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Original Article

Resilience and Well-being among Indonesian Nurses in the Post-COVID-19 Era: A Cross-sectional Study

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Abstract

Introduction: The COVID-19 pandemic has highlighted the strain on healthcare systems, notably in Indonesia. This study aimed to examine the resilience and psychological well-being of nurses working in local government hospitals in the post-COVID-19 period, providing insights into the specific challenges they face.

Methods: A cross-sectional survey involving 567 nurses from eight public hospitals across Sumatra Island was conducted. Participants completed the 10-item Connor-Davidson Resilience Scale (CD-RISC-10) and an 18-item Psychological Well-Being questionnaire.

Results: Nurses demonstrated high levels of resilience (93.8%) and good psychological well-being (85.9%). A positive correlation was found between resilience and psychological well-being ($r=0.287$, $P<0.001$). Resilience was significantly associated with chronic illness history and nursing experience, whereas age influenced the spiritual dimension of resilience and domains of purpose in life and self-acceptance in well-being.

Conclusion: The findings suggest a need for tailored strategies, considering factors such as chronic illness, nursing tenure, and age, to enhance psychological well-being among nurses. Customized approaches for different age groups are recommended to support overall resilience and well-being.

Introduction

The COVID-19 pandemic has posed widespread challenges to healthcare systems worldwide, significantly impacting healthcare workers, particularly nurses. International Council of Nurses collations indicate at least 2,300 reported nurse deaths across 59 countries by late 2020, with the organization emphasizing likely under-reporting.[1] A multi-country scoping review of nursing staff fatalities during the COVID-19 pandemic reported a mean age at death of approximately 42.6 years, with higher mortality observed in men.[2] Studies from Indonesia found most healthcare worker deaths in the 40-59 year age range (median 50 years; IQR 39-59).[3]

Among Indonesian healthcare workers more broadly, one survey found that 44.9% reported anxiety and 29.4% reported depression during the pandemic[4] While the situation is gradually stabilizing, there remains a crucial question about the policies that governments should implement in the future to enhance well-being, including bolstering nurse resilience in the face of disasters. As we transition to a post-pandemic era, thoughtful consideration and strategic planning are necessary to ensure the implementation of effective policies that address and improve the well-being of healthcare professionals, particularly nurses.[5]

Resilience is crucial in mitigating the impact of such crises on healthcare workers. Building and maintaining resilience among frontline healthcare professionals is essential to ensure they have the necessary coping mechanisms to navigate future disasters effectively.[6] Neglecting the support for the physical and mental health of healthcare workers may lead to a decline in their well-being, hindering their optimal performance.[7] The COVID-19 pandemic has significantly impacted the mental health experiences of healthcare workers, causing extreme and rapidly fluctuating emotions, guilt, fear, and limited stress coping mechanisms.[8] Italian healthcare workers have reported subclinical levels of psychiatric

symptoms, including stress, depression, anger, and emotional exhaustion, which can negatively affect the quality of care.[9]

According to Ruggeri et al: well-being is "the combination of feeling good and functioning well; the experience of positive emotions … as well as the development of one's potential … having a sense of purpose in life …".[10] Governments must prioritize cultivating robust resilience skills among healthcare workers to ensure they have the coping mechanisms and support systems necessary to navigate future disasters effectively.[11] Therefore, implementing policies to enhance healthcare workers' resilience, especially nurses, is crucial.[7] However, research has mainly focused on the immediate effects of the pandemic on healthcare workers' mental well-being, with limited exploration of long-term consequences and urgent needs in the post-pandemic era[12] This study's novelty lies in its specific focus on nurses working in local government hospitals—public hospitals managed under regional health authorities across Sumatra—and its exploration of post-pandemic impacts, which have not been thoroughly investigated previously. By understanding the needs and challenges faced by nurses in local government environments post-pandemic, this study contributes significantly to developing effective policies and strategies to support healthcare workers in the future. This study aims to address these gaps by examining the resilience and psychological well-being of nurses in local government settings post-COVID-19, providing insights into the specific challenges they face.

