

ปัจจัยที่มีความสัมพันธ์กับความสามารถในการเผชิญและฟื้นฝ่าอุปสรรค ของพยาบาลวิชาชีพโรงพยาบาลมะเร็งชลบุรี Factors Related to Adversity Quotient of Nurses in Chonburi Cancer Hospital

นิพนธ์ต้นฉบับ

Original Article

ดลฤดี โฉมจันทน์^{1*}, จินห์จาทา ชัยเสนา ดลาลาส², ชันดดา แนบเกษร² และ
สาวตรี หลักทอง²

¹ ผลิตหลักสูตรพยาบาลศาสตรมหาบัณฑิต สาขาการพยาบาลสุขภาพจิตและจิตเวช

² สาขาการพยาบาลสุขภาพจิตและจิตเวช

^{1,2} คณะพยาบาลศาสตร์ มหาวิทยาลัยบูรพา อ.เมืองชลบุรี จ.ชลบุรี 20131

* Corresponding author: Aumnaka.321@gmail.com

วารสารไทยเภสัชศาสตร์และวิทยาการสุขภาพ 2564;16(2):95-101.

Donrudee Chomjungwat^{1*}, Jinjuta Chaisena Dallas², Chanudda Nabkasorn²
and Sawitree Lakhong²

¹ Student in Master's of Science (Nursing) program, Department of Mental and Psychiatric Nursing

² Department of Mental and Psychiatric Nursing

^{1,2} Nursing Faculty of Nursing, Burapha University, Muang Chonburi, Chonburi, 20130, Thailand

* Corresponding author: Aumnaka.321@gmail.com

Thal Pharmaceutical and Health Science Journal 2021;16(2):95-101.

บทคัดย่อ

วัตถุประสงค์: เพื่อศึกษาความสามารถในการเผชิญและฟื้นฝ่าอุปสรรค และความสัมพันธ์กับการมองโลกในแง่ดี สัมพันธภาพภายในครอบครัว และความผูกพันในวิชาชีพ ของพยาบาลวิชาชีพของโรงพยาบาลโรคมะเร็ง **วิธีการศึกษา:** การวิจัยนี้มีตัวอย่างเป็นพยาบาลวิชาชีพโรงพยาบาลมะเร็งชลบุรีตามคุณสมบัติที่กำหนด รวบรวมข้อมูลโดยใช้แบบสอบถาม จำนวน 5 ชุด คือ (1) แบบสอบถามข้อมูลส่วนบุคคล (2) ความสามารถในการเผชิญและฟื้นฝ่าอุปสรรค (3) การมองโลกในแง่ดี (4) สัมพันธภาพภายในครอบครัว และ (5) ความผูกพันในวิชาชีพ เก็บข้อมูลระหว่างเดือนพฤศจิกายน – ธันวาคม พ.ศ. 2562 วิเคราะห์ข้อมูลด้วยสถิติพรรณนาและสถิติสัมพันธ์สหสัมพันธ์แบบเพียร์สัน **ผลการศึกษา:** กลุ่มตัวอย่างมีความสามารถในการเผชิญและฟื้นฝ่าอุปสรรคอยู่ในระดับสูง ($M = 5.12$, $SD = 0.45$) และความสามารถในการเผชิญและฟื้นฝ่าอุปสรรคสัมพันธ์ทางบวกกับการมองโลกในแง่ดี ($r = 0.42$) และสัมพันธภาพภายในครอบครัว ($r = 0.33$) อย่างมีนัยสำคัญทางสถิติ (P -value < 0.05 ทั้งคู่) แต่ไม่สัมพันธ์กับความผูกพันในวิชาชีพ สรุป: ความสามารถในการเผชิญและฟื้นฝ่าอุปสรรคในพยาบาลที่โรงพยาบาลมะเร็งสัมพันธ์ทางบวกกับการมองโลกในแง่ดีและสัมพันธภาพภายในครอบครัว ผู้บริหารและบุคลากรที่เกี่ยวข้องควรให้ความสำคัญและส่งเสริมให้เกิดการมองโลกในแง่ดี และเสริมสร้างสัมพันธภาพภายในครอบครัวเพื่อพัฒนาให้พยาบาลวิชาชีพโรงพยาบาลมะเร็งสามารถเผชิญและฟื้นฝ่าอุปสรรคต่อไป

คำสำคัญ: พยาบาลวิชาชีพ, ความสามารถในการเผชิญและฟื้นฝ่าอุปสรรค, การมองโลกในแง่ดี, สัมพันธภาพภายในครอบครัว, ความผูกพันในวิชาชีพ, โรงพยาบาลมะเร็ง

Editorial note

Manuscript received in original form: June 12, 2020;

Revised: June 26, 2020;

Accepted in final form: June 27, 2020;

Published online: June 29, 2021.

