

Unequal Minds and Hidden Struggles: Exploring Mental Health Disparities Across Demographic and Social Stratifiers in Abu Dhabi

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Citation: Badri, M., Alkhaili, M., Aldhaheeri, H., Yang, G., Albahar, M. and Alrashdi, A. (2025). Unequal Minds and Hidden Struggles: Exploring Mental Health Disparities Across Demographic and Social Stratifiers in Abu Dhabi, *Journal of Cultural Analysis and Social Change*, 10(2), 1761-1772. <https://doi.org/10.64753/jcasc.v10i2.1872>

Published: November 15, 2025

ABSTRACT

Mental health disparities are increasingly shaped by intersecting demographic and socioeconomic conditions. Anchored in the Social Determinants of Health framework, this study investigates variations in mental well-being among adults in Abu Dhabi using data from the 5th Cycle of the Abu Dhabi Quality of Life Survey (2023–2024), which included over 100,000 respondents. Drawing on a subset of 65,203 adults, we analysed key mental health indicators—such as sadness, anxiety, loneliness, fear, difficulty concentrating, and boredom—across population groups using descriptive statistics and ANOVA. The findings reveal statistically significant disparities by age, gender, nationality, education level, household head status, and employment sector. Notably, youth aged 15–29 reported the highest emotional stress, while females and non-Emiratis exhibited higher negative mental health indicators compared to their counterparts. Non-heads of households and private-sector employees also displayed elevated distress levels, reflecting structural vulnerabilities in occupational and social roles. These results underscore the multidimensional nature of mental health and the influence of systemic inequalities on psychological well-being. The study offers timely, locally grounded evidence to inform targeted mental health interventions and inclusive policy development in Abu Dhabi's rapidly evolving sociocultural landscape.

Keywords: Mental Health; Emotional stress; Demographic Disparities; Socioeconomic Inequalities; Abu Dhabi

INTRODUCTION

Mental health is increasingly recognized as a fundamental component of overall well-being, influencing individuals' capacity to function, form relationships, and contribute to society. The World Health Organization (WHO, 2022) emphasizes that mental health extends beyond the absence of mental disorders to encompass emotional, psychological, and social resilience. Despite growing awareness, mental health conditions such as anxiety, depression, and psychological distress continue to rise globally, often affecting individuals unevenly across demographic and socioeconomic lines (Patel et al., 2018; Lund et al., 2010).

Extensive literature supports the idea that mental health is shaped by an interplay of social determinants—including age, gender, income, education, marital status, and employment conditions—resulting in disparities in both prevalence and outcomes (Marmot & Wilkinson, 2005; WHO, 2008). Women, for instance, often report higher levels of psychological distress due to caregiving demands, economic inequities, and social expectations (Nolen-Hoeksema, 2012; Riecher-Rössler, 2017), while men may underreport distress due to stigma and cultural norms around emotional expression (Addis & Mahalik, 2003). Youth, too, face heightened emotional vulnerability stemming from social media use, academic pressure, and identity development (Twenge et al., 2019), whereas older adults may experience isolation, loneliness, or diminished purpose (Charles & Carstensen, 2010).

In the Gulf region, and particularly in Abu Dhabi, rapid demographic change, modernization, and labor diversity have amplified the need for robust mental health monitoring. Yet, despite periodic well-being surveys, few studies have comprehensively examined disparities in mental health across multiple demographic and occupational subgroups in this culturally complex setting. Prior studies have tended to isolate specific populations—such as youth (Badri et al., 2024) or workers (Badri et al., 2025)—rather than offer a holistic picture of mental well-being. Furthermore, existing research has often emphasized general life satisfaction or subjective health without adequately focusing on the mental health dimension.

This study addresses this gap by exploring how mental health indicators—sadness, anxiety, loneliness, fear, boredom, and difficulty concentrating—vary across demographic and socioeconomic categories using a large-scale dataset from the 5th Cycle of the Abu Dhabi Quality of Life Survey. Guided by the Social Determinants of Health (SDH) framework, the research specifically examines disparities based on gender, age, nationality, education level, employment sector, marital status, and household headship.

By identifying mental health disparities at the subgroup level, this study contributes localized, evidence-based insights to the emerging literature on public mental health. It aims to inform culturally sensitive, equity-focused policies in Abu Dhabi and support the development of more inclusive mental health interventions.

