

Research Article

Social Support and Psychological Distress of Women in Saudi Arabia: A Nationwide Cross-Sectional Study

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Background. Social support is an important determinant of the psychological health of women. **Aim.** To examine social support and its association with psychological distress among women in Saudi Arabia. **Materials and Methods.** Data were gathered between February and July 2023, using a cross-sectional, anonymous, online survey of women in Saudi Arabia above the age of 18 ($n = 414$). The multidimensional scale of perceived social support was utilized to gauge social support. The brief symptom rating scale, a 5-item measure, was used to measure psychological distress. Associations between social support and psychological distress were determined using linear regression considering potential covariates. **Results.** Results show high levels of psychological distress, with 38.1% of respondents scoring moderate to severe levels of psychological distress. The most commonly reported symptoms of distress were “feeling tense or high-strung” and “feeling easily annoyed or irritated,” with 39.4% and 34.5%, respectively, of respondents experiencing these symptoms moderately to extremely. Moderately high levels of social support were reported, with 77.1% of participants agreeing or strongly agreeing with the “my family really tries to help me” statement. Family/interpersonal relationships, however, were simultaneously the most commonly reported stressor over the past 3 years (59.4%). Unadjusted and adjusted analyses show social support was negatively correlated with psychological distress ($\beta = -0.284$, $p < 0.001$; adjusted $\beta = -0.145$, $p = 0.042$), indicating higher levels of social support were correlated with reduced psychological distress. **Conclusions.** Findings indicate moderate-to-high levels of psychological distress as well as social support and an inverse association between them. This information can be used to inform intervention development. To better understand these domains as they relate to psychological distress, future research is warranted.

1. Introduction

Women in Saudi Arabia comprise nearly 40% of the country's population [1]. In line with being a vibrant society within the nation's Vision 2030, the role of women has become increasingly prominent with revised legislation, progressive cultural shifts, and unprecedented opportunities to join the workforce [2, 3]. Few studies have examined the lived experiences of women in Saudi Arabia during this unparalleled period of the nation's history. In particular, examining the psychological distress of women within Saudi Arabia's unique sociocultural constructs is critical to facilitating their growing integration into society and varied roles [4].

Consistent with other parts of the world, Arab women generally, and in particular in Saudi Arabia, are more likely to experience depression, anxiety, and other mental health disorders than men [5, 6, 7]. With the onset of COVID-19, these experiences may be exacerbated, with research indicating up to nearly half of women reporting symptoms of psychological distress in Saudi Arabia, including high levels of depression, anxiety, and stress during the pandemic [5, 8, 9]. The literature also indicates that the prevalence of distress symptoms among women in Saudi Arabia may be elevated relative to other parts of the world, with rates ranging from 13.9% to as high as 80% among some subdemographics [10]. Distress is a significant public health problem and has been

widely linked to poor health outcomes, including reduced quality of life, higher mortality, increased unhealthy behaviors and healthcare utilization, decreased patient satisfaction, and decreased treatment adherence [11, 12].

There is a dearth of research about the lived experiences and psychological well-being of women in Saudi Arabia during this unparalleled period of the nation's history as they pertain to mental health. In particular, examining the psychological distress of women within Saudi Arabia's unique sociocultural constructs is critical to facilitating their growing integration into society and varied roles, taking into account any potential influences from social conventions, values, and beliefs [4]. This study aimed to elucidate potential factors associated with the experiences of psychological distress among women in Saudi Arabia, particularly after the pandemic of COVID-19 and to examine the association between social support and psychological distress.

2. Materials and Methods

2.1. Study Design and Sample. A cross-sectional online survey was used, and the snowball sampling technique was utilized to recruit respondents. The Raosoft calculator of sample size was utilized to calculate the suitable sample size (http://www.raosoft.com/sample_size.html) depending on 1.96 standard deviations, a 95% confidence interval, a total population of Saudi adult females in all five Saudi geographic regions aged 18 years and older of 7,913,386 according to the General Authority for Statistics in 2022 [1], a 5% margin of error, and an expected response rate of 50%. Relying on these characteristics, the minimal necessary sample size was determined to be 385 participants.

2.2. Inclusion Criteria. The study population comprised women, aged 18 and older, who were Saudi or residents of Saudi Arabia, living within the main five geographic regions of Saudi Arabia (Eastern, Western, Southern, Northern, and Central regions), and agreed to participate.

