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The Relationship between Adversity Quotient and Emotional Mental Disorders in Onshore Workers in The Upstream Oil and Gas Sector

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Abstract

Background: Adversity Quotient (AQ) is an essential concept for understanding an individual's capacity to cope with adversity, including prolonged workplace stress that may lead to Emotional Mental Disorders (EMD), particularly among Onshore workers in the upstream oil and gas sector. Harsh physical work environments and psychosocial pressures place these workers at increased risk of developing EMD. Although AQ has been shown to correlate negatively with stress, no specific research has investigated the relationship between AQ and EMD in this population.
Objective: This study aims to examine the relationship between AQ and EMD among Onshore workers in the upstream oil and gas.
Methods: This was an observational analytic study with a cross-sectional design involving 155 high-risk Onshore workers in the upstream oil and gas sector. Data were collected using total sampling and measured through the Self-Reported Questionnaire-20 (SRQ-20) and the Adversity Response Profile (ARP). Data analysis was conducted using the Chi-square test and Fisher's exact test.
Results: Fisher's test results, Adversity Quotient and emotional mental disorders were not significantly related (p = 0.47).
Conclusion: There is no significant correlation between Adversity quotient (AQ) and emotional mental disorders onshore workers in the upstream sector oil and gas.
Keywords: *adversity quotient*, mental emotional disorder, onshore workers

Abstrak

Pendahuluan: *Adversity Quotient (AQ) merupakan konsep penting untuk mengetahui kemampuan individu dalam menghadapi kesulitan, termasuk stres di tempat kerja yang berkepanjangan hingga dapat mengakibatkan Ganggun Mental Emosional (GME) khususnya pekerja Onshore di sektor hulu minyak dan gas. Lingkungan kerja fisik yang berat dan tekanan psikososial menjadikan pekerja berisiko terjadi GME. Walaupun AQ berkorelasi negatif terhadap stres tetapi belum ada penelitian spesifik meneliti hubungan AQ dengan GME pada populasi ini.*
Tujuan: *Penelitian ini bertujuan untuk mengetahui hubungan AQ dengan GME pada pekerja Onshore sektor hulu minyak dan gas.*
Metode: *Analitik observasional dengan potong lintang sebanyak 155 responden pekerja Onshore berisiko tinggi sektor hulu minyak dan gas. Pengumpulan data dengan cara total sampling dengan menggunakan kuisioner Self-Reported Questionnaire-20 (SRQ-20) dan Adversity Respon Profile (ARP). Prosedur analisis data dengan uji chi-square dan uji fisher's.*
Hasil: *Hasil uji fisher's, Adversity quotient dengan gangguan mental emosional tidak berhubungan signifikan (p = 0,47).*
Kesimpulan: *Tidak terdapat hubungan signifikan antara Adversity Quotient (AQ) dengan gangguan mental emosional pada pekerja Onshore sektor hulu minyak dan gas.*
Kata kunci: *adversity quotient, gangguan mental emosional, pekerja onshore*

Background

Emotional Mental Disorders (EMD) can be caused by ongoing stress. Stress is defined as a condition or feeling experienced when expectations of a person exceed their abilities.[1]

The average prevalence of stress, depression, and anxiety related to work in the industry is 2,590 cases per 100,000 workers.[2] There are around 340 million work accidents, 160 million victims of work-related diseases; 2.3 million workers die worldwide from work-related accidents or diseases and cause losses of more than $ 300 billion per year to companies in the United States.[3,4] Stress is a serious problem in Indonesia. There are 9.8% mental disorders. Stress in the workplace is 35% which can be fatal and as much as 43% are estimated to be lost work days.[5]

Stress in the workplace has various types of consequences, both in the form of cognitive, physiological and organizational effects. Stress is a negative emotion, cognitive, behavioural and physiological process that occurs in individuals to try to adjust or negotiate with existing stressors that can interfere with or threaten the individual's daily functioning and cause the individual to adjust. Stress experienced by workers is a problem for companies that needs to be considered in order to improve the quality of human resources.[6]