Material and Methods

Study Design and Setting

This study aimed to examine the resilience and psychological well-being of nurses working in local government hospitals across Sumatra in the post-COVID-19 period. An institution-based cross-sectional survey was conducted from July to August 2023 across eight regional public hospitals managed by local governments on Sumatra Island. Data were collected online using a structured questionnaire distributed through Google Forms.

Sample

The estimated sample size was calculated using the Raosoft sample size calculator (http://www.raosoft.com/samplesize.html), based on a total population of 2,047 registered nurses working across the Sumatra region. With a 5% margin of error and a 99% confidence level, the minimum required sample size was 502 respondents. In total, 567 nurses completed the survey.

A cluster sampling approach was used to ensure regional representation across Sumatra. The clusters were defined by hospitals within six major provinces: Aceh, North Sumatra, West Sumatra, Riau, South Sumatra, and Lampung. Within each province, one to two large government or teaching hospitals were identified as sampling clusters. Within each hospital cluster, eligible participants were registered nurses working in inpatient and outpatient units. Depending on logistical feasibility, two modes of recruitment were used:

In hospitals where data collectors had access to staff lists, simple random sampling was conducted using staff rosters to select potential participants. Meanwhile, in hospitals where direct randomization was not possible, a survey link was distributed through official nursing supervisors and WhatsApp groups, allowing voluntary participation.

Inclusion criteria included registered nurses working in local government hospitals in Sumatra, with at least six months of clinical experience, who were willing to participate and provided informed consent.

Exclusion criteria were nurses on extended leave, administrative staff not engaged in direct patient care, and those who submitted incomplete or duplicate questionnaires.

Variables Outcome and Measurements

The primary outcome of this study is resilience scale and psychological well-being of nurses in eight government hospitals across Sumatra Island. Secondary outcomes of this study include reporting on key socio-demographic variables. The questionnaire includes socio-demographics, resilience and psychological well-being assessments. Both instruments were initially translated from the original English version into Bahasa Indonesia by two professional translators. In order to validate all questionnaires, a pilot study involved 30 nurses, with face validity verified by a panel of experts, including an evaluation of translation accuracy. Additionally, the reliability of the instruments was evaluated using Cronbach's alpha before gathering data from the complete sample. The refined questionnaire was ultimately employed for data collection.

Socio-demographic variables

Socio-demographic variable includes questions on age, gender, length of time as a nurse, monthly income, involvement in caring for COVID-19 patients, having been diagnosed with a chronic disease for less than two years and feeling mentally healthy.

Connor-Davidson Resilience Scale (CD-RISC)

Resilience was measured using the 10-item Connor–Davidson Resilience Scale (CD-RISC-10).[13] Each item is rated on a 5-point Likert scale (0 = not true at all to 4 = true nearly all the time), with total scores ranging from 0 to 40, where higher scores indicate greater resilience. The original English version was translated into Bahasa Indonesia and back-translated by two independent professional translators. Face and content validity were evaluated by a panel of three experts, followed by a pilot reliability test among 30 nurses to assess internal consistency.

Item–total correlation coefficients ranged from 0.49 to 0.76, indicating satisfactory construct validity. Cronbach's α from the pilot test was 0.76, which was retained as the reliability coefficient for the present study. The earlier value of 0.88 refers to the original English validation study by Connor and Davidson and not to this dataset.

Psychological Well-being Questionnaire

Psychological well-being was assessed using the 18-item questionnaire adapted from Lane et al[14] which evaluates autonomy, environmental mastery, personal growth, positive relationships, life purpose, and self-acceptance. Each item was scored on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree), with higher scores reflecting better well-being.

The instrument was translated and back-translated by two independent translators to ensure linguistic and cultural equivalence. A pilot test with 30 nurses yielded a Cronbach's α = 0.65, which—although slightly below the conventional 0.70 threshold, it was still considered acceptable for exploratory field research and short multidimensional scales in psychosocial studies.