LITERATURE REVIEW

Understanding mental health disparities across demographic and social stratifiers is a critical public health priority. Mental well-being is increasingly recognized as a multidimensional construct influenced by a wide array of factors, including age, gender, education, employment, and marital status (Patel et al., 2018; World Health Organization [WHO], 2022; Lund et al., 2010). Globally, mental health challenges such as depression, anxiety, and stress-related disorders are not distributed equally across population groups, often reflecting broader patterns of social and economic inequality (Marmot & Wilkinson, 2005; Viner et al., 2012; Wang et al., 2020).

Indicators such as sadness or depression, anxiety, loneliness, difficulty concentrating, physical pain, fear, boredom, and emotional stress have long been recognized as key components of population-level mental health assessments. These indicators are frequently included in national and international well-being surveys due to their strong associations with quality of life and mental functioning. For example, loneliness has been shown to significantly predict depressive symptoms and psychological distress across age groups (Cacioppo & Cacioppo, 2014; Lee et al., 2021). Anxiety and sadness are widely utilized as core indicators in tools like the General Health Questionnaire (GHQ) and the Patient Health Questionnaire (PHQ), validated in studies across clinical and non-clinical populations (Spitzer et al., 2006; Kessler et al., 2002).

Similarly, difficulty concentrating and physical pain have been found to reflect not only mental health strain but also broader psychosocial stressors (Bair et al., 2003; Kroenke et al., 2011). Emotional stress is commonly assessed using the Perceived Stress Scale (PSS), a validated and widely adopted measure of psychological stress (Cohen et al., 1983; Cohen & Williamson, 1988). Stress scales have also been used in recent studies addressing youth well-being and digital stress (van den Broeck et al., 2020; Elhai et al., 2020).

Age is an important determinant of mental health. Adolescents and young adults face heightened vulnerability due to academic stress, identity formation, and digital exposure (Twenge et al., 2019; Viner et al., 2012). Older adults, on the other hand, may experience isolation, health-related anxiety, and role loss, contributing to psychological distress (Charles & Carstensen, 2010; Cattán et al., 2005). In Abu Dhabi, adolescents have shown particularly negative well-being scores, underscoring the need for more targeted mental health strategies (Badri et al., 2024).

Gender disparities are a recurring theme in mental health research. Women are more likely to report anxiety and depression due to social, economic, and caregiving pressures (Seedat et al., 2009; Nolen-Hoeksema, 2012; Riecher-Rössler, 2017). Conversely, men may underreport symptoms due to stigma and social norms (Afifi, 2007). Cultural expectations in Arab societies can further exacerbate such disparities, particularly through gendered roles and responsibilities (Badri et al., 2023).

Education is another critical factor. Higher educational attainment has been linked to improved mental health outcomes due to better economic prospects, social support, and cognitive resilience (Mirowsky & Ross, 2003; Freudenberg & Ruglis, 2007). Conversely, low education is associated with precarious employment and limited access to mental health resources (Eaton et al., 2008). The digital divide and health illiteracy further amplify vulnerabilities among those with lower education (WHO, 2008).

Employment status and work conditions are major determinants. Public sector employment is often linked to greater stability and well-being, while private sector workers and the unemployed face increased stress and insecurity (Stansfeld & Candy, 2006; Clark, 2001; Badri et al., 2025). Job insecurity, workload, and limited autonomy are key predictors of mental distress (Virtanen et al., 2005).

Marital status also plays a mediating role. Married individuals typically benefit from social and emotional support, while divorced, single, or widowed persons often experience higher emotional strain and loneliness (Simon, 2002; Robles & Kiecolt-Glaser, 2003; Avison et al., 2007; Amato, 2010). Head of household status can intensify mental strain, especially among single parents juggling financial and caregiving duties.

Cultural factors in the Arab world—particularly stigma and family dynamics—affect help-seeking and symptom disclosure. While religious coping and collectivist values may offer resilience, they can also obscure internal psychological distress (Koenig et al., 2012; Gearing et al., 2015; Al-Yateem et al., 2019). These cultural dynamics warrant locally tailored mental health approaches.

Several studies in Abu Dhabi validate the use of composite mental health indicators. Badri et al. (2023a) linked negative mental health to subjective health and life satisfaction. In another study on aging, similar indicators explained happiness through mediating health and sleep (Badri et al., 2023b). Their work with adolescents confirmed the multidimensionality of youth well-being using the same items (Badri et al., 2024), and further research explored mental health's mediating role in job security and satisfaction (Badri et al., 2025).