2.3. Study Tools. The research used an online anonymous survey that was administered using Survey Hero (<https://www.surveyhero.com/>)—a free online survey creator—took respondents an average of 4 min to complete, and all items included within the questionnaire were translated and independently back translated to Arabic and reviewed by a panel of bilingual experts in the field. The final draft was pretested in a small convenience sample of 20 participants. The survey link was distributed via social networking sites, including WhatsApp and Twitter, and respondents were urged to spread the link with other women in Saudi Arabia. Data were collected from February to July 2023 till we reached the required sample size. A total of 983 persons clicked on the survey link, 679 (69.1%) agreed to participate, and of those, 414 met eligibility criteria after omitting cases with missing or invalid responses. We tried to achieve a proportionate nationwide representative population distribution (with accepted $\pm 5\%$ variation) within the main five geographic Saudi regions that matched the census data from the General Authority for Statistics, where eligible females constituted about 12.1%,

14%, 14.5%, 26.7%, and 32.7% in Northern, Southern, Eastern, Central, and Western regions, respectively.

2.4. Independent Variables. The multidimensional scale of perceived social support (MSPSS) was utilized to gauge social support [13]. The psychometric characteristics of the Arabic version of the MSPSS were examined and found to be reliable and valid with McDonald's ω values of 0.94–0.97, indicating high internal consistency [14, 15].

Respondents were asked how strongly they agree about 12 statements covering three subscales: (a) *Family subscale* including “My family really tries to help me,” “I get the emotional help and support I need from my family,” “I can talk about my problems with my family,” and “My family is willing to help me make decisions.” (b) *Significant other subscale* including “I have a special person who is a real source of comfort to me,” “There is a special person with whom I can share my joys and sorrows,” “There is a special person who is around when I am in need,” and “There is a special person in my life who cares about my feelings.” (c) *Friends subscale* includes “I can count on my friend when things go wrong,” “I can talk about my problems with my friends,” “My friends really try to help me,” and “I have friends with whom I can share my joys and sorrows.” A 5-point Likert scale that ranged from strongly disagree to strongly agree was utilized for the response alternatives. Responses were scored 0–4 and summed, ranging from 0 to 48, with higher scores indicating higher perceived social support [16].

2.5. Dependent Variables. The brief symptom rating scale, a 5-item measure (BSRS-5), was used to measure psychological distress in both medical practice and the community. The scale was found to have good validity and reliability in previous studies (Cronbach $\alpha = 0.84$) [17, 18], and the Arabic version was previously used in research [19]. Respondents were required to rate how often, over the last 3 years, they experienced five symptoms related to poor sleep “having trouble falling asleep,” hostility “feeling easily annoyed or irritated,” anxiety “feeling tense or high-strung,” interpersonal sensitivity, “feeling inferior to others,” and depression “feeling depressed or low in mood.” Response choices were “not at all,” “a little bit,” “moderately,” “quite a bit,” and “extremely.” Responses were scored 0–4 and summed for a range of 0–20 (used a scale variable for linear regression analysis) and then divided into four groups based on the BSRS-5 score of intervals 0–5, 6–9, 10–14, and 15–20 (used as categories for descriptive analyses) indicating normal, mild, moderate, and severe mood disorders, correspondingly with a cutoff of 10 or more to define psychological distress as dichotomous variable [18].

2.6. Potential Covariates. Potential covariates included socio-demographic characteristics such as age, number of children under 18, marital status, area of residence, and employment status. Additionally, given the timing of the study, possible COVID-19 stressors were adjusted for and measured using six items representing six domains of potential stressors. Participants were asked to state whether they encountered challenges over the last 3 years (covering the period during and after the pandemic) related to daily life, mental health,

physical health, schooling, work/financial, and family/interpersonal relationships with “yes” and “no” response options [20].

2.7. Ethical Approval. It was secured from Umm Al-Qura University by the Bioethics Committee (HAPO-02-K-012-2023-01-1402). Before beginning the online survey, respondents received a cover page with an information letter on it. To ensure participant comprehension, this letter underlined the study’s aims and the essential things included. All participants provided electronic written informed consent on the questionnaire cover page, indicating their voluntary participation by clicking the “Accept to participate” icon and participants were free to leave the research at any moment and without explanation.

