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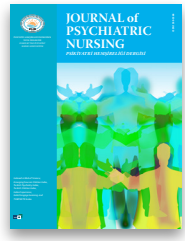

Original Article

Adversity quotient level and its relationship with nurse burnout

Jebul Suroso,[1] Savira Yahya Azzahra,[1] Agus Santosa[2]

[1]Department of Nursing Management, Faculty of Health Sciences, Muhammadiyah University of Purwokerto, Indonesia
[2]Department of Medical-Surgical Nursing, Faculty of Health Sciences, Muhammadiyah University of Purwokerto, Indonesia

Abstract

Objectives: This study aimed to determine the relationship between adversity quotient (AQ) and nurse burnout in a clinical setting, addressing the need for psychological resilience strategies in nursing practice.

Methods: A cross-sectional analytical study was conducted among 102 nurses working in inpatient wards at a public hospital in Central Java, Indonesia. Data were collected using the Adversity Response Profile (ARP) to assess AQ and the Burnout Syndrome Assessment Scale for Nurses to measure burnout levels. Spearman rank correlation analysis was used to examine the relationship between the two variables.

Results: The majority of nurses had low AQ levels (43.1%) and experienced severe burnout (41.2%). A significant negative correlation was found between AQ and burnout ($r=-0.775$, $p<0.0001$), indicating that higher AQ was associated with lower levels of nurse burnout.

Conclusion: AQ plays a protective role against nurse burnout. Enhancing AQ through structured interventions may help reduce emotional exhaustion and improve psychological well-being in demanding healthcare environments. Further research is needed to evaluate the effectiveness of AQ-based training in clinical settings.

Keywords: Adversity quotient; nurse burnout; psychological well-being; resilience; nursing

Nurse burnout is a condition of physical, mental, and emotional exhaustion experienced by nurses due to a heavy and prolonged workload. It can occur as they continually face pressure, high work demands, and lack of support, causing profound exhaustion and loss of motivation.[1] Its prevalence varies across different countries. Globally, it is around 30.0% [95% CI: 26.0%–34.0%], but several studies report that its prevalence reaches more than 40%.[2–4]

Factors contributing to burnout include high workload, overtime, inadequate resources, lack of social support, poor organizational management,[5–8] and other problems such as role conflict and coping strategies.[9,10] Burnout negatively impacts the quality of life of nurses both physically and emotionally.[11] If not immediately addressed, it can potentially disrupt performance, service quality, and patient care safety.[12]

The adversity quotient (AQ) is a person's ability to overcome and adapt to challenges or problems in life. AQ reflects the extent to which a person can remain resilient, positive, and productive in complex or uncertain situations. The higher a person's AQ, the better he/she can adapt and thrive amidst change and adversity.[13] It is essential to understand that it is not a measurement of intelligence but rather a reflection of the extent to which a person can face and learn from life's challenges. The AQ concept can be applied in various contexts, including work, education, and personal life.

Recent research has begun to emphasize the importance of AQ in supporting mental health and professional functioning among healthcare professionals, including nurses. AQ, which comprises four core components—control, ownership, reach, and endurance—has been shown to correlate significantly

Address for correspondence: Jebul Suroso, Department of Nursing Management, Faculty of Health Sciences, Muhammadiyah University of Purwokerto, Indonesia
Phone: +62 812-2660-0158 **E-mail:** jebulsuroso_ump@gmail.com **ORCID:** 0000-0003-0444-6416
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with professional quality of life (ProQOL), anxiety, depression, and burnout.[14] A systematic review of 23 studies highlighted that healthcare workers with high AQ demonstrate better well-being and lower susceptibility to psychological distress in high-pressure environments.[15]

Several studies have specifically explored AQ in the nursing context. Luo et al.[16] found that AQ was negatively associated with work stress and positively associated with professional identity among Chinese hospital nurses. Another study identified a significant correlation between AQ and resilience in critical care nurses in Indonesia.[17] Li et al.[18] reported a strong positive relationship between AQ and job engagement. Additionally, Li et al.[19] confirmed that AQ mediated the relationship between organizational climate and work engagement among ICU nurses. These findings underscore AQ as a central psychological capacity that helps nurses cope with adversity, maintain engagement, and sustain resilience in demanding healthcare environments.