Statistical Analysis

Data analysis was conducted using IBM SPSS Statistics version 26.0 (IBM Corp., Armonk, NY, USA). Both descriptive and inferential statistics were applied. Descriptive statistics, including frequencies, percentages, and means, were used to summarize socio-demographic variables and main study measures. Data normality was assessed using the Kolmogorov–Smirnov test, which indicated a non-normal distribution ($P < 0.05$). Accordingly, non-parametric tests were employed. The Spearman rank correlation test was used to examine relationships between socio-demographic and main outcome variables. Group differences were analyzed using the Mann–Whitney U test for two-group comparisons and the Kruskal–Wallis H test for comparisons involving more than two groups. For Kruskal–Wallis analyses, the chi-square (χ^2) value, degrees of freedom (df), and P value were reported to indicate the strength and significance of group differences. The level of statistical significance was set at $P < 0.05$.

Result

Respondent's Characteristics

As presented in Table 1, the attributes of the nurses examined in this study encompass various factors including age, gender, duration of nursing experience, monthly income, participation in the care of COVID-19 patients, recent diagnosis of a chronic illness, and self-reported mental health. The table indicates that a predominant proportion of respondents are female (81%), with a majority falling within the age group of 26-35 years (45.7%), followed closely by late adults (36-45 years) at 42.9%. A noteworthy percentage has accumulated over five years of nursing experience (78.8%), and the majority report a monthly income below the national minimum wage (83.6%). Regarding their involvement in caring for COVID-19 patients, 64.2% of respondents possess such experience. Additionally, a substantial percentage (91.9%) self-reported not having been diagnosed with a chronic disease within the past two years, and the overwhelming majority (98.2%) self-reported feeling mentally healthy.

Table 1. Frequency distribution of respondents' characteristics (N = 567)

Characteristics of respondents	N (%)
Age, in year	
Late adolescence (17-25)	11(1.9)
Early adulthood (26-35)	259(45.7)
Late Adults (36-45)	243 (42.9)
Early elderly (46-55)	46 (8.1)
Late elderly (56-65)	8 (1.4)
Gender	
Male	108 (19.0)
Female	459 (81.0)
Length experience as a nurse	
<1 year	17 (3.0)
1-5 years	103 (18.2)
>5 years	447 (78.8)
Monthly income	
<National minimum wages	474 (83.6)
≥National minimum wages	93 (16.4)
Involved in caring for COVID-19 patients	
Yes	364 (64.2)
No	203 (35.8)
Have been diagnosed with chronic disease<2 years	
Yes	46 (8.1)
No	521 (91.9)
Feeling mentally healthy	
Yes	557 (98.2)
No	10 (1.8)

Relationship between Variables

Table 2 presents the mean scores for the study variables: resilience = 24.94 and psychological well-being = 38.90. The analysis indicates a positive correlation between resilience and psychological well-being ($r = 0.287$, $P < 0.001$). Additionally, there are significant correlations between resilience and specific components of psychological well-being, including autonomy ($r = 0.295$, $P < 0.01$), control over one›s surroundings ($r = 0.099$, $P < 0.05$), personal growth ($r = 0.172$, $P < 0.001$), positive relationships with others ($r = 0.040$, $P < 0.05$), life purpose ($r = 0.182$, $P < 0.001$), and self-acceptance ($r = 0.223$, $P < 0.001$).

