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Prevalence of Work Burnout and Associated Factors Among Nurses In selected hospitals, Saudi Arabia

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Abstract
Work burnout is a negative workplace state caused by work overload, protracted hours, unfairness, conflict, lack of social support, and decision-making authority. This study aimed to assess the prevalence of work burnout and associated factors among nurses at selected hospitals in Saudi Arabia. A descriptive cross-sectional **research design** was used in this study, **setting:** The study was conducted at selected Hospitals, in the eastern province of Saudi Arabia. **The sample** consists of 100 available nurses, who agreed to participate at the time of data collection and fulfill inclusion criteria. The **tools** used were socioeconomic characteristics of nurses, Maslach Burnout Inventory MBI, and the associated factors scales. Statistical analysis was performed using SPSS version 25. **Results:** More than half the nurses had a low level of work burnout and Oslo Social Support scale identified that about half of the nurses received poor social support whereas about one-quarter of nurses received strong social support and only a minority of nurses were exposed to high mental stress while most of the nurses were exposed to little stress. As per Athen's insomnia scale, more than half of nurses had insomnia. In **conclusion,** this study revealed that a considerable proportion of nurses had burnout syndrome. There is a significant positive weak correlation between work burnout and social support, anxiety, depression, somatisation, and insomnia. Therefore, the enhancement of educational standards and vigorous social support should be promoted among nurses in hospital environments to improve healthcare services, job satisfaction, and overall quality of care.
Keywords: Work burnout, Prevalence, Nurses, Job satisfaction

Introduction

Nurses face significant tasks and duties and are more likely to experience stress than other healthcare professions. Nurses have a lot of responsibilities and tasks to perform and globally, nurses struggle with burnout. In Saudi Arabia, the Ministry of Health provides healthcare to all citizens, works to prevent disease, enhances public health, establishes rules and laws governing the public and private health sectors with a continuous evaluation of the results and performance, and promotes interest in the research community, academic training, and facets of health investment. **(MOH Organizational Structure, 2022)**

The healthcare field, and particularly the nursing environment, may be a very stressful place to work because of the demanding obligations, nearly nonexistent control over one's work, lack of social support, and lengthy shifts. (Ribeiro RP, 2018) In addition, nurses face additional

stressors at work, including dealing with pain, patient deaths, and imparting terrible news to patients. **(Wazqar DY, 2018)** In their personal lives, nurses may experience emotionally taxing situations. This conflict between work and life can cause emotional exhaustion, which then leads to burnout. **(Gandi JC, 2011)** The incidence rate of burnout symptoms among nurses is approximately 11.3%, as shown by a meta-analysis of a global sample of 45,539 nurses from various specialties. **(Woo, 2020)**

In 1970, the term "job burnout" was first used to describe the unfavorable mental state that can develop at work because of pressures like work overload, long hours, unfairness, conflict at work, a lack of social support from coworkers or a supervisor, and a lack of decision-making authority. **(Bazami E, 2019)** Burnout is described as "a chronic stress state characterized by high levels of emotional exhaustion, decreased personal accomplishment, and depersonalization" by Maslach and Jackson in 198". **(Bazami E, 2019)**

Burnout is a psychosocial occupational disorder brought on by a sustained high level of emotional and social stress. It is marked by weariness, cynicism, and ineffectiveness, which frequently leads to bad attitudes toward coworkers and feelings of ineptitude. There are three categories of burnout: "frenetic" burnout, which affects people who are overly ambitious, "under-challenged" burnout, which affects people who work in dull, repetitive tasks, and "worn-out" burnout which affects people who readily give up under pressure. Having a better understanding of these types of burnouts will help create efficient therapy strategies**. (Qedair JT, 2022)**

Numerous factors, such as age, job experience, and nurse hierarchy, have been connected to the emergence of burnout in nurses. Other contributing variables include having an excessive workload at home and in healthcare facilities, experiencing psychological stress, undervaluing one's work, and receiving inadequate remuneration, disagreeing with coworkers, lacking social support, clashing with other nurses, and clashing with doctors. Numerous studies have demonstrated that African nurses experience low job satisfaction, which increases the risk of burnout and is associated with several adverse consequences. For instance, it motivates nurses to frequently switch workplaces and even quit their current jobs. Burnout's most pervasive adverse impacts are a fall in performance and production, a drop in the caliber of healthcare services, and health problems **(Belay AS, 2021)**