Together, these findings support the indicators' psychometric validity and emphasize their relevance in policy and research. This study expands on existing work by employing these indicators to examine disparities across multiple demographic dimensions within Abu Dhabi.

The study is theoretically anchored in the Social Determinants of Health (SDH) framework (WHO, 2008), which emphasizes how contextual factors such as education, income, and societal roles shape mental well-being. This foundation allows for a comprehensive examination of mental health as both an individual and structural outcome, shaped by unequal social environments.

METHODS AND ANALYSIS

Methods

This study utilized data from the 5th Cycle of the Abu Dhabi Quality of Life (QoL) Survey, conducted between September 2023 and April 2024 by the Department of Community Development. The survey employed a stratified sampling strategy to ensure representativeness across gender, age groups, nationality (Emirati and non-Emirati), marital status, educational attainment, and employment sectors. The full dataset included over 100,000 responses, of which 84,523 completed the mental health section. For this study, only respondents aged 15 and above with complete mental health and demographic data were included (Table 1).

Measures

The dependent variables were six mental health indicators derived from the survey: sadness, anxiety, loneliness, boredom, fear, and difficulty concentrating. Respondents rated these on a five-point Likert scale (1 = not at all; 5 = to a great extent), reflecting how much they experienced each symptom in the past two weeks. A reliability analysis was conducted, and the internal consistency across items was acceptable (Cronbach's alpha = 0.82). No composite score was created to preserve the individual variance of each emotional indicator. It should be noted that the emotional stress variable was measured on a 0–10 scale, whereas the other mental health indicators used 1–5 Likert responses. To ensure comparability, all variables were standardized prior to analysis, thereby minimizing scale-related discrepancies and allowing meaningful interpretation across measures.

Independent variables included:

- Gender (Male, Female)
- Age groups (15–24, 25–44, 45–64, 65+)
- Nationality (Emirati, non-Emirati)
- Education level (Less than secondary, Secondary, Tertiary)
- Marital status (Single, Married, Divorced/Separated, Widowed)
- Employment sector (Government, Private, Unemployed, Other)
- Head of household (Yes, No)

Analysis

All analyses were conducted using SPSS Version 28. Descriptive statistics were used to present means and standard deviations for each mental health indicator. One-way Analysis of Variance (ANOVA) was applied to test differences in mental health scores across demographic subgroups. Levene's test for homogeneity of variances was conducted prior to each ANOVA to validate assumptions. Where significant differences were found ($p < 0.05$), post-hoc comparisons using Tukey's HSD were conducted to identify specific group-level contrasts.

Effect sizes (η^2) were calculated to interpret the magnitude of between-group differences. Missing data were below 3% for all variables and were treated using listwise deletion. No imputation or weighting adjustments were applied, as subgroup stratification in the sampling design already ensured population coverage.

The analytical design of this study was guided by the Social Determinants of Health (SDH) framework, which emphasizes the role of structural and demographic factors in shaping mental well-being (Marmot & Wilkinson, 2005; WHO, 2010). Accordingly, the selected independent variables—including gender, age, educational attainment, nationality, marital status, employment sector, and household headship—reflect the key social determinants identified in the framework. These variables were used to examine disparities in mental health outcomes through ANOVA, with the goal of identifying which groups may be at greater psychological risk due to their demographic and socioeconomic positioning.

RESULTS

The analysis is based on a total of 100,045 respondents who completed the mental health section of the Abu Dhabi Quality of Life Survey. As seen in Table 1, the gender distribution shows a majority of male respondents (56.4%), with females representing 43.6% of the sample. The largest age groups were those aged 40–44 (17.1%) and 35–39 (16.9%), while younger respondents aged 15–19 comprised 8.7% of the total. Educational attainment was diverse, with over two-thirds of respondents having a college degree or higher (college degree: 34.0%, master's: 13.2%, PhD: 2.2%). Approximately one-third held pre-college qualifications (32.5%), while a small proportion were illiterate or only able to read and write (9.9%). The majority of participants were married (67.6%), followed by single (24.5%), with smaller proportions reporting divorced (5.7%), widowed (1.6%), or separated (0.6%) status. About 53.9% of the sample were heads of households. In terms of nationality, Emiratis constituted 47.7% of the sample, while non-Emiratis made up 52.3%. Employment status data showed that 61.3% were fully employed, while smaller groups included part-time employed (2.6%), self-employed (2.6%), unemployed but previously worked (5.5%), unemployed and never worked (4.0%), and retirees (3.1%). Regarding the nature of work, the largest share was in the private sector (25.5%), followed by local government (15.8%), federal government (12.2%), and semi-government institutions (8.1%). Domestic workers made up 2.3% of the sample.