Moreover, Table 3 presents the outcomes of the Mann–Whitney and Kruskal–Wallis tests concerning

Table 2. Correlation between key study variables (N = 567)

Variables		Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12
1.	Resilience Total	24.94 (3.379)												
2.	Personal competence	7.73 (1.175)	0.857***											
3.	Tolerance of negative effect	6.94 (1.175)	0.787***	0.533***										
4.	Positive acceptance and secure relationship	2.65 (0.554)	0.556***	0.410***	0.353***									
5.	Control and factor	2.30 (0.650)	0.695***	0.513***	0.429***	0.295***								
6.	Spiritual influence	5.32 (0.886)	0.742***	0.596***	0.443***	0.321***	0.435***							
7.	Psychological well-being total	38.90 (4.000)	0.278***	0.239***	0.241***	0.120**	0.151***	0.266***						
8.	Autonomy	9.36 (1.604)	0.295***	0.259***	0.247***	0.124**	0.183***	0.255***	0.691***					
9.	Control over your surroundings	4.38 (0.846)	0.099*	0.070	0.089*	0.088*	0.043	0.111**	0.505***	0.195***				
10.	Personal growth	4.09 (0.718)	0.172***	0.138**	0.120**	0.088*	0.170***	0.159***	0.489***	0.232***	0.204***			
11.	Positive relationships with other	6.96 (1.545)	0.040*	0.007	0.064	-0.003	0.002	0.042	0.613***	0.183***	0.230***	0.285***		
12.	Life purpose	7.10 (0.956)	0.182***	0.189***	0.148***	0.084*	0.116**	0.170***	0.529***	0.234***	0.195***	0.295***	0.245***	
13.	Self-acceptance	7.02 (0.885)	0.223***	0.193***	0.194***	0.051	0.131**	0.236***	0.493***	0.160***	0.267***	0.205***	0.191***	0.247***

Note: ***$P<0.001$; **$P<0.01$; *$P<0.05$.

Table 3. Differences in resilience scores according to participants' characteristics among nurses in local government hospitals across Sumatra, post-COVID-19 (N = 567)

Characteristic	N	Resilience total			Personal competence			Tolerance of negative effect			Positive acceptance and secure relationship			Control and factor			Spiritual influence		
		Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*
Gender[a]				0.596		24312.5	0.748		24000.0	0.596		23542.0	0.337		23484.5	0.347		23754.0	0.451
Male	108	291.28	291.28		288.38			291.28			294.52			296.05			293.56		
Female	459	282.29	282.29		282.97			282.29			280.90			281.16			281.75		
Income[a]			20743.0	0.367		20743.0	0.351		17388.00	0.001		21232.0	0.623		19718.0	0.075		21206.5	0.518
<NMW	474	281.26			281.26			274.18			282.29			279.10			282.24		
>NMW	93	297.96			297.96			334.03			289.72			308.98			292.97		
Involved in caring for COVID-19 patients[a]			35848.0	0.555		36553.5	0.828		36620.0	0.857		36247.5	0.693		35430.0	0.369		36636	.853
Yes	364	280.98			282.92			283.10			285.14			279.84			284.85		
No	203	289.41			285.93			285.61			280.56			291.47			282.47		
Have been diagnosed with chronic disease<2 years[a]			9654.0	**0.028**		9672.5	**0.024**		10399.0	0.124		10708.0	0.146		11328	0.496		9751.0	0.019
Yes	46	233.37			233.77			249.57			256.28			298.23			235.48		
No	521	288.47			288.43			287.04			285.91			282.74			288.28		
Length experience as a nurse[b]			8.105	**0.017**		4.134	0.127		4.180	0.124		2.849	0.241		3.255	0.196		8.670	**0.013**
<1 year	17	224.26			239.68			235.06			239.26			248.82			238.29		
1-5 years	103	320.61			308.62			307.81			296.01			304.86			319.77		
>5 years	447	277.84			280.01			280.38			282.30			280.53			277.50		
Age, in year[b]			8.980	0.062		8.763	0.067		7.842	0.098		7.418	0.115		7.328	0.120		11.343	**0.023**
Late adolescent	11	198.14			202.91			245.50			224.59			183.82			216.32		
Early adult	259	301.76			298.91			301.94			278.40			292.03			304.00		
Late adult	243	271.83			270.57			273.19			290.12			282.51			267.20		
Early elderly	46	281.07			301.22			262.77			305.52			281.73			269.68		
Late elderly	8	213.44			221.88			206.44			202.50			220.25			322.13		