Journal website: <http://ejournals.swu.ac.th/index.php/pharm/index>

Abstract

Objective: To determine adversity quotient and its relationship with selected factors among professional nurses in cancer-specialized hospital. **Method:** A simple random sampling technique was used to recruit 62 professional nurses who met inclusion criteria. The instruments used for data collection consisted of questionnaires of (1) personal information, (2) adversity quotient (3) optimism, (4) family relationship, and (5) career commitment of professional nurses. Data were collected from November to December, 2019, and were analyzed by descriptive statistics and Pearson's product moment correlation analysis. **Results:** The participants had a high level of adversity quotient ($M = 5.12$, $SD = 0.45$). Adversity quotient was positively correlated with optimism ($r = 0.42$) and family relationship ($r = 0.33$) with statistical significance (P -value < 0.05 for both), but not correlated with career commitment. **Conclusion:** Adversity quotient was positively correlated with optimism ($r = 0.42$) and family relationship among nurses taking care of cancer patients. Hospital administrators and related personnel should promote optimism and positive family relationships in order to strengthen adversity quotient among professional nurses in cancer hospitals.

Keywords: nurse, adversity quotient, optimism, family relationship, career commitment, cancer hospital

Introduction

Nursing is one of the 40 occupations with a high stress level. Nursing tasks cause stress, pressure, and desperation which could lead to the decline of physical deterioration.¹ Professional nurses working in cancer-specialized hospital is of great concern since they are involved in close care for cancer patients. These cancer patients need various treatment modalities such chemotherapy, surgical operation, radiotherapy, and hormone therapy. This unique set of diverse treatment modalities require nurses to have diverse yet specific knowledge and skills to master the care which need

constant learning and improving to achieve a quality treatment.²

Previous studies found that nurses working in cancer-specialized hospitals had a high stress level. This was because cancer-specialized hospitals have context and practice different from other hospitals. In terms of factors contributing to stress on nurses, demographic characteristics of the nurses and their family, organizational factors such as role and, responsibility and structure of the organization, working environment and social support of the organization all pose a significant, negative impact on the nurse.³

Adversity quotient is a factor enhancing the individual to adjust to their daily living. Adversity quotient is referred to capability or potential to overcome obstacles and difficulties. Adversity quotient consists of four components namely control, ownership and origin, reach and endurance. Control (C) means perception of the individual toward their potential or capability in controlling and managing the problem. Ownership and origin (O) refers to realization of the problems under the individual's oversight, taking their own responsibility not pushing the problems to others, and trying to solve to problems. Reach (R) means the acknowledgement on the problems in the individual's life, and the effort to control the negative impact and to enhance the positive impact. Endurance (E) is recognition on how long the problem has been going on and the effort to manage the problem, with the hope to overcome the problem.⁴

Previous studies revealed that adversity quotient was positively associated with the nurse happiness.⁵ Nursing care for cancer patients faces immense problems that could cause stress and pressure. One psychological capability to help overcome adversity and its related stress is the adversity quotient. Adversity quotient also indicates how well the individual adjust to and accept the problems and difficult situations.

Being optimistic is one of the important positive traits that could affect the capability to face and overcome the obstacles. Optimistic persons could perceive the situation as it is, both in a positive way and being able to benefit from the situation. Optimistic persons are hopeful and self-confident enough to overcome the obstacles and problems.⁶ Studies in nurses in operating room found that optimism was associated with adversity quotient among nurses.^{7,8} We hypothesized that optimism was positively associated with adversity quotient among nurses in cancer-specialized hospital.

Family relationship has an immense impact on feeling since positive relationship allows family members to feel more warmth and bonding, and less anxiety in their relationship. Family relationship also bring satisfaction and sense of security. With positive relationship with their family members, nurses could feel safe, secured and confident in confronting and overcoming the obstacles and difficulties with support from their family members.⁹ In a study among university students, family relationship was positively associated with adversity quotient.¹⁰

Career commitment is referred to how the individuals perceive value, trust and significance of their profession. Individuals with career commitment would be willing to acquire more knowledge and understanding, and to commit to hard work to achieve the professional goal. They would also have positive attitude, being part of the profession, and willing to handle difficulties. They would be willing to take part in tasks beyond their assigned responsibilities, and to be in the profession.¹¹ A study among nurses in hospitals in Bangkok found that career commitment of professional nurses was positively correlated with career success.¹² Nurses who lack career commitment would be more likely to be bored with their work, to be less motivated to achieve their professional goal, and to quite the profession. When facing problems and obstacles, these nurses also feel discouraged and exhausted, and were unable to overcome such problems. On the other hand, nurses with career commitment are motivated to face and handle the problems and obstacles, and over such obstacles.