If someone experiences mental health problems, early detection and early prevention are very important to prevent negative impacts.[1] Mental disorder screening tools are useful for workers to identify possible mental disorders in themselves or others. Screening instruments are used to check for early symptoms of mental disorders, early detection, intervention, and research. The Self-Reported Questionnaire-20 (SRQ-20) is a tool used to screen for mental disorders through individual assessment.[7]

Stress coping strategies can be done from the individual side, in dealing with it, a person will make efforts to overcome the stress which is called a coping strategy.[8] Such as by distancing oneself from the cause of stress, processing thoughts by changing perceptions about stress, eliminating causes of stress, controlling increased stress and asking for social support from people around.[9]

Adversity Quotients (AQ) is a concept introduced by Stoltz in 1997 regarding the personal qualities that a person has to face various difficulties and in an effort to achieve success in his life.[10] While the coping mechanism is how a person deals with various things that can cause stress. There is a positive relationship with a significant correlation between the adversity quotient and coping strategies, meaning that the higher the adversity quotient, the more effective the coping strategy used.[11]

The Adversity Response Profile (ARP), as an assessment instrument, has been administered to more than 7,500 individuals worldwide, encompassing a wide range of careers, ages, races, and cultural backgrounds. Formal analysis of the results has shown that the instrument is a valid measure for assessing how individuals respond to adversity and serves as a powerful predictor of success.[10] The Adversity Quotient (AQ) has an impact on workplace stress, organizational commitment, and the turnover intention among industrial workers.[12] A relationship exists between adversity quotient and occupational stress in employees. Adversity intelligence has a significant negative effect on workplace stress, meaning that individuals with higher adversity intelligence tend to experience lower levels of stress at work. Those who are capable of facing adversity are better able to manage stress effectively. This finding is consistent with other AQ research conducted in Indonesia.[13]

The oil and gas industry is one of the industries with a high level of danger.[11] Workers are a group at high risk of various health problems caused by the work process, work environment, and worker behaviour, so they have the potential to experience work-related diseases.[14] Symptoms of anxiety and depression were reported by almost 15% of workers surveyed. Ordered logistic regression analysis shows age, length of rotation, length of service and region of origin.[15]rotation length, years of service and local origin (versus expatriate The upstream oil and gas sector cannot be separated from the hazards and risks that arise. The risks of working on offshore and onshore oil and gas installations include operational risks, physical health and individual psychology.[16]

Psychosocial hazards relate to individual workers, work contexts, social and corporate. High labour demands, deadlines, workloads, short tenure, work methods and relationships between superiors and coworkers can cause stress at work.[17,18,19] Onshore workers in the upstream oil and gas sector are tasked and responsible for maintaining productivity with 8-hour working hours a day which are divided into 3 (three) work shifts, namely morning, afternoon and night. This is related to the physical environmental conditions in

the work area, namely hot work locations and several remote areas.[20]

As well as the adversity quotient intelligence possessed by each worker at risk of receiving pressure received during working hours. There has been no research linking Adversity Quotient with emotional mental disorders in Onshore workers, especially in the upstream oil and gas sector in Indonesia. Based on this, the formulation of the problem is that the relationship between Adversity Quotient and emotional mental disorders in Onshore workers in the upstream oil and gas sector is not yet known.

This study aims to examine the relationship between Adversity Quotient and emotional mental disorders among onshore workers in the upstream oil and gas sector. This study specifically aims to determine the prevalence of Adversity Quotient and emotional mental disorders, as well as to assess the relationship between them among onshore workers in the upstream oil and gas sector.

The results of this study are expected to serve as a recommendation for upstream oil and gas companies, particularly in onshore fields, to support company policy-making in identifying contributors to emotional mental disorders among the workforce, to enhance workers' understanding of the contribution of Adversity Quotient to emotional mental disorders, reference for future researchers in conducting studies related to the importance of stress management in the workplace among onshore workers in the upstream oil and gas sector, and This study can provide the public with knowledge about the Adversity Quotient, which may help them in dealing with various challenges.