Table 1. Profile of respondents

	Number	Percent
<i>Gender</i>		
Male	56457	56.4
Female	43588	43.6
<i>Age</i>		
15-19	8693	8.7
20-24	3700	3.7
25-29	8451	8.4
30-34	14073	14.1
35-39	16931	16.9
40-44	17086	17.1
45-49	11972	12.0
50-54	8042	8.0
55-59	4504	4.5
60+	6593	6.6
<i>Education attainment</i>		
Illiterate	2284	2.3
Read and write	7639	7.6
Pre-college	32469	32.5
College degree	34003	34.0
Post college	8254	8.3
Master degree	13157	13.2
PhD	2239	2.2
<i>Marital status</i>		
Single	24504	24.5
Married	67602	67.6
Divorced	5685	5.7
Widowed	1606	1.6
Separated	648	0.6
<i>Household nature</i>		
Head of household	53932	53.9

Not head of household	24727	24.7
<i>Nationality</i>		
Emirati	47729	47.7
Non-Emirati	52316	52.3
<i>Employment</i>		
Full employment	61327	61.3
Part-time employment	2565	2.6
Self-employed	2619	2.6
Unemployed/worked	5485	5.5
Unemployed/did not work	4033	4.0
Retired	3075	3.1
<i>Nature of work</i>		
Federal government	12254	12.2
Local government	15818	15.8
Semi government	8091	8.1
Private sector	25465	25.5
Domestic workers	2264	2.3

The results in Table 2 reveal clear and consistent age-related disparities in mental well-being. The youngest respondents (15–19 years) reported the highest levels of psychological and emotional distress across nearly all indicators. Boredom (3.080) and emotional stress (4.984) were exceptionally high among adolescents, with boredom showing the strongest overall variation across age groups ($F = 639.064$). Elevated levels of sadness, anxiety, concentration difficulty, and fear were also most pronounced in the 15–24 age range. In contrast, older adults (60+) consistently reported the lowest levels of distress across all indicators, including Sadness (1.748), Anxiety (1.793), Loneliness (1.486), and Emotional stress (2.916).

Results indicate a clear gradient of improving mental well-being with age, with younger individuals—especially adolescents and young adults—emerging as the most vulnerable group. The results reinforce the need for age-targeted mental health strategies, especially for youth in Abu Dhabi.

The results in Table 3 show that educational level is significantly associated with differences in mental well-being, though not in a linear fashion. The most notable pattern is that respondents with pre-college education reported the highest levels of distress across nearly all indicators, including Sadness (2.452), Worry/anxiety (2.560), Concentration difficulties (2.540), and Emotional stress (4.558) – the highest reported across all education levels.

By contrast, illiterate respondents consistently reported the lowest distress levels, particularly in emotional stress (2.679), worry (1.587), and sadness (1.572). Interestingly, those with higher education degrees (Master's or PhD) reported somewhat lower distress than the mid-educated groups, but still higher than the illiterate. For example, PhD holders reported less boredom (1.905) and fear (1.694) compared to pre-college respondents. This suggests that those with moderate education levels may experience greater financial or social pressure, while those at both ends of the education spectrum report better mental resilience.

The ANOVA results in Table 4 indicate that gender differences in mental well-being are consistently significant across all indicators, with females reporting higher levels of distress than males in every category. The most pronounced disparities were observed in Worry/anxiety and emotional stress, where females scored substantially higher (2.623 vs. 2.333 and 4.736 vs. 4.039, respectively). Physical pain also showed a notable gap (2.341 for females vs. 1.980 for males), the highest F-value (1819.380) in the table. These findings confirm that women experience significantly more emotional, psychological, and physical strain than men.

For nationality, although all differences were also statistically significant, the gaps were generally less pronounced. Still, Emiratis reported slightly higher emotional distress than non-Emiratis on several indicators—especially in worry/anxiety, emotional stress, and physical pain—suggesting greater perceived pressure or vulnerability among Emiratis in certain aspects of well-being.