2.8. Data Analysis. Descriptive statistics for all variables were computed using the frequency and percentage for qualitative variables and the mean \pm SD for quantitative variables. We used the Shapiro–Wilk test to check for the normality of data. For quantitative nonnormal distribution variables (scores for psychological distress and perceived social support), we employed the Mann–Whitney *U* test to measure the associations between independent (perceived social support) and dependent (psychological distress) variables. We also generated a multiple linear regression model to assess whether social support was significantly associated with psychological distress among women in Saudi Arabia, adjusted for potential covariates. All analyses were conducted in SPSS V 25.0 statistical software (SPSS, Armonk, NY: IBM Corp., USA). For all analyses, a significant level of $p < 0.05$ was set.

3. Results

Table 1 shows the respondent’s general characteristics. The age of women ranged from 18 to 70 years, with a mean age of 32.2 ± 13.9 . More than half of participants (54.4%) were never married, about two-thirds (65.7%) had no children younger than 18 years, 35.8% and 26.3% were from Western and Central regions, respectively, and 39.6% were students and 30.4% were government employees.

The mean psychological distress score was 5.67 ± 3.26 . High levels of psychological distress were reported, with 38.1% ($n = 158$) of respondents scoring moderate-to-severe levels of psychological distress, 27.6% ($n = 114$) of respondents scoring mild levels of psychological distress, while about one-third of respondents ($n = 142$, 34.3%) scoring normal with no psychological distress (Figure 1). The most commonly reported symptoms of distress were “feeling tense or high-strung” and “feeling easily annoyed or irritated,” with 39.4% and 34.5%, respectively, of respondents experiencing these symptoms moderately to extremely. The least reported symptom of distress was “feeling inferior to others,” with 13.3% of responses experiencing it moderately to extremely.

Most respondents (89.1%) reported experiencing one or more stressors over the past 3 years. The most common of which was “family/interpersonal relationships,” “physical health,” and “daily life,” at 59.4%, 55.8%, and 55.3%, respectively. The least reported stressor was mental health at 28.7% (Figure 2).

TABLE 1: General characteristics of respondents.

Variables	<i>n</i> = 414 (%)
Age (years)	
Mean \pm SD	32.2 \pm 13.9
Min–max	18–70
Marital status	
Never married	225 (54.4)
Divorced/widowed	17 (4.1)
Married	172 (41.5)
Number of children younger than 18 years	
0	272 (65.7)
1–2	29 (7.0)
3–4	92 (22.2)
More than 4	21 (5.1)
Area of residence	
Western region	148 (35.8)
Central region	109 (26.3)
Eastern region	60 (14.5)
Southern region	55 (13.3)
Northern region	42 (10.1)
Employment	
Government employee	126 (30.4)
Private employee	55 (13.3)
Independent work	10 (2.4)
Student	164 (39.6)
Unemployed	59 (14.3)

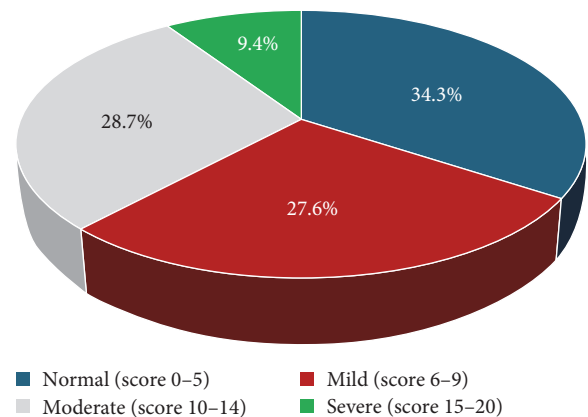


FIGURE 1: Psychological distress among women in Saudi Arabia.

Respondents indicated moderately high social support levels with a mean score of 32.43 ± 9.8 (out of a maximum of 48). Saudi women with psychological distress ($n = 158$) showed significantly lower perceived social support than those without psychological distress ($n = 256$) on all of the “family” ($p < 0.001$), “significant other” ($p = 0.001$), and “friends” ($p < 0.001$) subscales of social support (Table 2).