With an ever-increasing number of cancer patients, nursing care workload has also been increasing. This increasing workload, tiredness and exhaustion could negatively affect career commitment and retention in the profession of professional nurses. Based on previous research, adversity quotient has been shown to be a crucial factor in promoting adjustment when facing difficult situation. With adversity quotient, nurses taking care of cancer patients could be confident to manage the difficult situation, accept the consequences, and be patient for the problems to be alleviated and overcome. They could also be responsible for their own action and consequences and able to face and handle the obstacles which could affect their happiness and optimism. With adversity quotient, nurses could face less burn out and leaving the profession could be reduced. With a scarcity of adversity quotient among nurses taking care of cancer patients and the increasing burden of cancer patient care, the study on adversity quotient and its related factors was of great concern and deserved more attention.

Based on the adversity quotient concept of Stoltz (1997) and literature review, we aimed to examine the association between adversity quotient and selected factors among nurses taking care of patients in the cancer specialized hospital. These factors including optimism, family relationship and career commitment were crucial for the development of adversity quotient of nurses taking care of cancer patients.

Findings could be useful for improving nurses working environments and well-being, and ultimately the retention of practicing nurses.

Methods

In this correlational study, study population was professional nurses practicing at Chonburi Cancer Hospital, Chonburi, Thailand. These nurses were licensed with the Nurse and Midwifery Council of Thailand. Sample size was estimated with power analysis with a two-tailed test. With a medium effect size of 0.35 as suggested by Polit & Beck¹³, an error of 0.05 and a power of 0.80¹⁴, a sample size of 62 persons was required.¹³ The sample of 62 participants was selected by simple random sampling without replacement. Data collection was done from November to December 2019. The study was approved by the Ethic Committee of the Faculty of Nursing, Burapha University (approval number: 02-07-2562). All participants provided consent voluntarily on the informed consent form.

Research instrument

The instrument was a questionnaire consisting of 5 parts. The **first part** collected demographic characteristics with 9 questions. The **second part** was the **adversity quotient** questionnaire of Chomcheowchan.¹⁵ The questionnaire contained 20 scenarios with 40 questions. Consequently, there were 10 questions for each of the four component of adversity quotient (i.e., Control, Ownership and origin, Reach, and Endurance). For each question, the participants were asked how they perceived toward the left and right statements with a 7-point rating scale ranging from 1-extremely toward the left statement, to 2-moderately toward the left statement, 3-slightly toward the left statement, 4-neutral, 5- slightly toward the right statement, 6- moderately toward the right statement, and 7-extremely toward the right statement. Total scores of the overall scale and each of the four component were averaged to 1 to 7 points and were further categorized as low, moderate, and high level of adversity quotient (1.00 – 3.00, 3.01 – 5.00, 5.01 – 7.00, respectively). The questionnaire was used with a sample of nurses of a public hospital in Thailand and had high internal consistency reliability with a Cronbach's alpha coefficient of 0.90.¹⁵

The **third part** asked the participants about **optimism**. The optimism questionnaire was from the work of Maturapodpong¹⁶ which was translated from the work of Scheier et al.⁶ The questionnaire used in this present study contained 16 questions. The response format was a 5-point rating scale ranging from 1-not at all how I feel, to 2-somewhat not how I feel, 3-neutral, 4- somewhat how I feel, and 5-exactly how I feel. The total score was averaged to 5 points and further categorized into extremely low, low, moderate, high, and extremely high level of optimism (1.00 – 1.80, 1.81 – 2.61, 2.62 – 3.42, 3.43 – 4.23, and 4.24 – 5.00 points, respectively).¹⁷ The questionnaire had acceptable internal consistency reliability with a Cronbach's alpha coefficient of 0.86.¹⁶