Table 2. Means of mental indicators and ANOVA significance (according to age categories)

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60+	F	Sig.
Sad/low/depressed	2.588	2.415	2.482	2.489	2.466	2.371	2.302	2.184	2.003	1.748	230.924	0.001
Worry/anxiety	2.822	2.550	2.594	2.588	2.570	2.472	2.397	2.274	2.098	1.793	288.647	0.001
Concentrating/remembering	2.846	2.491	2.513	2.478	2.479	2.408	2.329	2.214	2.066	1.827	286.452	0.001
Physical pain	2.152	1.985	2.067	2.167	2.223	2.215	2.191	2.088	2.002	1.900	54.624	0.001
Fear	2.161	1.815	1.874	1.937	1.940	1.886	1.825	1.709	1.576	1.424	175.269	0.001
Loneliness	2.225	2.134	2.171	2.087	2.027	1.919	1.850	1.742	1.639	1.486	213.433	0.001
Boredom	3.080	2.494	2.440	2.300	2.209	2.102	2.036	1.917	1.797	1.611	639.064	0.001
Emotional stress	4.984	4.426	4.613	4.607	4.582	4.407	4.234	4.007	3.685	2.916	191.371	0.001

Table 3. Means of mental indicators and ANOVA significance (according to Education attainment)

	Illiterate	Read and write	Pre-College	College degree	Post college	Master	PhD	F	Sig.
Sad/low/depressed	1.572	1.825	2.452	2.413	2.447	2.396	2.190	345.481	0.001
Worry/anxiety	1.587	1.838	2.560	2.535	2.549	2.545	2.374	436.124	0.001
Concentrating/remembering	1.623	1.801	2.540	2.472	2.476	2.390	2.211	444.044	0.001
Physical pain	1.781	1.831	2.191	2.187	2.214	2.122	2.062	122.453	0.001
Fear	1.383	1.567	1.973	1.865	1.908	1.823	1.694	161.708	0.001
Loneliness	1.420	1.617	2.034	1.981	2.021	1.963	1.856	154.546	0.001
Boredom	1.489	1.756	2.472	2.198	2.187	2.090	1.905	421.634	0.001
Emotional stress	2.679	3.376	4.558	4.388	4.529	4.500	4.281	194.720	0.001

Table 4. Means of mental indicators and ANOVA significance (according to gender and nationality)

	Male	Female	F	Sig.	Emirati	Non-Emirati	F	Sig.
Sad/low/depressed	2.245	2.486	664.462	0.001	2.399	2.310	89.932	0.001
Worry/anxiety	2.333	2.623	922.459	0.001	2.520	2.410	131.557	0.001
Concentrating/remembering	2.306	2.520	546.459	0.001	2.510	2.306	495.852	0.001
Physical pain	1.980	2.341	1819.380	0.001	2.296	2.003	1196.637	0.001
Fear	1.741	2.003	920.195	0.001	1.943	1.781	352.906	0.001
Loneliness	1.867	2.059	433.665	0.001	1.936	1.966	11.140	0.001
Boredom	2.115	2.326	484.867	0.001	2.273	2.152	158.463	0.001
Emotional stress	4.039	4.736	908.693	0.001	4.499	4.225	140.126	0.001

The ANOVA results in Table 5 show that marital status and household role both significantly influence mental health indicators. Regarding marital status, the separated and divorced individuals consistently reported the highest levels of distress, particularly in Sadness, worry/anxiety, and emotional stress — with emotional stress peaking among separated respondents. Widowed individuals reported the lowest boredom and loneliness, likely reflecting coping maturity and life-stage adjustment, though still with moderate emotional strain. Married respondents generally fared better than singles and separated/divorced individuals, reporting lower means in sadness, loneliness, and emotional stress.

These findings suggest that relationship disruption is a strong risk factor for poor mental health, with separated individuals emerging as the most emotionally vulnerable group.

Focusing on the head of household status, we note from Table 6 that non-heads of households reported significantly higher levels of distress across nearly all indicators. Notably in anxiety (2.564 vs. 2.385), boredom, and emotional stress (4.574 vs. 4.150). This may reflect reduced autonomy, financial dependence, or limited decision-making power, particularly in cultural contexts where household headship carries both authority and stability.

Together, the results underscore that marital disruption and household role inequalities contribute to elevated mental health risks in Abu Dhabi.

