	17 (9.77)	8 (7.1)	0.190
Administrative job	58 (33.3)	29 (25.7)	0.178
Medical or Health Services	96 (55.2)	72 (63.7)	0.268
Disaster victim help/Blood bank	40 (23.0)	33 (29.2)	0.757
Social worker	31 (17.8)	22 (19.5)	
Help received from the officer of the Thai Red Cross Society			0.278
Every time	87 (50.0)	66 (58.4)	
Most of the time	62 (35.6)	38 (33.6)	
Sometime	24 (13.8)	8 (7.1)	
Never	1 (0.6)	1 (0.9)	
Satisfaction of help received from the officer of the Thai Red Cross Society (score 0 - 10)			0.420
0 - 5	1 (0.6)	0 (0.00)	
5 - 10	173 (99.4)	113 (100.0)	
Personal resource questionnaire (PRQ) score			0.275
High	29 (16.7)	13 (11.5)	
Moderate	114 (65.5)	84 (74.3)	
Low	31 (17.8)	16 (14.2)	
HADS – Anxiety score			0.745
0 - 7	157 (90.2)	99 (87.6)	
8 - 10	10 (5.8)	9 (8.0)	
≥ 11	7 (4.0)	5 (4.4)	
HADS – Depression score			0.746
0 - 7	149 (85.6)	97 (85.8)	
8 - 10	11 (6.3)	9 (8.0)	
≥ 11	14 (8.1)	7 (6.2)	
Burnout			1.000
Low	141 (81.0)	92 (81.4)	
Moderate	33 (19.0)	21 (18.6)	
High	0 (0.0)	0 (0.0)	

*P < 0.05, **P < 0.01

Table 4. Factors associated with resilience quotient (RQ) score among volunteers of the Thai Red Cross Society using Pearson's Correlation Coefficient.

Factors	Resilience Quotient (RQ) score	
	r	*P* - value
Age	0.013	0.828
Years of education	0.150	0.011*
Personal income	0.146	0.014*
Duration of volunteer (months)	0.061	0.309
Amount of help received from the officer of the Thai Red Cross Society	0.171	0.004**
Satisfaction of help received from the officerof the Thai Red Cross Society	0.321	0.000**
Depression, anxiety (HADS) score		
Depression score	0.022	0.716
Anxiety score	- 0.008	0.895
Personal resource questionnaire (PRQ) score burnout components	0.066	0.266
Emotional exhaustion	0.061	0.306
Depersonalization	0.063	0.290
Personal accomplishment	- 0.058	0.325

*$P < 0.05$, **$P < 0.01$

Discussion

As for the Thai Red Cross Society volunteers in our study, we found that most of them had a normal level of resilience quotient (RQ), with around one-third that had a high level. This was congruent with the study on the officers of public health college [5], and new nursing graduates[6] which found that most of the subjects had a normal level of resilience quotient whereas incongruent with the study on 806 emotional workers in 2019 which had a lower level of RQ and a higher level of burnout.[7]

In this study, we found that those with a high level of RQ tend to have no physical illness which is congruent with the study on public health college officers[5] and elderly people.[8] Moreover, we also found the correlation between resilience quotient score and years of education, personal income, amount of help received, and satisfaction score of help received from the officer of the Thai Red Cross Society. All factors were positively correlated with the resilience quotient score. These were congruent with a study on the elderly population[9] which found that elders who received emotional help and protection would feel secure and confident in their ability to give help to society. Iamsiripreeda P, *et al*.[10] proposed the empowerment of senior citizens through volunteer work to support the aging society situation in Thailand which emphasized finding new knowledge for volunteer management. They also said that the volunteering is not only to help the community and state agencies but also beneficial to the senior

volunteer both good physical and mental health and can adapt well after retirement. If the management of volunteering for the elderly was taken appropriately (e.g., providing good help) these outcomes leads to effective volunteer work among the elderly.

For personal income, which reflects financial security was also mentioned in a study on the elderly in Bangkok.[11] Younger elderly tended to have more financial security than their older counterparts which affects their adaptive ability to various situations. Wagnlid G. [12] also emphasized the ability to respond to basic needs in humans which need adequate financial security to access to resources needed.

Thus, the resilience quotient was important for volunteers. The institutions should be concerned about the psychological factor of the volunteer group, i.e., resilience quotient, to improve their mental health. The future direction of research among volunteers should be concerned with the type of volunteer job because this factor was related to the resilience quotient.

The present study has some limitation This research studied the Thai Red Cross Society volunteers at King Chulalongkorn Memorial Hospital which is a large tertiary hospital in Bangkok. Research results may not be applicable to volunteers in other settings.

Conclusions

The resilience of the Thai Red Cross Society was within the normal level, followed by a high level. The factors associated with resilience among this group

of subjects were years of education, personal income, help received, and satisfaction with help received from the officer of the Thai Red Cross Society.

Conflict of interest statement

The authors have each completed an ICMJE disclosure form. None of the authors declare any potential or actual relationship, activity, or interest related to the content of this article.

Data sharing statement

The present review is based on the reference cited. Further details, opinions, and interpretation are available from the corresponding authors on reasonable request.

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