Abbreviation: NMW = National Minimum Wage. *Statistical tests:* Mann–Whitney U test was used for comparisons between two groups, and Kruskal–Wallis H test was used for comparisons among more than two groups. For Kruskal–Wallis analyses, chi-square (χ^2), degrees of freedom (df), and *P* values are reported. *Significance threshold: P* < 0.05. *Software:* IBM SPSS Statistics v26.0 (IBM Corp., Armonk, NY, USA)
[a]tested using Mann whitney, [b]tested using Kruskal Wallis
Bold Numbers show significancy

the resilience variable. The results indicate a significant difference in resilience between nurses who reported having a chronic disease within the past two years and those who did not ($U = 9654.0$, $P = 0.028$). Significant differences in both overall resilience and across individual dimensions were observed among nurses with less than 1 to 5 years of experience and those with more than 5 years of experience ($\chi^2 = 8.105$, $P = 0.017$; $\chi^2 = 8.670$, $P = 0.013$, respectively). Additionally, the results of the Mann-Whitney test revealed significant differences in resilience among nurses in different age groups, including late adolescence, early adulthood, late adulthood, early elderly, and late elderly ($\chi^2 = 11.343$, $P = 0.023$).

Table 4 presents the outcomes of the Kruskal–Wallis test, showing significant differences in the dimensions of psychological well-being, specifically *Life Purpose* and *Self-Acceptance*, among nurses in different age groups ($\chi^2 = 12.530$, $P = 0.009$; $\chi^2 = 10.403$, $P = 0.034$, respectively).

Discussion

The main aim of this study was to explore the resilience and psychological well-being of nurses in the post-COVID-19 period and to identify the factors associated with these constructs. The findings revealed a positive correlation between resilience and psychological well-being, indicating that nurses with higher resilience levels experienced more favorable psychological well-being across key dimensions, including autonomy, environmental mastery, personal growth, positive relationships, life purpose, and self-acceptance. These results suggest that resilience serves as an essential personal resource supporting well-being among nurses.

This study also identified several demographic factors associated with resilience, such as age, gender, and work experience. The majority of participants were female and within the early-adult age group (26–35 years), consistent with findings by Athifahsari et al.[15] Most respondents had more than five years of nursing experience, and many earned below the national minimum wage, reflecting the economic disparities faced by Indonesian nurses. Furthermore, most participants were involved in caring for COVID-19 patients and reported good self-perceived mental health and no chronic disease diagnosis in the past two years.

A related study by Mirzaei Dahka et al[16] found that more than half of nurses caring for COVID-19 patients in Iran experienced psychological distress, with resilience scores in the moderate range. Importantly, that study reported a negative correlation between resilience (CD-RISC-10) and psychological distress (GHQ-12) that nurses with higher resilience demonstrated *better* mental health outcomes, as higher GHQ-12 scores reflected *worse* mental health. This supports the present study's findings, emphasizing that resilience functions as a protective factor mitigating psychological distress and promoting psychological well-being.

Consistent with these findings, Javanmardi et al[17] reported burnout among 30% of emergency technicians exposed to COVID-19, while the current post-pandemic assessment suggests that not all health professionals with high exposure necessarily maintain high resilience. These results highlight the enduring variability of resilience among healthcare workers and underscore the need for sustained organizational and psychosocial support even after the acute crisis period.

Additionally, many respondents demonstrated the ability to endure challenges, aligning with cultural and spiritual traits in Indonesia, where difficulties are often seen as part of a greater plan. This spiritual influence corresponds to heightened tolerance in adversity. Tolerance of negative effects is closely tied to problem-solving skills, with composed individuals navigating challenges effectively.[18] Family support emerged as crucial for resilience, with many expressing positive feelings about self-acceptance and secure relationships, empowering them to manage stress.[19] This self-acceptance fosters self-confidence and composure, even in stressful situations.