Methods

This research is an observational analytical study with cross sectional design approach to analyse the relationship *adversity quotient* and emotional mental disorder among onshore workers in upstream oil and gas Central Sumatera. The study took place from January-March 2025, using primary data from the ARP questionnaire and SRQ-20

The sample consisted of 155 respondents, who declared fit to work. Inclusion criteria included Onshore workers (working at height, in confined space, driver, heavy equipment operator, as security and fireman) aged 20-56 years, male and female, regular schedule system, fit for work, more than 3 months of service and signing informed consent. Exclusion criteria included Workers who work onshore in the upstream oil and gas sector outside central Sumatra and not willing to participate in the study.

The study variables included independent variables (*adversity quotient*), dependent variables (emotional mental disorders), and confounding variables (age, gender, tenure, marital status, education level and shift work). The sample size was determined using the two proportions difference formula with a 95% confidence level and 95% power of the test, based on the proportions in the previous study of Late, 2023.

Data analysis was performed using SPSS software, including univariate, and bivariate chi-square tests. The confidence interval was set at 95% and the significance limit was set at $p<0.25$.

This study received ethical approval from the Ethics Committee of RSCM-FKUI, January 17, 2025: KET – 57/UN2.F1/ETIK/PPM.00.02/2024.

Result

Data Collection Process

Population are 948 people, identification of permanent workers and partners included in the Onshore job category for the period 2024–2025 was carried out. In addition, workers and partners who worked shifts in the same period were also identified. The number of workers identified was 187 people. Furthermore, an evaluation of workers and partners was carried out based on the results of the 2024 medical check-up (MCU). After identifying groups of workers who were declared fit to work, workers were asked to complete a medical declaration form and a daily check-up (DCU) examination.

A total of 156 people were declared fit to work based on the 2024 MCU data. However, of the 156 people, 1 person was excluded from the study because he was declared unfit to work while undergoing DCU. Total of 155 people who were declared fit to work were willing to take part in the study by signing the research informed consent Participants then filled out two types of questionnaires, namely the *Adversity Response Profile (ARP)* and the *Self-Reported Questionnaire* (SRQ-20). The questionnaire was filled out through guided interviews to ensure consistency and suitability of the

data with the objectives of the study. Data collected from the questionnaire was analysed using SPSS software. The flow of this data collection process is illustrated in Figure 1.

Overview of Respondent Characteristics

Table 1 displays the sociodemographic characteristics of the age group 41–50 years (45.2% of the total sample) with 9.1% experiencing emotional mental disorders. The age group >50 years has the highest percentage of emotional mental disorders (14.3%), The age group 41–50 years (45.2% of the sample) contributed 9.1% of cases of emotional mental disorders. As the dominant age group in the sample, this figure indicates that this productive age be vulnerable to workload. The young age group (20–30 years and 31–40 years) has a lower percentage of emotional mental disorders (5.9% and 7.5%). Male gender (98.7% of the total sample), with 9.2% experiencing disorders. The last education was high school/equivalent (90% of the total sample), with 10% experiencing emotional mental disorders in this group. Most respondents have a working period of ≥5 years (90.1%) of the total sample) with 10% experiencing emotional mental disorders. Working period <5 has a lower percentage of disturbance, which is 5.9%. Marital status is married (91.0% of the total sample), with 9.2% experiencing disturbance. Afternoon-night work shift (58.7% of the total sample) with 7.7% experiencing disturbance. Low Adversity Quotient (AQ) (83.9% of the total sample), with 10% experiencing disturbance. Mental emotional disturbance 9.0% of the total respondents.

A clearer picture of the tendency of the CO2RE dimension in the Adversity Quotient profile, data grouping is carried out based on the assessment results filled in by respondents.