Unadjusted results showed social support was negatively correlated with psychological distress ($\beta = -0.284$, $p < 0.001$). The inverse association was maintained after adjusting for

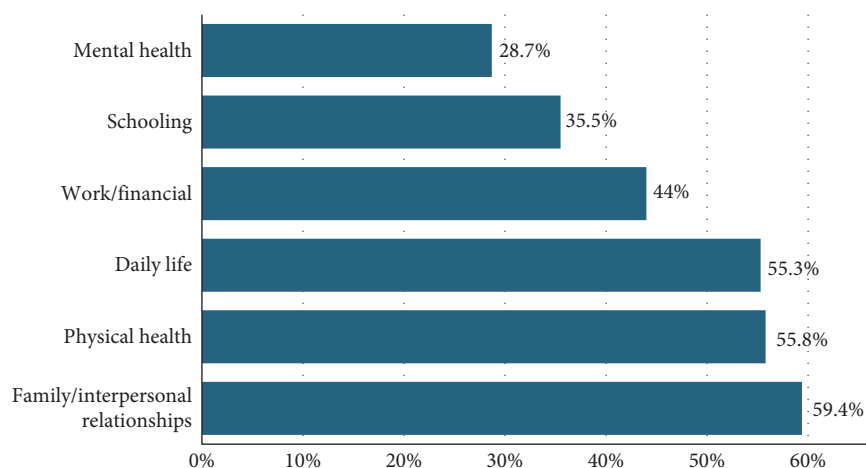


FIGURE 2: Potential stressors among women in Saudi Arabia over the past 3 years.

TABLE 2: Univariate analysis of the relation between social support and psychological distress among women in Saudi Arabia.

Perceived social support	No psychological distress, <i>n</i> = 256	Psychological distress, <i>n</i> = 158	<i>p</i> -Value
I get the emotional help and support I need from my family	6.84 ± 1.49	5.17 ± 1.33	<0.001*
My family really tries to help me	7.45 ± 1.84	5.24 ± 1.56	<0.001*
My family is willing to help me make decisions	6.28 ± 1.64	5.67 ± 1.93	0.001*
I can talk about my problems with my family	6.55 ± 2.01	5.41 ± 1.87	<0.001*
<i>Family subscale score</i>	27.12 ± 6.98	21.49 ± 6.69	<0.001*
There is a special person with whom I can share my joys and sorrows	6.11 ± 1.85	5.24 ± 1.92	<0.001*
There is a special person who is around when I am in need	6.03 ± 1.57	5.37 ± 1.66	<0.001*
There is a special person in my life who cares about my feelings	6.28 ± 1.38	5.89 ± 1.84	<0.001*
I have a special person who is a real source of comfort to me	5.86 ± 1.62	5.44 ± 1.57	0.001*
<i>Significant Other subscale score</i>	24.28 ± 6.42	21.94 ± 6.99	0.001*
I can count on my friend when things go wrong	5.65 ± 1.67	4.96 ± 1.34	<0.001*
My friends really try to help me	5.51 ± 1.33	4.67 ± 1.22	<0.001*
I have friends with whom I can share my joys and sorrows	5.88 ± 1.30	4.86 ± 1.09	<0.001*
I can talk about my problems with my friends	5.12 ± 1.49	4.58 ± 1.99	0.002*
<i>Friends subscale score</i>	22.16 ± 5.79	19.07 ± 5.64	<0.001*

Values present as mean ± SD and analyzed by Mann–Whitney test. * Significant.

covariates ($\beta = -0.145$, $p = 0.042$), indicating that higher levels of social support were correlated with lower psychological distress levels. Additionally, stressors and number of children younger than 18 years of age were positively correlated with psychological distress ($\beta = 0.336$, $p < 0.001$ and $\beta = 0.211$, $p = 0.040$) in adjusted analyses (Table 3).

4. Discussion

The study's aim was to examine the psychological distress among women after the pandemic of COVID-19 in Saudi Arabia, along with associated factors. The results revealed several significant findings that contribute to a better understanding of the psychological distress of women in this context. Our results indicate moderately high levels of psychological distress among women in Saudi Arabia. The experience of psychological distress, however, was buffered by social support as higher social support levels were correlated with lower levels of distress. Our

findings are consistent with other studies, suggesting that increased social support may be an indication of more access to emotional and instrumental support minimizing the impact of psychological distress aligning with the stress-buffering hypothesis, which proposes that effective social support mitigates the detrimental psychological consequences of stress [21, 22, 23, 24].

Importantly, participants reported moderately high levels of social support consistent with previous research and the communal nature of the culture [25]. This is particularly evident in the context of family, as about 77% of respondents agreed or strongly agreed with the statement “my family really tries to help me,” indicating the importance of family support in the cultural context. Alternatively, fewer respondents agreed with “I can talk about my problems with my friends” statement, suggesting potential barriers to seeking social support outside of the family. This finding is consistent with a study assessing the quality of life and social support of Saudis who survived

TABLE 3: Unadjusted and adjusted association of social support with psychological distress among women in Saudi Arabia.