This study revealed variations in resilience among nurses, influenced by factors such as COVID-19 diagnosis, years of experience, and age. Differences were observed in resilience levels between nurses with varying experience and age groups, underscoring the role of these factors in shaping resilience. Understanding these resilience variations is vital for organizations and policymakers to support nurses' well-being. This study also highlighted significant differences in psychological well-being dimensions among different age groups, emphasizing the impact of age on nurses' well-being.

Overall, respondents demonstrated positive self-perception, feeling capable of managing their lives and confronting challenges. They embraced life as a journey of learning and growth, exhibiting robust self-acceptance and a willingness to embrace challenges. The pandemic served as an opportunity for personal growth and resilience building.

Positive social relationships, a sense of purpose, and adaptive motivation were identified as key factors contributing to nurses' well-being. Supportive relationships and a clear life purpose enhance emotional well-being and fulfilment, aligning with individuals' achievements and life paths.

Limitation

This study has several limitations. First, it employed a cross-sectional design, providing a snapshot of resilience and psychological well-being at a single point in time without capturing changes over a longer period. Second, the online distribution of questionnaires through Google Forms may have introduced sampling error and response bias, as participation relied on voluntary responses and internet access. Third, the Psychological Well-Being instrument demonstrated a Cronbach's alpha of 0.65,

Table 4. Differences in psychological well-being scores according to participants' characteristics among nurses in local government hospitals across Sumatra, post-COVID-19 (N = 567)

Characteristic	N	Psychological well-being total			Autonomy			Control over your surroundings			Personal growth			Positive relationships with other			Life purpose			Self-acceptance		
		Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*	Mean Rank	U/χ^2	*P*
Gender[a]			24568.5	.887		23927.5	.568		23495.5	.364		22776.0	.092		22945.0	.213		24134.0	.610		23450.0	.332
Male	108	286.01			276.05			272.05			302.61			301.05			277.96			271.63		
Female	459	283.53			285.87			286.81			279.62			279.99			285.42			286.91		
Income[a]			20743.0	.367		19300.0	.053		21904.5	.919		20387.0	.141		21675.0	.793		20565.5	.221		21853.0	.885
< NMW	474	281.26			278.22			284.29			280.51			284.77			280.89			284.40		
> NMW	93	297.96			313.47			282.53			301.78			280.06			299.87			281.98		
Involved in caring for COVID-19 patients [a]			36797.0	.936		33798.0	.087		35632.5	.449		36742.5	.889		33.720	.074		36253	.704		36336.5	.717
Yes	364	284.41			275.35			287.61			284.56			292.86			282.37			285.67		
No	203	283.27			299.51			277.53			283.00			268.11			286.92			281.00		
Have been diagnosed with chronic disease < 2 years[a]			11913.0	.947		11097.0	.397		11728.0	.796		11488.5	.551		11828.0	.880		11811.5	.847		11119.5	.367
Yes	46	285.52			264.74			278.46			294.75			287.37			287.73			302.77		
No	521	283.87			285.70			284.49			283.05			283.70			283.67			282.34		
Length experience as a nurse [b]			5.721	.057		3.818	.148		2.121	.346		5.713	.057		.010	.995		3.797	.150		1.816	.403
< 1 year	17	207.26			224.09			266.94			239.47			281.21			225.82			244.03		
1-5 year	103	266.71			268.99			265.91			263.97			285.05			276.22			275.77		
> 5 year	447	290.90			289.74			288.82			290.31			283.86			288.00			287.42		
Age, in year[b]			8.040	.090		5.443	.245		.405	.982		4.964	.291		1.910	.752		12.530	**.009**		10.403	**.034**
Late adolescent	11	221.00			262.05			271.59			237.50			262.45			183.77			180.09		
Early adult	259	272.66			274.83			282.56			275.85			281.76			271.99			281.04		
Late adult	243	295.43			294.98			285.54			293.40			291.61			294.14			282.58		
Early elderly	46	316.97			299.58			290.98			293.40			269.86			325.04			320.18		
Late elderly	8	200.94			188.13			260.75			248.88			236.31			266.63			357.88		