The results in Table 6 clearly show that employment status significantly influences mental well-being, with unemployed individuals—especially those who had previously worked—reporting the highest levels of psychological distress. The unemployed who previously worked had the highest scores across nearly all indicators, especially - Sadness (2.808), Worry/anxiety (2.838), Fear (2.128), Boredom (2.649), and Emotional stress (4.798)

These levels are notably higher than those of any other group. Unemployed individuals who never worked also reported elevated distress, though slightly lower than their previously employed counterparts. In contrast, Retired respondents consistently showed the lowest distress levels, including the lowest means for sadness (2.094), fear (1.687), and emotional stress (3.787). We also note that the Self-employed individuals reported relatively better mental health than those in part-time or full-time employment, particularly in worry and boredom. These findings highlight the vulnerability of the unemployed, especially those with disrupted employment histories, and emphasize the protective role of stable or self-directed work in supporting mental well-being.

Table 5. Means of mental indicators and ANOVA significance (according to marital status, and being head of household or not)

	Single	Married	Divorced	Widow	Separated	F	Sig.	Head of household	Not head of household	F	Sig.
Sad/low/depressed	2.545	2.303	2.690	2.133	3.123	257.340	0.001	2.345	2.415	38.652	0.001
Worry/anxiety	2.701	2.458	2.785	2.167	3.134	307.144	0.001	2.452	2.551	76.166	0.001
Concentrating/remembering	2.616	2.362	2.566	2.174	2.894	209.127	0.001	2.377	2.490	108.592	0.001
Physical pain	2.125	2.171	2.494	2.253	2.672	108.915	0.001	2.163	2.249	71.637	0.001
Fear	2.016	1.824	2.189	1.776	2.486	226.459	0.001	1.843	1.877	10.926	0.001
Loneliness	2.277	1.915	2.451	1.983	2.849	652.121	0.001	1.872	1.985	110.480	0.001
Boredom	2.693	2.198	2.431	1.913	2.706	838.522	0.001	2.088	2.284	310.753	0.001
Emotional stress	4.781	4.546	4.996	3.595	5.820	187.780	0.001	4.217	4.582	174.914	0.001

Table 6. Means of mental indicators and ANOVA significance (according to employment status)

	Full time	Part time	Self Emp.	Unemployed Worked	Unemployed not/worked	Retired	F	Sig.
Sad/low/depressed	2.292	2.449	2.251	2.808	2.411	2.094	111.365	0.001
Worry/anxiety	2.405	2.525	2.367	2.838	2.490	2.131	106.545	0.001
Concentrating/remembering	2.342	2.467	2.330	2.576	2.418	2.154	59.853	0.001
Physical pain	2.108	2.224	2.035	2.227	2.161	2.128	51.516	0.001
Fear	1.798	1.923	1.740	2.128	1.895	1.687	67.515	0.001
Loneliness	1.904	2.039	1.843	2.261	1.995	1.679	81.367	0.001
Boredom	2.050	2.218	1.955	2.649	2.555	1.952	193.556	0.001
Emotional stress	4.278	4.489	3.899	4.798	4.459	3.787	36.120	0.001

The analysis (Table 7) reveals significant differences in mental well-being across employment sectors. Semi-government employees consistently reported the highest levels of psychological distress, including Worry/anxiety (2.600), Sadness (2.434), and Emotional stress (4.580) – the highest across all sectors. By contrast, domestic workers reported the lowest distress levels on every indicator, with particularly low scores in Sadness (1.430), Worry/anxiety (1.417), and Emotional stress (2.195). This unusually low reporting could reflect underreporting, cultural barriers, or differing expectations rather than better actual well-being.

Employees in federal, local, and private sectors reported similar patterns, with moderate levels of emotional distress. Notably, private sector workers showed slightly higher loneliness and boredom than government employees. The results suggest that semi-government employees may face unique institutional pressures or role ambiguity contributing to elevated stress, while domestic workers may remain under-observed in mental health assessments, warranting closer qualitative investigation.