Variable	Psychological distress, β	95% CI	Psychological distress, $a\beta$	95% CI
Social support	-0.284***	-0.416 to -0.108	-0.145*	-0.357-1.083
Stressors	0.438***	0.184-1.912	0.336***	0.116-2.064
Age	-0.330***	-0.658 to -0.114	-0.213	-0.643-0.427
Number of children younger than 18 years	-0.050	-0.338 to 2.061	0.211*	0.106-2.943
Marital status				
Never married	Ref	—	Ref	—
Divorced/widowed	-0.146*	-0.453 to 1.884	-0.542	-0.813 to -0.257
Married	-0.217**	-0.669 to 1.472	-1.014	-3.146 to 2.249
Area of residence				
Western region	Ref	—	Ref	—
Central region	0.082	-0.054 to 0.175	-0.152	-0.647 to 1.006
Eastern region	0.005	-0.114 to 1.543	0.043	-0.942 to 3.115
Southern region	0.015	0.001-1.647	0.009	-0.083 to 2.227
Northern region	0.043	0.001-1.548	0.065	0.001-1.948
Employment				
Government employee	Ref	—	Ref	—
Private employee	0.030	-0.247 to 0.762	0.009	-0.201 to 0.841
Independent work	0.039	0.002-1.424	0.046	0.002-1.671
Student	0.305***	0.116-3.047	0.157	0.005-2.954
Unemployed	0.181*	0.010-1.885	0.099	0.006-2.556

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; β = unadjusted standardized regression coefficient; $a\beta$ = adjusted standardized regression coefficient; CI = confidence interval.

stroke. The study found that the dimension of social support with the highest average was support from family members, while support from friends had the lowest [26]. This may be due to the value and priority given to family within the Saudi culture alongside the potential stigma associated with seeking refuge with those of outside the context of family in the face of varied stressors and challenges [27, 28].

Although social support was associated with less psychological distress among our participants, “family/interpersonal relationships” were simultaneously the most commonly reported stressor. This finding suggests that while families can be an important source of social support, they can also be burdened in situations of shared distress or a source of vulnerability when support is lacking [29]. Krysz et al. [30] found that those in less individualistic contexts may sometimes deprioritize their individual well-being relative to that of their families.

The identification of family/interpersonal relationships as the most commonly reported stressor highlights the need to target and address challenges within familial and interpersonal contexts. Interventions that enhance family communication, conflict resolution, and support systems may help alleviate psychological distress and promote better psychological well-being among women. Our findings highlight the need for further research to identify the mechanisms by which social support magnifies psychological distress and the mechanisms by which social support mitigates stress within a collectivist culture.

5. Conclusions

In conclusion, this study provides valuable insights into the factors associated with psychological distress among women in Saudi Arabia after the COVID-19 pandemic. The findings

emphasize how crucial social support is as a buffer against psychological distress and shed light on the specific stressors experienced by women in this context. Cultural, social, and contextual factors may contribute to the differences observed between this study and previous research conducted in other countries.

Data Availability

The datasets used and analyzed in this study are available from the corresponding author upon reasonable request. Confidentiality and security of data and materials were ensured through all stages of the study.

Additional Points

Limitations of the Study. There were various shortcomings in our study. Because of the cross-sectional design, we cannot know the temporal sequence of social support and psychological distress. Also, the recruitment methods used did not yield a random sample and may have resulted in bias. A potential selection bias as the survey link was distributed on social media sites and, thus, may not have reached women in Saudi Arabia who do not use social media and who may differ from respondents in other ways. The possibility of social desirability bias and recall bias of self-reported data cannot be overlooked. Our sample size did not consider proportionate age or nationality distributions, further restricting the generalizability of our findings. While our study identified an association between social support and psychological distress, more research is required to understand the underlying mechanisms and mediators of these relationships. Specifically, the mechanisms by which social support may amplify

psychological distress or mitigate stress within a collectivist culture like Saudi Arabia should be explored. Additionally, not all factors were accounted for. Potential confounding variables that may influence these associations should be considered in future studies, including other socioeconomic variables such as education and income, cultural practices, ethnic backgrounds, and prior mental health history.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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