Abbreviation: NMW = National Minimum Wage. \ *Statistical tests:* Mann–Whitney U and Kruskal–Wallis H tests were performed. For Kruskal–Wallis analyses, chi-square (χ^2), degrees of freedom (df), and p-values are reported. * *Significance* at $P < 0.05$. *Software:* IBM SPSS Statistics v26.0.
[a]tested using Mann whitney, [b]tested using Kruskal Wallis
Bold Numbers show significancy.

which is at the lower acceptable threshold; this relatively modest internal consistency may limit the precision of the construct measurement. Fourth, as all data were self-reported, there is a potential for recall and social desirability bias, and the absence of objective verification (e.g., medical or employment records) may affect data accuracy. Lastly, since participants were drawn exclusively from government hospitals across Sumatra, the findings may not be generalizable to nurses in private hospitals or other regions of Indonesia.

Future research employing longitudinal designs, incorporating larger and more diverse samples, and controlling for potential confounding variables such as workload, workplace support, and institutional characteristics will provide a more comprehensive understanding of nurses' resilience and psychological well-being.

Implication

This study highlights the need for targeted interventions based on factors like COVID-19 diagnosis, nursing experience, and age to enhance nurses' resilience and well-being. Recognizing the interconnectedness of resilience and psychological well-being, interventions focusing on resilience may positively impact various dimensions, including autonomy, control, personal growth, relationships, life purpose, and self-acceptance. The study underscores the role of family support, self-acceptance, and a sense of life purpose in bolstering nurses' resilience, suggesting that healthcare organizations can foster environments that encourage these elements. The observed adaptive motivation in nurses, along with their ability to cultivate positive social relationships and find meaning in their work, highlights the importance of holistic approaches in nursing well-being programs. Tailoring support mechanisms to individual and contextual factors is crucial, promoting resilience and psychological well-being among nurses. This approach can lead to a more resilient and satisfied nursing workforce, benefiting both healthcare professionals and the quality of patient care.

Conclusion

The global healthcare systems, especially healthcare workers, have been significantly impacted by the COVID-19 pandemic. Nurses and other health professionals have encountered substantial challenges, including workforce reductions due to COVID-19-related deaths and departures. The pandemic has taken a toll on the mental and physical well-being of healthcare workers, underscoring the importance of supportive government policies and interventions to enhance their resilience. Well-being, comprising life satisfaction, comfort, and discomfort, is a multidimensional concept. Neglecting the physical and mental health of healthcare workers may lead to a crisis in health services, affecting their ability to deliver optimal care. It is crucial for the government to focus on developing resilience skills to help healthcare workers cope with the aftermath of disasters. This study is driven by the urgency to assess the resilience and well-being of nurses in Sumatra Island post-pandemic. The findings reveal that nurses demonstrate resilience and well-being, with positive correlations between resilience and various aspects of psychological well-being. The study provides vital insights into factors influencing nurses' well-being and strategies to support their mental health.

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Competing Interests

The authors declare that they have no known competing financial

Research Highlights

What is the current knowledge?

- Resilience varied significantly with factors such as a history of chronic diseases and nursing experience, while age influenced certain dimensions of resilience and psychological well-being.

What is new here?

- New insights by specifically examining the resilience and psychological well-being of nurses in Indonesia post-pandemic.
- Identifies factors such as a history of chronic diseases, nursing experience, and age as significant influencers of resilience and psychological well-being among nurses.
- Emphasizes the need for tailored strategies to support nurses' psychological well-being, taking into account these influential factors.

interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability Statement

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethical Approval

Ethics clearance was confirmed by the Faculty of Nursing Ethical Standards Committee on June 13th 2023 Number: 106.laiketik/KEPKFKEPUNAND. Participants provided informed consent prior to undertaking the survey and had the option to decline to answer any question or to terminate the survey at any stage. All information collected was completely anonymous.

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