Table 7. Means of mental indicators and ANOVA significance (according to employment sector)

	Federal Gov.	Local Gov.	Semi-Gov	Private	Domestic	F	Sig.
Sad/low/depressed	2.319	2.307	2.434	2.338	1.430	286.124	0.001
Worry/anxiety	2.440	2.456	2.600	2.415	1.417	370.267	0.001
Concentrating/remembering	2.419	2.450	2.469	2.314	1.400	375.403	0.001
Physical pain	2.226	2.228	2.185	2.040	1.408	284.664	0.001
Fear	1.826	1.836	1.901	1.803	1.241	145.963	0.001
Loneliness	1.878	1.845	1.961	2.008	1.387	141.800	0.001
Boredom	2.072	2.055	2.125	2.104	1.376	180.992	0.001
Emotional stress	4.261	4.363	4.580	4.362	2.195	235.945	0.001

The results revealed significant disparities in mental health indicators across various demographic and socioeconomic groups in Abu Dhabi. Age emerged as a strong differentiator, with adolescents and younger adults (15–19 and 20–24) reporting the highest levels of sadness, anxiety, and emotional stress, while older age groups, particularly those 60 and above, reported markedly better mental health outcomes. Educational attainment also showed a clear pattern: respondents with lower education levels experienced higher levels of sadness, loneliness, and boredom, whereas those with postgraduate qualifications exhibited better mental health scores across nearly all indicators.

Gender and nationality differences were also notable. Females reported significantly higher levels of emotional distress—especially sadness, anxiety, and stress—compared to males. Similarly, non-Emiratis exhibited worse mental health outcomes than Emiratis, particularly in feelings of sadness, worry, and emotional stress. Marital status played a critical role, with divorced and separated individuals scoring highest on sadness and loneliness, followed by singles, while married individuals reported the lowest distress levels. Heads of households also showed significantly higher emotional stress levels. Lastly, employment sector differences indicated that semi-government employees were the most emotionally strained, reporting the highest levels of sadness, anxiety, and stress, whereas domestic workers consistently reported the lowest scores, though this pattern may reflect cultural or reporting biases. These results underscore the variability in mental well-being across population subgroups in the Emirate.

DISCUSSIONS

The findings of this study substantiate growing global and regional evidence that mental health outcomes are deeply stratified by demographic and socioeconomic characteristics. Drawing from the Social Determinants of Health (SDH) framework, the disparities observed across gender, age, nationality, education, marital status, employment, and household roles reflect the embedded influence of structural inequalities in shaping psychological well-being in Abu Dhabi.

A striking observation is the heightened mental health burden reported by females, echoing international research on gendered vulnerability to anxiety and depression (Albert, 2015; Seedat et al., 2009; WHO, 2021). In the local context, cultural expectations and dual caregiving and occupational responsibilities may amplify emotional strain, particularly among working mothers. Such findings underscore the need to reassess gender-sensitive mental health services, including workplace-based interventions.

The pattern of distress among non-Emiratis adds another layer of sociopolitical complexity. Expatriates' elevated levels of sadness, loneliness, and anxiety may be rooted in precarity arising from residency insecurities, employment dependency, and reduced access to extended family networks—common challenges in Gulf labour migration systems (Rizvi, 2015; Thomas & Al-Menhali, 2019). These findings emphasize the importance of inclusive mental health policies that transcend citizenship boundaries.

Age-based patterns further indicate that youth, particularly those aged 15–29, experience pronounced psychological distress, characterized by boredom, loneliness, and emotional tension. This trend resonates with international concerns over youth mental health in the digital age, where academic pressures and identity confusion converge with social media-induced comparison and information overload (Twenge et al., 2019; Elhai et al., 2020; van den Broeck et al., 2020). These insights call for integrated mental health strategies within educational settings and digital wellness campaigns tailored to the younger demographic.

Marital status was another influential determinant. Divorced and separated individuals reported significantly poorer mental health than their married or single counterparts, reinforcing the adverse psychosocial and economic repercussions of marital dissolution (Amato, 2010; Lee & Ono, 2012). The potential for added social stigma in

conservative societies such as Abu Dhabi may deepen these challenges, pointing to the importance of community-based support systems and post-divorce counselling.

Educational attainment appeared to offer some protection, particularly in reducing sadness and emotional stress. This supports the established literature linking higher education with greater cognitive flexibility, better employment, and healthier coping strategies (Freudenberg & Ruglis, 2007; Eaton et al., 2008; Ross & Mirowsky, 2006). However, the persistence of psychological distress among even highly educated individuals suggests that broader labor market pressures and performance anxieties may erode some of these protective effects.