Burnout is a very prevalent problem among nurses. It is frequently believed that nurses who work in oncology and critical care areas are more susceptible to developing this problem. However, neonatal, and pediatric facility workers also experience high levels of stress and are at risk of burnout. A thorough understanding of the causes of this condition, an evaluation of the prevalence of each of its dimensions, and an understanding of the working environment of these professionals are necessary for the formulation and implementation of programs for the treatment and prevention of burnout. Adequate solutions in this area would help to promote the occupational health of pediatric nurses, enhance the caliber of care given to their patients, and the working environment**. (Pradas-Hernandez L, 2018)**

Significance of Study

The frequency and causes of burnout among nurses at hospitals have to be understood by a comprehensive review. Specifically in nursing, burnout is a psychological condition that can have a significant influence on people's well-being and professional performance. The study offers insightful information on the difficulties nurses experience and how these could affect their well-being both professionally and personally. It increases public awareness of the problem and its possible consequences, which encourages the creation of support and intervention networks. Health officials might use the data to design policies to combat burnout among nurses at hospitals

by focusing on elements like workload, job related stress, and workplace empowerment. The study highlights the necessity of comprehensive strategies that address systemic problems, emphasizing the significance of psychosocial treatments and support to decrease burnout among nurses.

Aim of the Study

The study aims to assess the prevalence of work burnout and associated factors among nurses at selected hospitals in the Eastern province of Saudi Arabia.

Research Questions

1. What is the level of Work Burnout among the nurses at selected hospitals in the Eastern province of Saudi Arabia?
2. Is there a correlation between Work Burnout and associated factors like social support, anxiety, depression, somatization, and insomnia?

Materials and Methods

Research Design: A descriptive cross-sectional research design was used in this study.

Sample: The research was carried out with one hundred registered nurses who were accessible at the time of data collection from a variety of departments at selected hospitals in Saudi Arabia. These nurses had also agreed to take part in the study and met the inclusion criteria.

Inclusion Criteria

- Have at least one year of work experience in the same position.
- Nurse's aged 22 years and older.
- Nurses spent at least 3 consecutive months at work without long leaves.
- Currently working in clinical departments with multiple shifts.

Exclusion Criteria

- Nurses with less than one year experience or fresh graduate.
- Working in administrative or supervisory positions
- Nurses with multiple long vacations
- Nurses on outpatient clinic with one shift

Tools for data collection:A structured questionnaire is used after reviewing the recent relevant literature and it included the following:

Tool 1: Demographic characteristics: include the name of the hospital, gender, age, marital status, residence, years of experience, monthly income, history of chronic diseases, and department or unit.

Tool 2: Burnout self-test scale (Maslach Burnout Inventory MBI). (Adbaru, Assen, and Demelew, 2019): The English version of Maslach's Burnout Inventory-Human Services Survey (MBI-HSS) is the most popular tool for assessing burnout risk. It consists of 22 items that have been reorganized into three subscales: emotional exhaustion (EE; nine items), depersonalization (DP; five items), and personal accomplishment (PA; eight items).

Scoring system: A 7-point Likert scale was used to answer each question. The scale goes from "never" (= 0) to "daily" (= 6). Three different scores were given for the inventory, one for each factor or subscale. Emotional exhaustion, depersonalization, and personal achievement all had scores that were added up. Then, those scores were used to find the overall scores. For emotional exhaustion, a score of 27 or higher was considered high burnout, 17 to 26 was considered intermediate burnout, and 0 to 16 was considered low burnout. For depersonalization, a score of 13 or higher was considered high burnout, 7 to 12 was considered intermediate burnout, and 0 to 6 was considered low burnout. Finally, a Personal Accomplishment score between 0 and 21 was considered low, a score between 22 and 38 was considered middle, and a score of 39 or more was considered high.