The **fourth part** asked about **family relationship** using the questionnaire of Pakanirin.¹⁸ The questionnaire had 18 items with a 5-point rating scale ranging from 1-not at all true, to 2-slightly true, 3-somewhat true, 4-mostly true, and 5-absolutely true for positive statements and converse scores for negative ones. With scores of negative statements conversed before summing up, the possible total score of 18 – 90 points averaged to 1 – 5 points, and further categorized as extremely low, low, moderate, high, and extremely high level of family relationship (1.00 – 1.80, 1.81 – 2.61, 2.62 – 3.42, 3.43 – 4.23, and 4.24 – 5.00 points, respectively).¹⁷ The questionnaire had acceptable internal consistency reliability with a Cronbach's alpha coefficient of 0.82.¹⁸

In the **fifth part**, the career commitment questionnaire of Klahan was used.¹² The questionnaire consisted of 3 components namely (1) strong faith/belief and acceptance of the profession value and goal, (2) knowledge, determination and readiness for professional work, and (3) strong desire to retain in the profession. With 10 items for each of the three components, the scale had 30 items. The response format was a 5-point rating scale of how likely the respondent to agree with the statement ranging from 1-the least likely, to 2-less likely, 3-slightly likely, 4-likely, 5-the most likely. The total scores of the overall scale and each of the three components were summed and averaged to 1 – 5 points and further categorized as very low, low, moderate, high, and very high level of career commitment (1.00 – 1.49, 1.50 – 2.49, 2.50 – 3.49, 3.50 – 4.49, and 4.50 – 5.00, respectively).¹⁷ Klahan tested the scale with nurses working at hospitals under the jurisdiction of the Department of Medical Services, Bangkok,

and found the scale to have acceptable internal consistency reliability with a Cronbach's alpha coefficient of 0.80.¹²

In our present study, parts 2 to 5 of the questionnaire was tested with 30 nurses working at Lopburi Cancer Hospital. These nurses had characteristics comparable to the study participants. All scales had at least acceptable internal consistency reliability with Cronbach's alpha coefficients of 0.86, 0.89, 0.81 and 0.96, respectively.

Data analysis

Demographic characteristics, scores of adversity quotient, family relationship, optimism, and career commitment were presented with descriptive statistics including frequency with percentage and mean with standard deviation. Associations between score of adversity quotient and scores of family relationship, optimism, and career commitment were tested using Pearson's product moment correlation coefficient. Statistical significance was set at a 5% type I error (or *P*-value < 0.05). Software program SPSS version 26 was used for all statistical analyses.

Results

Of the 62 participants, most of them were women (57 or 91.9%). The majority was in their 51 to 60 years of age (54.9%). Regarding marital status, the majority was single (58.1%), followed by those who were married (40.3%). About two-thirds had no offsprings (66.1%). They had been practicing nursing for 1 – 10 years (36.4%) followed by those with 31 - 40 years of practice 32.3%.

These participants were practicing nurses (91.9%) while the rest 8.1% were heads of department. About two-thirds of them worked in the in-patient department (62.9%). The majority had family monthly income of 15,001 – 25,000 Baht (33.9%), followed by the income of 45,001 Baht or higher (30.6%). The majority worked 40 – 50 hours per week (41.9%).

The overall adversity quotient of these participants was at a high level with a mean of 5.12 ± 0.45 out of 7 points (Table 2). Once four components were considered, Endurance component and Reach component were at a high level (5.45 ± 0.62 and 5.31 ± 0.50 points, respectively); while components of Ownership and origin and Control were at a moderate level (4.88 ± 0.51 and 4.84 ± 0.58 points, respectively) (Table 2).

Table 1 Demographic characteristics of participants (N = 62).

| Characteristics | N | % |
|---|----|------|
| Gender | | |
| Men | 5 | 8.1 |
| Women | 57 | 91.9 |
| Age (years) | | |
| 21 – 30 | 11 | 17.7 |
| 31 – 40 | 16 | 25.8 |
| 41 - 50 | 1 | 1.6 |
| 51 - 60 | 34 | 54.9 |
| Marital status | | |
| Single | 36 | 58.1 |
| Married | 25 | 40.3 |
| Divorced | 1 | 1.6 |
| Widowed | 0 | 0 |
| Number of offspring | | |
| None | 41 | 66.1 |
| 1 | 16 | 12.9 |
| 2 | 24 | 21.0 |
| 3 | 0 | 0 |
| Number of nursing practice (years) | | |
| 1 – 10 | 22 | 36.4 |
| 11 – 20 | 6 | 9.7 |
| 21 – 30 | 11 | 17.0 |
| 31 – 40 | 20 | 32.3 |
| More than 40 | 3 | 4.6 |
| Job position | | |
| Head of department | 5 | 8.1 |
| Practicing nurse | 57 | 91.9 |
| Department | | |
| Out-patient | 23 | 37.1 |
| In-patient | 39 | 62.9 |
| Monthly family income (Baht) | | |
| Less than 15,000 | 1 | 1.6 |
| 15,000 – 25,000 | 21 | 33.9 |
| 25,001 – 35,000 | 11 | 17.7 |
| 35,001 – 45,000 | 10 | 16.1 |
| More than 45,000 | 19 | 30.7 |
| Number of working hours per week | | |
| 40 – 50 | 30 | 41.9 |
| 51 – 60 | 8 | 21.0 |
| 61 – 70 | 8 | 16.1 |
| 71 – 80 | 12 | 14.5 |
| More than 80 | 4 | 6.5 |