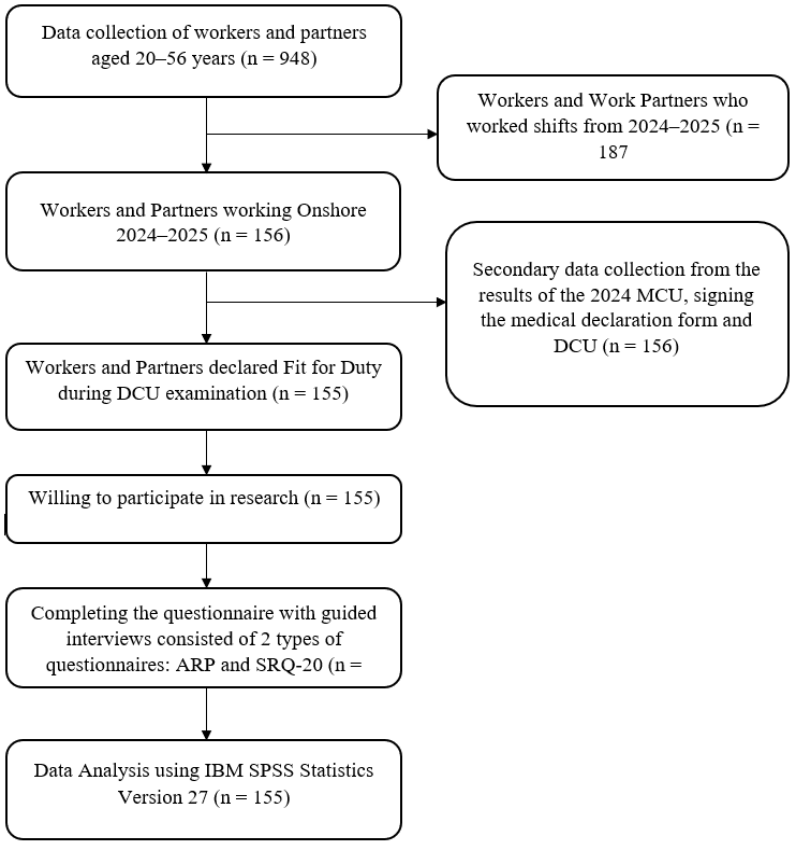

Figure 1. Flow of Data Collection

Table 1. Sociodemographic characteristics of respondents (n=155)

Variable	Emotional mental disorder	
	Yes	No
	n (%)	n (%)
Age		
20 – 30 years	1 (5.9%)	16 (94.1%)
30 – 40 years	3 (7.5%)	37 (92.5%)
41 – 50 years	7 (9.1%)	70 (90.9%)
>50 years	3 (14.3%)	18 (85.7%)
Gender		
Male	14 (9.2%)	139 (90.8%)
Female	0 (0%)	2 (100%)
Education level		
Senior high school graduate	14 (10,0%)	139 (90,8%)
Diploma & Bachelor	0 (0%)	15 (100%)
Length of service		
<5 years	2 (5.9%)	32 (94,1%)
≥5 years	12 (9,9%)	109 (90,1%)
Marital status		
Married	13 (9.2%)	128 (90.8%)
Not Married	1 (7.1%)	13 (92.9%)
Work shift		
Morning	7 (10.9%)	57 (89.1%)
Afternoon & Evening	7 (7.7%)	84 (92.3%)

Table 2. Description of respondents adversity quotient dimension profile (n=155)

AQ dimension profile	Number (n)	Percentage (%)	High AQ	Low AQ
CO_2RE	105	67,74	25	80
co_2re	17	10,97	0	17
CO_2Re	14	9,03	1	13
Co_2re	5	3,23	0	5
cO_2Re	4	2,58	0	4
cO_2RE	3	1,94	0	3
CO_2re	2	1,29	0	2
co_2Re	1	0,65	0	1
co_2RE	1	0,65	0	1
cO_2re	1	0,65	0	1
CO_2rE	1	0,65	0	1

*C/ O_2/ R/ E: *Control, Origin & Ownership, Reach* or *Endurance* with moderate & high value.
*c/ o_2/ r/ e: *control, origin & ownership, reach* or *endurance* with low value.

The CO_2RE profile describes the combination / weakness in the fourth dimension. So, even though the total AQ score is low as many as 80 respondents, the profile dimension can still show moderate strengths that enter the CO_2RE aspect. In the CO_2RE dimension, there are a total of 155 samples with a variety of profiles, most of the respondents are 105 people (67.7%) consisting of 25 respondents having a high total AQ, compared to 80 respondents having a low total AQ. The rest with a co_2re profile of 10.97%, a CO_2Re profile of 9.03%, a Co_2re profile of 3.23%, a cO_2Re profile of 2.58%, a cO_2RE of 1.94% and a CO_2re of 1.29% other forms in smaller numbers below 1%. Table 2 has different interpretations at each level as follows.