Tool 3: The associated factors tool.

a. **Oslo Social Support Scale (Abiola, Udofia, and Zakari, 2013).** The degree of social support can be measured using this three-item self-report instrument. concerning the number of personal confidants and the nature of the relationship with one's neighbors.
Scoring system: The total score varies from 3 to 14, with higher scores indicating robust levels and lowered values indicating inadequate levels of social support. The OSSS-3 sum score can be categorised into three overarching types of social support as follows: Scores of 3–8 indicate inadequate social support, 9–11 reflect moderate social support, and 12–14 signify robust social support.

b. **Self-Reporting Questionnaire version 20 (SRQ 20).** The Self-Reporting Questionnaire version 20 (SRQ 20), produced by the World Health Organization (WHO), was utilized to assess psychological discomfort, including depression, anxiety, and somatization.
Scoring system: The questionnaire was filled out either by the interviewer or by the interviewee themselves, and it only contains yes/no questions. The SRQ 20 is a standard screening tool for somatization, anxiety, and depression; it consists of 20 items. Assessment and Analysis. Graded from 0 (no symptoms) to 1 (some symptoms). Scale from 0 to 20, with scores above 10 indicating mental anguish. Only yes or no can be answered. **(Youngmann, et.al.2008)**

c. **Athen's insomnia scale (AIS):** measures the severity of sleep disturbances using a self-report psychometric tool.
Scoring system: The American Sleepiness Scale (AIS) is an 8-item self-reporting questionnaire that measures the severity of insomnia in the last 30 days on a scale from 0 (very bad) to 3 (very good). If the total score is 6 or more, it means the person suffer from insomnia. (**Soldatos, Dikeos and Paparrigopoulos, 2003)**

Pilot study

A pilot study was conducted on 10 nurses for the goal of testing the tools productivity. The proposed changes were considered to develop the final format.

Ethical consideration

Each participant was fully informed of the study's aims before obtaining their permission. All participants in the research was given the assurance that their participation is voluntary, anonymous, and confidential, and that their data will be safeguarded by the assignment of a code number for the survey. The respondent will be assured that the data collected will be used for research purposes only.

Statistical Analysis

Data analysis was done with the help of IBM SPSS software package version 20.0. Published by IBM Corp. in Armonk, New York. Numbers and percentages were used to describe the quantitative data. To ensure distribution normality, the Kolmogorov-Smirnov test was employed. Range (minimum and maximum), mean, and standard deviation were used to characterize quantitative data. The results were considered significant at the 5% level. To find the magnitude and direction of the linear relationship between the variables, the Pearson's r correlation coefficient test was utilized.

Results

Table (1): The research study illustrated the following results, with all participants providing their responses. In terms of gender distribution 51% of the participants were males. The age group of 22-30 years old constituted 45% of the study's population. Married individuals

accounted for 61% of the participants. Furthermore, 46% of the participants resided in rented apartments. Regarding professional experience, 32% of the participants had 5-10 years of work experience. Lastly, 67% of the participants expressed satisfaction with their monthly income.

Figure (1): This figure shows that 61% of the participants nurses work at Al Manaa General hospital al Khobar where 25% of participants nurses work at Al Hasa General Hospital and 14% of nurses work at Al Mana General Hospital at Al Dammam.

Table (2): This table presents the breakdown of the surveyed nurses based on the items of the Maslach Burnout Inventory. It reveals that 21% of nurses were exposed to high emotional exhaustion while 66% of them were exposed to low emotional exhaustion with mean 16.0 ± 13.06. Regarding depersonalization 22% of nurses had a high level of depersonalization and 53% had low level of depersonalization with mean 8.04 ± 6.86. Finally, 44% of nurses had high personal accomplishment while 39% had low levels of personal accomplishment. It can be concluded that more than half the nurses had a low level of work burn out.

Table (3): This table shows the associated risk factors that will be affected by work burnout. Concerning Oslo Social Support 49% of the nurses received poor social support where 22% of nurses received strong social support. Regarding self-reporting questionnaires that measure mental distress only 19% of nurses exposed to high mental stress while most of the patients 81% exposed to little stress. Regarding Athen's insomnia scale more than half 58% of nurses had insomnia.

Table (4): This table shows that there is a significant positive weak correlation between work burnout and social Support ($r=0.279$, $p<0.05$), Self-reporting Questionnaire (anxiety, depression, and somatization) with ($r=0.204$, $p<0.042$) and there is a positive weak correlation between work burnout and insomnia with ($r=0.219$, $p<0.029$).