Research on the relationship between AQ levels and the incidence of nurse burnout has not been studied before. Such studies are primarily undertaken in education to assess students' success during their studies.[20,21] AQ has significant relevance for nurses, considering they work in a healthcare environment with challenges, pressure, and rapid changes in procedures, technology, and policies. Their tasks also frequently involve stressful and urgent situations, high workloads, and varied tasks, all of which can impact the incidence of nurse burnout.[22] Against the existing gaps, it is necessary to understand the relationship between AQ levels and the incidence of nurse burnout. It is hypothesized that the higher the AQ level in nurses, the lower the potential incidence of nurse burnout.

What is presently known on this subject?

- Adversity quotient (AQ) is a person's ability to overcome and adapt to challenges or trials in life. AQ has significant relevance for nurses, considering that nurses work in a healthcare environment often full of challenges and pressure. Nurses' duties also usually involve stressful and urgent situations, high workloads, and varied tasks, which can impact the incidence of nurse burnout.

What does this article add to the existing knowledge?

- This research reveals that nurses with low AQ levels are more susceptible to experiencing severe nurse burnout compared to nurses with high AQ levels.

What are the implications for practice?

- The importance of training and developing nurses' AQ through education and training programs to minimize the occurrence of severe nurse burnout.

Materials and Method

Study Design and Setting

This study employed an analytical observational approach with a cross-sectional design. It aimed to observe the natural relationship between AQ and burnout levels among nurses.[23] It was conducted at the Regional Public Hospital Dr. R. Goeteng Taroenadibrata, Purbalingga, Central Java, Indonesia, from November 2022 to July 2023.

Participants and Sampling

The study population comprised nurses working in inpatient wards. A total of 102 nurses were selected through simple random sampling. Inclusion criteria were: male or female nurses; diploma or bachelor's degree in nursing; permanent or contractual employment status; and willingness to participate. Nurses on leave or occupying managerial roles (e.g., head nurse) were excluded.

Variables and Instruments

The independent variable was AQ, measured using the Adversity Response Profile (ARP), developed by Stoltz.[14] This instrument consists of 40 items covering four dimensions: control, ownership, reach, and endurance. Each item is rated on a 5-point Likert scale. The total score ranges from 40 to 200, with higher scores indicating greater resilience. The ARP has been validated in various international studies and showed good reliability (Cronbach's α=0.87 in this study).

The dependent variable was nurse burnout, assessed using the Burnout Syndrome Assessment Scale for Nurses. This instrument contains 25 items rated on a 5-point scale, covering three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment. The scale was adapted to the nursing context and demonstrated strong internal consistency (Cronbach's α=0.91).[24]

Data Collection Procedure

Data were collected through structured self-administered questionnaires. Research assistants distributed the questionnaires during nurse shift changes to avoid disrupting work schedules. Participants completed the questionnaires in a private setting, and confidentiality was ensured. The researchers had no managerial or supervisory relationship with the participants to minimize bias.

Ethical Consideration

Ethical clearance was obtained from the Health Research Ethics Committee of Universitas Muhammadiyah Purwokerto (Approval Number: KEPK/UMP/72/VI/2023), in accordance with the principles of the Helsinki Declaration. All participants provided informed consent prior to participation, and data confidentiality was strictly maintained.

Statistical Analysis

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 21, IBM. Descriptive statistics were used

Table 1. Characteristics of respondents (n=102)

Characteristics	n	%
Gender		
Male	45	44.1
Female	57	55.9
Age		
<36 years	34	33.3
36–45 years	37	36.3
>45 years	31	30.4
Education		
Diploma of Nursing	49	48.0
Bachelor of Nursing	53	52.0
Working experience		
<10 years	33	32.4
10–20 years	39	38.2
>20 years	30	29.4
Employment status		
Governmental worker	46	45.1
Non-governmental worker	56	54.9

to summarize respondent characteristics and variable distributions. The Spearman rank correlation test was used to assess the relationship between AQ and burnout, considering the ordinal nature of the data. Statistical significance was set at $p<0.05$.

Results

Table 1 presents the demographic characteristics of the respondents. The majority were female, aged between 36 and 45 years, and held a bachelor's degree in nursing. Most had 10–20 years of work experience and were employed as either civil servants or non-civil servants. Table 2 shows that the majority of nurses had low AQ levels (43.1%) and experienced severe levels of burnout (41.2%).

As shown in Table 3, a large proportion of nurses with low AQ levels experienced severe burnout, whereas those with high AQ levels predominantly reported mild burnout. Spearman's rank correlation test revealed a strong negative correlation between AQ levels and nurse burnout ($r=-0.775$, $p<0.0001$), indicating that higher AQ levels are associated with a lower risk of experiencing burnout.