Table 2 Adversity quotient scores (N = 62).

| Adversity quotient | M | SD | Level |
|----------------------|-------------|-------------|-------------|
| Control | 4.84 | 0.58 | Moderate |
| Ownership and Origin | 4.88 | 0.51 | Moderate |
| Reach | 5.31 | 0.50 | High |
| Endurance | 5.45 | 0.62 | High |
| Overall | 5.12 | 0.45 | High |

It was found that scores of optimism, family relationship and career commitment were all at a high level (4.11 ± 0.43 , 4.16 ± 0.43 , and 4.00 ± 0.49 points, respectively) (Table 3). For career commitment, all three components (i.e., 1-strong faith/belief and acceptance of the profession value and goal, 2-knowledge, determination and readiness for professional work, and 3-strong desire to retain in the profession) were also

at a high level (4.21 ± 0.60 , 3.91 ± 0.57 , and 3.88 ± 0.52 points, respectively) (Table 3).

Table 3 Scores of optimism, family relationship and career commitment (N = 62).

| Factors | M | SD | Range | | Level |
|---|------|------|-------------|----------|-------|
| | | | Actual | Possible | |
| Optimism | 4.11 | 0.43 | 3.31 - 5.00 | 1 - 5 | High |
| Family relationship | 4.16 | 0.43 | 3.00 - 5.00 | 1 - 5 | High |
| Career commitment | 4.00 | 0.49 | 2.90 - 4.83 | 1 - 5 | High |
| Strong faith/belief and acceptance of the profession value and goal | 4.21 | 0.60 | 2.90 - 5.00 | 1 - 5 | High |
| Knowledge, determination and readiness for professional work | 3.88 | 0.52 | 2.70 - 4.50 | 1 - 5 | High |
| Strong desire to retain in the profession | 3.91 | 0.57 | 2.80 - 5.00 | 1 - 5 | High |

Since assumptions for linear correlation between study variables hold true, Pearson's product moment correlation analysis was appropriate. It was found that adversity quotient was positively correlated with optimism ($r = 0.42$, P -value = 0.001) and family relationship ($r = 0.33$, P -value = 0.008) with statistical significance and with career commitment ($r = 0.20$, P -value = 0.110) with no statistical significance (Table 4).

Table 4 Pearson's product moment correlation coefficient (r) between adversity quotient and optimism, family relationship and career commitment (N = 62).

| Factors | Pearson's product moment correlation coefficient (r) | P -value |
|---------------------|--|------------|
| Optimism | 0.42 | 0.001 |
| Family relationship | 0.33 | 0.008 |
| Career commitment | 0.20 | 0.110 |

Discussions and Conclusion

In this survey study, adversity quotient of nurses taking care of cancer patients at Chonburi Cancer Hospital was at a high level (5.12 ± 0.45 points). This indicated that these nurses had high capability to handle and overcome difficulties and problems. The majority of them was in their 41 – 60 years of age (54.8%). These nurses were considered not young adult. Based on Erikson's theory of personality development¹⁹, these nurses were in "adult period" of which psychosocial status has been developed to the point that the individuals' interest turns to external world or the society. Adults increasingly think and act creatively for the society and other people, instead of only for themselves. They are less likely to be obsessed with themselves and less selfish or taking from others. The understand more about complicate and deep aspects of life.²⁰