Table (1): Distribution of the studied nurses according to demographic characteristic of nurses (n = 100)

	Demographic characteristic	No.	%
1	**Hospital**		
	AGH Al Khobar	61	61.0
	AGH Al Ahsa	25	25.0
	AGH Dammam	14	14.0
2	**Sex**		
	Male	51	51.0
	Female	49	49.0
3	**Age**		
	< 22	2	2.0
	22 - 30	45	45.0
	30 - 40	42	42.0
	40 - 50	9	9.0
	50 – 60	2	2.0
	> 60	0	0.0
4	**Marital status**		
	Single	37	37.0
	Married	61	61.0
	Divorced	2	2.0

5	**Residence**		
	Owned Apartment	22	22.0
	Rented Apartment	46	46.0
	Owned House	12	12.0
	Rented House	8	8.0
	Other	12	12.0
6	**Years of experience**		
	1-5 years	31	31.0
	5-10 years	32	32.0
	10-15 years	26	26.0
	15-20 years	9	9.0
	20 years	1	1.0
	> 20 years	1	1.0
7	**Monthly Income (SAR)**		
	Satisfied monthly income	67	67.0
	Unsatisfied monthly income	33	33.0

Maslach Burnout inventory	**High**		**Moderate**		**Low**		**Total score**
	No.	**%**	**No.**	**%**	**No.**	**%**	**Mean ± SD.**
Emotional Exhaustion	**(≥27)**		**(17-26)**		**(0-16)**		
	21	21.0	13	13.0	66	66.0	16.0 ± 13.06
Depersonalization	**(≥13)**		**(7- 12)**		**(0-6)**		
	22	22.0	25	25.0	53	53.0	8.04 ± 6.86
Personal Accomplishment	**(0-21)**		**(22-38)**		**(≥39)**		
	44	44.0	17	17.0	39	39.0	27.83± 15.69

Figure (1): Distribution of The Studied Nurses According to Hospital Distribution of Nurses (n = 100)

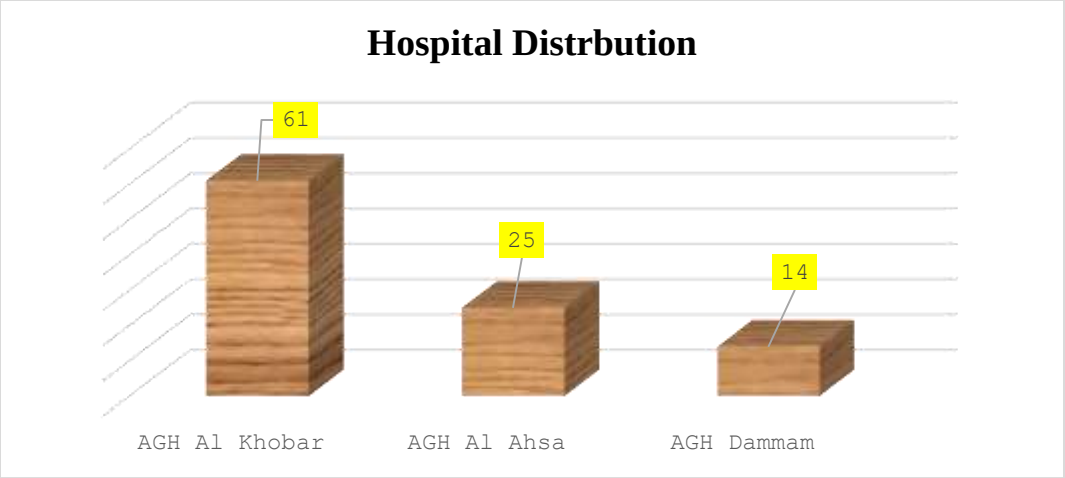

Table (2): Distribution of the studied nurses according to Maslach Burnout inventory items (n =100)

Table (3): Distribution of the studied nurses according to Associated factors of work burnout (n = 100)