The sectoral analysis revealed that private sector workers and the unemployed experience more pronounced emotional difficulties than those in government employment. This finding mirrors international literature on job precarity and its toll on mental health (Virtanen et al., 2005; Stansfeld & Candy, 2006), and reaffirms Abu Dhabi-specific evidence that public sector employment offers greater psychological security (Badri et al., 2023; 2025). Mental health policy must therefore consider employment status and job stability as central factors in preventive care models.

Additionally, non-heads of households showed elevated emotional distress, possibly due to limited autonomy and increased dependency within domestic hierarchies—echoing theories of control and agency as psychological buffers (Mirowsky & Ross, 1990). These results highlight the need to examine intra-household dynamics and foster supportive decision-making roles for all members.

Altogether, the study reinforces the SDH framework by demonstrating how mental health is not merely a private or clinical issue, but a reflection of wider social, economic, and cultural contexts. These findings urge policymakers to shift from reactive mental health models to proactive, equity-focused strategies targeting systemic disparities.

CONCLUSIONS

This study has illuminated critical mental health disparities across gender, age, nationality, education, employment, and household roles in Abu Dhabi, revealing that mental well-being is not uniformly distributed but shaped by deeply embedded social determinants. By employing validated mental health indicators from a large-scale population survey, the analysis confirmed that groups such as women, youth, non-Emiratis, and private sector workers bear a disproportionate burden of emotional distress. These patterns mirror global mental health trends while offering context-specific insights that underscore the intersection of socio-demographic vulnerability and emotional well-being in the Gulf region.

The findings contribute both empirically and conceptually to the understanding of mental health within a Social Determinants of Health (SDH) framework, reinforcing the need for tailored, inclusive, and culturally grounded mental health strategies in rapidly changing societies like Abu Dhabi. Crucially, the study affirms the urgency of investing in mental health infrastructure, workplace wellness programs, school-based psychological services, and accessible community-based care.

Future research should adopt longitudinal and qualitative methods to better capture the evolving nature of mental health inequalities and the lived experiences of marginalized subgroups. As Abu Dhabi continues its development journey, addressing hidden emotional struggles through evidence-based interventions will be essential to fostering a resilient and inclusive society where mental well-being is a shared priority. In addition, while this study relied on one-way ANOVA to examine group differences, future studies would benefit from applying multivariable general-linear or mixed-effects models. These approaches would allow for the adjustment of important confounders and the exploration of interactions—such as between age and gender or education and employment—thereby producing more robust effect size estimates with confidence intervals. Such methodological advancements would enrich the understanding of mental health disparities and further strengthen the policy relevance of future findings.

The implications of this research are far-reaching. For policymakers, the findings offer actionable guidance for designing mental health policies that are equitable, culturally attuned, and demographically sensitive. For public health professionals and social service providers, they highlight the need for targeted programs focused on youth, women, expatriates, and lower-income populations. At a broader societal level, this study calls for a collective dialogue on mental well-being—one that shifts from individual responsibility to structural and systemic support.

Ultimately, addressing mental health disparities is not only a matter of public health, but also one of social justice. In a fast-developing society like Abu Dhabi, where demographic diversity is a defining feature, understanding and bridging these disparities is essential to fostering a mentally resilient and socially cohesive community.

Funding declaration: There was no funding.

Conflict of Interest: The authors have no conflict of interest to declare.

Ethical Approval: Written informed consent was obtained from all the participants. The Ethical Committees of the Department of Community Development, and Statistic Centre Abu Dhabi (SCAD) in the Abu Dhabi, United Arab Emirates has granted approval for this study (Ref. No. OUT/061/2023). The research was performed in accordance with relevant guidelines/regulations applicable when human participants are involved (Declaration of Helsinki).

Competing Interests: The authors declare no competing interests.

Use of AI Assistance: This research paper benefited from the use of artificial intelligence (AI) tools to support the drafting, editing, and refinement of text. AI assistance was used under the supervision of the lead researcher to enhance clarity, consistency, and organization of content. All data analysis, interpretation, and intellectual insights remain the sole responsibility of the authors.

Data Availability: The data that support the findings of this study are available from the Abu Dhabi Department of Community Development. Restrictions apply to the availability of the data.

Informal consent: Informed consent was obtained from all participants prior to their participation in the Quality-of-Life Survey in Abu Dhabi. The survey was conducted in accordance with ethical research guidelines, and respondents were informed about the purpose of data collection, confidentiality, and their right to withdraw at any time. For adolescent participants (aged 15-19), consent was also obtained from their legal guardians where applicable.

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