The CO_2RE profile is a high and ideal AQ profile. Individuals show tenacity, high responsibility, empowerment, optimism and optimum strength. Individuals with a co_2re profile tend to experience great difficulties. The cumulative effects of excessive self-blame due to events that occur, far-reaching and assuming that the difficulties will last a long time can decreasing productivity, motivation, health and psychology. The CO_2Re profile is relatively high, with a healthy tendency to assign roles appropriately and to set boundaries on scope and control. However, there is also a belief that difficulties and their causes will persist for a long time.[10]

Description of adversity quotient with emotional mental disorders

Based on the research results in table 3 it can be seen that as many as 14 respondents (9.0%) have emotional mental disorders, while as many as 141 respondents (91.0%) were normal or did not have emotional mental disorders. It can be seen that as many as 25 respondents (16.1%) have a high AQ level, while as many as 130 respondents (83.9%) have a low AQ level.

Relationship between adversity quotient and emotional mental disorders

The chi-square test and fisher exact test are results showed no significant relationship between AQ and emotional mental disorders ($p = 0.47$). Indicates that respondents with high AQ tend to have a lower risk of experiencing emotional mental disorders is not statistically significant. This can also be seen from the proportion of respondents with high AQ who experienced emotional mental disorders of only 4%, while respondents with low AQ experienced emotional mental disorders of 10%.

Discussion

The prevalence of emotional mental disorders (EMD) among onshore upstream oil and gas workers was 9%. Representing approximately 9% of total respondents, is comparable to the 8.7% prevalence of EMD in Indonesia reported by Riskesdas (2018).[5] This similarity suggests that factors contributing to EMD, such as stress, social pressure, and environmental conditions, are consistently influential across various populations. However, a study by Pavicic et al. (2019) on oil and gas workers in Europe found a higher EMD prevalence of

Table 3. Frequency distribution based on emotional mental disorders

No	Emotional mental disorders	Frequency (N)	Percentage (%)
1	Normal	141	91.0%
2	Mental disorders	14	9.0%
	Total	155	100%

Table 4. Frequency distribution based on *adversity quotient*

No	Adversity quotient	Frequency (N)	Percentage (%)
1	Low value	130	83.9%
2	High value	25	16.1%
	Total	155	100%

Table 5. The relationship between *adversity quotient* and emotional mental disorders

Variable	Emotional mental disorders		P value
	Yes	No	
	n (%)	n (%)	
Length of service			
<5 years	2 (5.9%)	32 (94.1%)	0.73[f]
≥5 years	12 (9.9%)	109 (90.1%)	
Marital Status			
Married	1 (7.1%)	13 (92.9%)	1.00[f]
Not Married	13 (9.2%)	128 (90.8%)	
Work Shift			
Morning	7 (10.9%)	57 (89.1%)	0.48[cs]
Afternoon & evening	7 (7.7%)	84 (92.3%)	
Adversity Quotient			
High value	1 (4%)	24 (96%)	0.47[f]
Low value	13 (10%)	117 (90%)	

* cs: *chi-square*
* *f: fisher*

15%. This difference stem from cultural variations in reporting mental health symptoms. In Indonesia, the stigma surrounding mental disorders and limited mental health literacy could lead to underreporting of EMD symptoms.[15]

Regarding Adversity Quotient (AQ), a low AQ level was found in 83.9% of respondents. Instead, it indicates a general challenge in resilience, suggesting that most respondents have an optimal, but not necessarily low, level of resilience when facing challenges, potentially aligning with a moderate profile. Individuals with a moderate profile often have "specific" responses to difficulties and are frequently quite successful. However, when AQ scores were further broken down into the CO_2RE dimensions (Control, Ownership, Reach, Endurance), a more complex and varied profile emerged.[10]

Out of 155 respondents, 105 individuals (67.7%) fell into one majority CO_2RE profile consisting of 80 respondents with low total AQ and 25 respondents who had high total AQ. This suggests that low AQ has a moderate profile but does not meet the total score requirements for the high AQ category. while the remaining were distributed across various other profiles (10.97%, 9.03%, 3.23%, and smaller percentages in other profiles). For instance, the 9.03% group exhibited a CO_2RE profile where individuals felt control over difficulties, took responsibility for challenges (whether internal or external), and contained difficulties without them spreading to other life areas. However, their low endurance indicated a belief that difficulties would last a long time. This finding suggests that a low total AQ score doesn't uniformly reflect weaknesses across all CO_2RE dimensions. In many cases, respondents still showed relative strengths in one or more specific dimensions.[10]