Oslo Social Support	**Poor (3-8)**		**Intermediate (9-11)**		**Strong (12-14)**		**Total score**
	No.	**%**	**No.**	**%**	**No.**	**%**	**Mean ± SD.**
	49	49.0	29	29.0	22	22.0	8.90 ± 2.63
Self-reporting (SRQ)	**≤ 10**		**>10 Mental distress**			**Total score**	**Average Score**
	No.	**%**	**No.**	**%**		**Mean ± SD.**	**Mean ± SD.**
	81	81.0	19	19.0		5.88 ± 5.64	0.29 ± 0.28
Athen's insomnia scale (AIS)	**<6**		**≥6 Insomnia**			**Total score**	**Average Score**
	No.	**%**	**No.**	**%**		**Mean ± SD.**	**Mean ± SD.**
	42	42.0	58	58.0		6.29 ± 4.58	0.79 ± 0.57

Table (4): Correlation between Burnout scale and Oslo Social Support Scale, Anxiety, Depression, Somatization, and Athen's insomnia scale

	Maslach Burnout inventory	
	r	**p**
Oslo Social Support Scale	0.279*	0.005*
Self-reporting (SRQ)	0.204*	0.042*

Athens insomnia scale (AIS)	0.219*	0.029*

r: Pearson coefficient

***: Statistically significant at p ≤ 0.05**

Discussion

The study "Prevalence of Work Burnout and Associated Factors Among Nurses" provides valuable insights into the demographic and professional characteristics of nurses experiencing burnout. The results highlight several key factors that may influence the prevalence of burnout among this population.

A sizable number of the study's participants (45%) were in the 22–30 age range. Younger nurses who have just begun their careers are currently dealing with high levels of burnout, so this finding is especially alarming. This is consistent with prior studies suggesting that younger healthcare professionals experience burnout due to a lack of experience and coping strategies **(Dyrbye et al., 2017).** The relationship between marital status and burnout can be ambiguous; some research indicates that married individuals may have greater social support, while others suggest that juggling job and family obligations can make people feel more stressed **(Aiken et al., 2002)**. According to the study, more than one-third of participants worked for between 5 -10 years. Given that nurses may encounter greater responsibilities and expectations without commensurate increases in support or resources, this mid-career stage can be very difficult. This result is in line with research that indicates mid-career professionals frequently suffer from significant degrees of burnout. **(Maslach & Leiter, 2016).**

According to the Maslach Burnout Inventory (MBI), the current study's findings show that a substantial proportion of nurses are experiencing different levels of burnout. A key component of burnout is emotional exhaustion, which is frequently brought on by high job demands and ongoing workplace stress. With a mean score of 16.0 ± 13.06, the data reveals that more than two-thirds of nurses had modest levels of emotional exhaustion, and more than one-fourth had high levels. This result is consistent with earlier studies showing that nurses frequently experience emotional exhaustion as a result of the demanding nature of their jobs. **(Shah et al., 2021).** Regarding depersonalization, more than one-fourth of nurses reported high levels, and more than half of nurses reported low levels, with a mean score of 8.04 ± 6.86. A further significant aspect of burnout is depersonalization, which is defined by a cynical attitude toward work and a sense of separation from patients **(Maslach & Leiter, 2016).** The comparatively substantial proportion of nurses who report feeling depersonalized refers to the necessity of measures to enhance nurse-patient interactions and minimize job-related stress. **(Wickstrom & Harris, 2023).**

Remarkably, 39 percent of nurses reported low levels of personal success, compared to 44 percent who reported high levels. High levels of personal achievement can act as a buffer against burnout by fostering a sense of efficacy and fulfillment in one's work. Professional development and support programs could help nurses who still struggle to find satisfaction in their employment, as seen by the roughly equal distribution between high and low levels. **(Cimiotti et al., 2012).** Overall, the study concludes that more than half of the nurses surveyed experienced low levels of work burnout. While this is encouraging, it also highlights the ongoing need to support nurses' mental health and well-being. To mitigate burnout and enhance job satisfaction, it is crucial to

improve work conditions, ensure adequate staffing, and provide mental health resources. **(Shah et al., 2021), (Wickstrom & Harris, 2023)**

The findings of this study highlight significant factors associated with work burnout among nurses, emphasizing the critical need for targeted interventions to mitigate these risks. The data indicates that nearly half (49%) of the nurses reported receiving poor social support, while only 22% received strong social support. This disparity suggests that inadequate social support is a prevalent issue among nurses, potentially exacerbating feelings of isolation and stress. Previous research has shown that strong social support networks are crucial in buffering against work-related stress and burnout **(Smith et al., 2020).** Therefore, enhancing social support systems within healthcare settings could be a vital strategy in reducing burnout rates. According to the self-reporting questionnaire, a minority (19%) of nurses experienced high levels of mental distress, whereas the majority (81%) reported low levels of stress. This finding is somewhat encouraging, indicating that most nurses are not experiencing severe mental distress. However, the 19% who do experience high stress represent a significant portion of the workforce that may be at risk for burnout.