Table 2. Adversity quotient level and nurse burnout

Variable	n	%
Adversity quotient level		
Low	44	43.1
Medium	28	27.5
High	30	29.4
Nurse Burnout		
Mild	26	25.5
Medium	34	33.3
Severe	42	41.2

Discussion

This study confirmed a significant negative correlation between nurses' AQ and their level of burnout ($r=-0.775$, $p<0.0001$), supporting the hypothesis that higher AQ is associated with a lower risk of burnout. These findings emphasize the role of AQ as a psychological resilience factor that can protect nurses from emotional exhaustion and mental fatigue in demanding clinical settings.

The mechanisms underlying this relationship can be explained through the four dimensions of AQ—Control, Ownership, Reach, and Endurance (CORE). Nurses with a strong sense of control perceive that they can influence challenging situations, which reduces feelings of helplessness. Those with high ownership take responsibility for resolving difficulties rather than blaming external circumstances, fostering proactive coping. Reach reflects the extent to which adversity spills over into other life areas; high-AQ nurses are better at compartmentalizing stress. Lastly, endurance shapes one's belief that adversity is temporary, which supports long-term persistence and emotional balance.[13,14,25,26]

These mechanisms are supported by findings from Saxena and Rathore, whose systematic review of healthcare professionals

Table 3. Relationship adversity quotient level and nurse burnout

Variable	Nurse Burnout						Total		rho (R)	p
	Mild		Medium		Severe					
	n	%	n	%	n	%	n	%		
AQ level										
Low	0	0.0	12	27.3	32	72.7	44	43.1	-0.775	0.0001
Medium	1	3.6	17	60.7	10	35.7	28	27.5		
High	25	83.3	5	16.7	0	0.0	30	29.4		
Total	26	25.5	34	33.3	42	41.2	102	100		

AQ: Adversity quotient.

revealed that high AQ is associated with lower burnout, better professional quality of life, and reduced anxiety.[15] Similarly, Luo et al.[16] found that AQ reduces work-related stress among nurses by enhancing their professional identity, while Dewi et al.[17] demonstrated a significant relationship between AQ and resilience in Indonesian ICU nurses.[15,17] Li et al.[18] and Li et al.[19] further confirmed that AQ contributes to increased job engagement, even under high workload pressures.

Our findings are especially relevant in the Indonesian healthcare context, where nurses often face staff shortages, high patient loads, limited resources, and frequent organizational change. Nurses with low AQ may find such adversities overwhelming and unmanageable, increasing their risk of depersonalization and burnout. In contrast, those with high AQ are more likely to remain focused, solution-oriented, and emotionally grounded, which supports both personal well-being and quality patient care.

These results highlight the importance of integrating AQ development into nursing professional training and workforce support strategies. Educational programs that include emotional regulation, self-reflection, and cognitive-behavioral techniques may help nurses enhance their adversity quotient. Nurse managers should consider AQ-based assessment tools to identify individuals at risk of burnout and offer targeted interventions accordingly.

Limitations

This study was limited to a single hospital setting, which may affect the generalizability of the findings. Additionally, the use of self-report instruments introduces the potential for response bias. The cross-sectional design also precludes any causal inference. Future research should include longitudinal, multi-site studies to further validate these findings and test the effectiveness of AQ-based interventions.

Conclusion

The findings confirm that AQ serves as a protective psychological factor against nurse burnout. Nurses with higher AQ levels were found to be more resilient and less likely to experience severe burnout, highlighting the psychological advantage of strong adversity management in clinical environments. These findings suggest that strengthening AQ among nurses could be a valuable strategy to prevent burnout and improve professional well-being. Nursing education and hospital management programs should incorporate AQ-enhancement interventions, such as resilience training, emotional regulation workshops, and reflective practice sessions, into their staff development initiatives. Future research should explore the longitudinal impact of AQ on burnout, test the effectiveness of targeted AQ training programs, and investigate contextual factors—such as leadership style and organizational culture—that may further moderate this relationship.

Ethics Committee Approval: The study was approved by the Universitas Muhammadiyah Purwokerto Ethics Committee (no: KEPK/UMP/72/VI/2023, date: 27/07/2023).

Informed Consent: All participants provided informed consent prior to participation, and data confidentiality was strictly maintained.

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