This study aimed to understand the relationship between Adversity Quotient (AQ) and emotional mental disorders (EMD) among onshore upstream oil and gas workers. The majority of respondents were aged 41–50 years (51.5%), with the highest percentage of EMD cases (14.3%) found in the over 50 age group. This elevated percentage is likely linked to age-related stressors, such as approaching retirement (56 years), declining physical health, or psychosocial pressures in later life. The 41–50 age group, which constituted 45.2% of the sample, contributed 9.1% of EMD cases, indicating that this productive age group could be vulnerable to work-related burdens. Younger age groups (20–30 years and 31–40 years) showed lower EMD percentages (5.9% and 7.5% respectively), possibly due to greater adaptability and social support.

The typical sociodemographic profile of the EMD cases included male workers, with a high school education or equivalent, who were married and worked morning shifts.

Workers with same or over 5 years of service (64.5%) accounted for 9.9% of EMD cases among all respondents. This suggests that while workers in this sector are generally experienced, the high incidence of EMD stem from accumulated chronic stress due to long-term exposure to the work environment or emotional burnout. These sociodemographic characteristics align with Kusmawan's (2022) research on stress among downstream oil and gas workers in Balongan, which also found a high percentage of workers with over 5 years of service (61.7%) and married status (58.3%).[21]

Low Adversity Quotient (AQ) was observed in 83.9% of respondents, with 9.0% also experiencing EMD, despite their extensive experience. Similar sociodemographic patterns were found in Utami's (2021) study on EMD and hypertension among Indonesian workers, analysing Riskesdas 2018 data, where 8.7% of workers experienced EMD, with the most common age group being 35-64 years (62.6%) and the majority being male (60.5%).[22] Consistent with Dwi's research on workplace accidents in oil and gas drilling areas, this study found that 58.7% of onshore upstream oil and gas workers were on afternoon-night shifts. Although not statistically significant, the afternoon-morning shift showed the highest EMD percentage (10.9%), followed by morning shifts (7.7%), potentially influenced by higher workload during morning shifts compared to night shifts. Regarding education, 90.0% of respondents had a high school education or equivalent, with a EMD prevalence of 10%.[23].

These results are consistent with Bergh et al. (2018), who stated that psychosocial risks like workload, shift work, and geographical isolation have a greater impact on the mental health of oil and gas workers than individual resilience factors like AQ. It is suggested that social support and company policies in managing worker mental health act as mediating factors that reduce the impact of stress, thereby obscuring a significant relationship between AQ and EMD.[24]

This research found no significant relationship between Adversity Quotient (AQ) and emotional mental disorders (EMD) in onshore upstream oil and gas workers. align with Ramadhani's research on train engineers, which also found no significant link between AQ and workplace stress.[21] The insignificant relationship may also be caused by cultural mediator factors and company policies in this population such as social support, adequate spiritual activity, promotion of physical activity and easily accessible recreational facilities can reduce the impact of stress and work engagement.[25]

The physical work environment in the upstream oil and gas sector can create greater pressure than psychosocial pressure, so that individual abilities or AQ are not visible enough to overcome emotional mental disorders. Research conducted online in 34 provinces in Indonesia by Suryaputri (2023) found that anxiety in this case part of GME has sufficient evidence that spiritual activity, physical activity and recreational activities provide 3 to 4 times protection against severe anxiety.[26]

The low AQ level (83.9%) observed in the majority of our respondents suggests that these workers be less equipped to handle difficulties. This aligns with Calvin's (2022) findings that low AQ is often associated with high work stress, particularly in high-psychosocial-risk industries like oil and gas. However, our findings contrast with Singh et al. (2017), who found a significant relationship between AQ and work stress among IT professionals. Their study indicated that higher AQ enabled IT professionals to manage stress effectively even in challenging situations, with eight out of twelve work stress dimensions correlating significantly with AQ.[27] Furthermore, onshore upstream oil and gas workers face more complex operational risks, such as accidents and chemical exposure, compared to office workers, making external pressures in the work environment more dominant.