Mental distress has been consistently linked to burnout in numerous studies **(Johnson et al., 2019),** underscoring the need for mental health support and stress management programs tailored for nurses. The Athens Insomnia Scale results reveal that more than half (58%) of the nurses suffer from insomnia. Insomnia is a well-documented risk factor for burnout, as it can lead to chronic fatigue, decreased cognitive function, and impaired job performance **(Brown & Smith, 2018).** Addressing sleep issues through interventions such as sleep hygiene education, cognitive-behavioral therapy for insomnia (CBT-I), and organizational changes to reduce shift work-related sleep disturbances could be beneficial.

The significant positive weak correlation between work burnout and social support ($r=0.279$, $p<0.05$) suggests that as social support decreases, the level of burnout among nurses increases. This aligns with previous research indicating that social support is a crucial buffer against work-related stress and burnout **(Smith et al., 2020).** Enhancing social support systems within healthcare settings could therefore be a strategic approach to mitigating burnout. Additionally, the study found a significant positive weak correlation between work burnout and the Self-Reporting Questionnaire (SRQ) scores, which measure anxiety, depression, and somatization ($r=0.204$, $p<0.042$). This finding is consistent with the literature that links mental health issues with higher levels of burnout **(Jones & Brown, 2019).**

It underscores the need for mental health interventions and support for nurses to address these psychological factors, which could, in turn, reduce burnout levels. Moreover, the positive weak correlation between work burnout and insomnia ($r=0.219$, $p<0.029$) indicates that sleep disturbances are associated with higher burnout levels. This is supported by previous studies that have shown a bidirectional relationship between sleep problems and burnout **(Williams et al., 2018).** Addressing sleep hygiene and providing resources for better sleep management could be beneficial in reducing burnout among nurses. Overall, while the correlations found in this study are weak, they are significant and point to the multifaceted nature of burnout among nurses.

Conclusion

In conclusion, this research study provided valuable insights into the demographic characteristics and burnout levels among participants. The majority of participants were male, aged between 22-30 years, and married, with a significant proportion residing in rented apartments. Participants expressed varying degrees of burnout, including emotional exhaustion, depersonalization, and personal accomplishment. It can be concluded that more than half of the study participants had a low level of work burnout. Regarding associated factors, about half of the nurses received poor social support while less than a quarter had strong social support and most of them had little mental distress. More than half of them had insomnia.

Recommendation

Increase the sample size and diversity, use both subjective and objective measures, assess organizational factors, and collaborate with multiple healthcare institutions to enhance the generalizability, validity, and comprehensiveness of the study on healthcare professional burnout.

Limitation

The key limitations of the study include potential issues with sample size and representation, self-report bias, cross-sectional design limiting causal conclusions, lack of a control group, and the inherent subjectivity in measuring the complex construct of burnout, all of which constrain the generalizability and interpretability of the findings. Small sample size was the limitation of the study, and this can be explained by nurse's workload and short break time the use for taking snacks or praying.

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Conflict of interest: No conflicts of interest are reported.

Data Accessibility: The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Authors' contributions:

Author-1: Overall Concept, data handling, data analysis, supervision, study validation, supervision, and manuscript writing

Author-2,3,4&5: Data collection, draft preparation, discussion of results, editing, review, and manuscript writing

All authors have critically reviewed and approved the final draft and are responsible for the content and index of the manuscript.

Research Highlights:

Current knowledge: nurses experience low job satisfaction, which increases the risk of burnout and is associated with several adverse consequences

New Knowledge: A considerable proportion of nurses had burnout syndrome. There is a significant positive weak correlation between work burnout and social support, anxiety, depression, somatization, and insomnia

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