Their cumulative experience in taking care of cancer patients could have taught them about the uncertainty in life which could form the mental strength to confront and fight difficulties and obstacles. Such adulthood psychological development could enhance their endurance to overcome obstacles, flexibility in handling the problems, turning critical situation into opportunity, and readiness for life skill development. This psychological development is needed to be able to work with cancer patients. In their daily practice at the cancer hospital, these nurses had to be able to come up with timely, correct and safe ways to help the patients. They developed perseverance constantly despite the difficulties or pressure to ensure the quality nursing care. As a result, adversity quotient among nurses taking care of cancer patients was found to be at a high level. Previous studies also found a high level of adversity quotient among nurses in Thailand and other country.^{15,21}

Once individual components of adversity quotient was considered, scores of Endurance and Reach components were at a high level. In addition, they were mostly practicing nurses (91.9%). Cancer patients needed care that promotes quality of life both of the patient and their family, alleviates pain and sufferings both physically, mentally, and psychosocially, and enhances spiritual well-being of the living with acceptance of death as a natural process.²² Nursing care for cancer patients had to cover health promotion, disease prevention, and rehabilitation throughout 24 hours. Despite a high level of burn out among nurses taking care cancer patients²³, professional nurses were still devoted to the work with high pressure. They faced various emotions of clients, co-workers, and patients and their family. Thus they needed to concentrated, tolerated and self-controlled when facing problems and obstacles. They had to improve themselves, had not to get discouraged by obstacles, had to be determined and alert in managing the problems while practicing. With all obstacles to face, terminally ill patients to take care of, and the non-existence of life to witness, adversity quotient could be developed. Our finding was consistent with previous study stating that nurses providing a holistic care covering physical, mental, social and well-being aspects of life had to have high responsibility and not be discouraged by expectations.²⁴ Nurses in operating room also needed to have high endurance to face and manage obstacles.²⁵ The study in the US also suggested that nurses had a high level of capability to face

and manage obstacle with their high endurance and perceived impacts of the situation.¹⁵

We found that adversity quotient was significantly correlated with optimism and family relationship, but not with career commitment. Significant positive correlation of adversity quotient with optimism ($r = 0.42$) could be due to the expectation, hope and belief that good things could happen in the future. Their perceived capability could enhance the nurses to explore more options to manage the difficult situation with determination. Our finding was also consistent with studies where optimism was positively correlated with adversity quotient among professional nurses.^{7,8} Another study among private company employees found that optimism was positively associated with adversity quotient.²⁶

Adversity quotient was found significantly, positively correlated with family relationship ($r = 0.33$). Good family relationship could help nurses better face and manage obstacles. Good family relationship could support nurses to develop strength to face problems psychologically and socially. As a result, the nurses have developed capability to face and manage problems and obstacles in their nursing care.²⁷ Study in university students also found that family relationship was positively correlated with adversity quotient.¹⁰ In short, family relationship was a crucial factor to help nurses taking care of cancer patients to overcome obstacles in their life and work.

Finally, career commitment was not correlated with adversity quotient among nurses taking care of cancer patients despite a high level of career commitment was found in this present study. This could mean that nurses could have high satisfaction regardless of their adversity quotient. Taking care of terminally ill patients was hard working and rewarding at the same time. Therefore, nurses could also have felt satisfied and bonded with their job regardless of their adversity quotient. The study in nurses in the US and Canada found that tasks and environment of the job were associated with stress, satisfaction, and burn out of the nursing care.²⁸ In our study, nurses had a long hour of work where as high as 58.1% of them worked 51 to 80 hours per week compared with a normal 40 hours per week workload. In addition, 54.8% of the nurse were at their 51 – 60 years which could allow for certain dissatisfaction to the hard work. Therefore, career commitment could be less associated with adversity quotient.

Based on our findings, nursing administrators could help promote adversity quotient among practicing nurses by

promoting related factors. Optimism could be promoted by creating working environment and job policy that nurses could trust and rely on. Academic and practical sessions to encourage nurses to maintain good family relationship could also help enhance adversity quotient. In addition, sessions to enhance adversity quotient could also be beneficial. Nursing education could also benefit from the findings by incorporating the impact of optimism and family relationship on adversity quotient into the curriculum.

This study had certain limitations. Since the study was conducted in one single cancer specialized hospital, generalization to hospitals with different levels of care should be cautious. Therefore, studies with different levels of care and service and larger sample sizes should be conducted. More factors with potential impact on adversity quotient could also be studied. Such studies could account for the ever-changing nature of social online media, media impact, and information technology on the nursing job.

Acknowledgement

The authors would to express our great gratitude to personnel at Chonburi Cancer Hospital for kind assistance and most importantly to participants for their invaluable participation.

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