A clear pattern emerges from these studies: AQ tends to have a more significant influence when individuals face psychosocial stressors compared to physical stressors. Psychosocial stressors like interpersonal conflict, social pressure, work atmosphere, or rejection involve more complex cognitive and emotional dimensions, directly engaging the CO_2RE aspects of AQ. Such situations demand high adaptive capacity, mature decision-making, and stable emotional regulation, all within AQ's scope. Conversely, physical stressors are generally concrete and direct, primarily involving physiological responses.

AQ plays a more crucial role in the context of psychosocial stressors, as an individual's success in facing social pressure heavily relies on their difficulty management and adaptive capacity. For companies,

this finding indicates that simply increasing workers' AQ is insufficient for reducing EMD. A comprehensive program incorporating stress management training, psychological support, and adjustments to work policies is necessary. This finding challenges the assumption that AQ is the primary predictor of mental resilience across all industries, job types, and work environments. It underscores the need for a multidimensional approach to understanding EMD, considering both individual factors like AQ and environmental factors such as social support and physical stressors.

Study strengths

- Cross-Sectional Design: This research design is easy to implement as it doesn't require complex or long-term monitoring, making it more straight forward than other designs.
- Total Sampling: By including all population members, total sampling ensures high data accuracy and avoids the risk of selection bias in the research sample.
- Speed and Cost-Effectiveness: Research results can be obtained quickly and at a relatively low cost, especially since an online survey was used to gather data from many respondents in a short amount of time.
- Data Availability: All necessary secondary data for this research was readily available and easily accessible.

Research limitations

- Response Bias: Participants provide inaccurate answers due to factors like social desirability bias, where they respond based on perceived social norms rather than their true views. This can lead to distorted data and an underestimation of symptoms or weaknesses. Responses be extreme (e.g., strongly agree/disagree) or neutral, not reflecting actual conditions.
- Theoretical Limitations: The complexity of emotional mental disorders (EMD) is influenced by various biological, psychological, and social factors. Adversity Quotient (AQ) is likely just one of many contributing factors, making its isolated influence difficult to assess.
- Methodological Limitations: The study used SRQ-20 for early detection of EMD generally, not clinical diagnosis, which is a limitation. As mentioned, response bias (social desirability bias) likely occurred, leading participants to underreport mental symptoms or perceived weaknesses. This results in an underestimation of EMD prevalence and its relationship with AQ, requiring cautious interpretation and future longitudinal verification.
- Assessment Tool Limitation: The Adversity Response Profile (ARP) scale categorizes AQ into only high and low scores. However, the CO_2RE dimensions within AQ have three categories: high, medium, and low. This means the moderate profile of CO_2RE was not captured in the overall AQ assessment.

Conclusion

There is low Adversity Quotient level with 83.9% for onshore workers in the upstream oil and gas sector in the region of Central Sumatera. The prevalence of emotional mental disorders in respondents was 9%, which tends to be similar to other studies of emotional mental disorders, indicating that this remains a significant issue requiring ongoing attention. There is no statistically significant relationship between Adversity Quotient (AQ) and emotional mental disorders (EMD) among onshore workers in the upstream oil and gas sector, even after controlling for various confounding factors such as length of employment, marital status, and shift work system.

Recommendations

- Companies should implement mental health screening in the workplace, integrating it into regular medical check-up programs. It's crucial for companies to promote psychological support programs, such as counselling or Employee Assistance Programs (EAPs). Additionally, consider offering one-on-one coaching sessions for employees with low AQ (Adversity Quotient) scores. For these coaching sessions, it's highly recommended to utilize psychologists with deep expertise and knowledge of AQ.

- Providing knowledge to workers about the importance of AQ in forming individuals to be able to control, be responsible, reach and limit the problems.
- For education should do longitudinal studies to explore the long-term dynamics of AQ and emotional mental disorders.
- For Providing knowledge to encourage the community to take an active role in mental health campaigns to create a supportive environment.

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