

Silent Epidemic of Depression in Women in the Middle East and North Africa Region

Emerging tribulation or fallacy?

Liyam Eloul,¹ Aamal Ambusaidi,² *Samir Al-Adawi¹

وباء الأكتئاب الصامت لدى المرأة في منطقة الشرق الأوسط و شمال أفريقيا

أزمة مقبلة أم تضليل؟

ليام الول، آمال أمبوسعيدي، سمير العدوي

الملخص: في حين أن الكساد الاقتصادي يحكم قبضته على العالم أجمع . يكس علماء الأخصاء النفسيين البراهين للأدباء بأن الأكتئاب النفسي ومتبايناته قد أصبحت مسببا رئيسيا في تعاظم العبء المرضي العالمي بما في ذلك منطقة الشرق الأوسط و شمال أفريقيا. الهدف: أن الهدف الرئيسي لهذه المقالة هو تقديم مناقشة نقدية تبحث في احتمالية أن تكون النساء في منطقة الشرق الأوسط و شمال أفريقيا أكثر عرضة للأصابة بالأكتئاب النفسي مقارنة بمنيلاتهن في باقي دول العالم وذلك من خلال استعراض الأوراق العلمية المتاحة. النتيجة: تشير هذه الدراسة الى أن معدلات الأكتئاب المذكورة لسييت بالضرورة ظاهرة فردية مرتبطة بمنطقه الشرق الأوسط و شمال أفريقيا. الخلاصة: بالرغم من أنه لم تفلح أي من المجتمعات في تجاوز ظاهرة تهمة المرأة وعدم تفعيل دورها. فإنه من الضروري تطوير دراسات احصائية باستخدام تصنيفات عالمية موحدة تراعي التباين الثقافي العالمي من أجل استيعاب هذه الظاهرة المعقدة وتقييم الوظيفة النفسية للمرأة.

مفردات البحث: الأكتئاب عند النساء. اختلاف الجنس . الشرق الأوسط و شمال أفريقيا . الإسلام . استعراض.

ABSTRACT Background: As the world is being gripped by economic depression, international psychological epidemiologists have amassed evidence to suggest that psychological depression and its variants are becoming leading contributors to the global burden of disease with the Middle East and North Africa (MENA) region being no exception. **Aim:** The main aim of the present discourse, based on a review of the available literature, is to discuss critically whether women in the MENA region have a higher rate of psychological depression than those in other parts of the globe. **Result:** From the present synthesis, it emerges that the rate of depression may not be necessarily unique to the region. **Conclusion:** Although no society has totally overcome the marginalisation and lack of empowerment of women, in order to come to grips to this complex issue more vigorously designed epidemiological studies, using taxonomies that are standardised for cross-cultural populations, are needed to quantify the psychological functioning of women.

Keywords: Depression in women; Gender Issue, Middle East and North Africa; Islam; Review

WHEN, IN 1948, THE WORLD HEALTH Assembly conceived of health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”, it may not have been apparent to those attending the assembly that mental disorders would be conspicuously omitted in the algorithms of care for the rest of 20th century.¹ As psychological concepts are

protean and without central features, it was natural to think that health planners would not allocate resources to psychological disorders. The ‘enemy’ of health was poignantly perceived to be hiding in the realm of physical illness, most notably in communicable diseases. Therefore, two-tier health systems emerged which further emphasised the irrelevancy of psychological disorders. The focus, on one hand, has been on

¹Department of Behavioural Medicine, College of Medicine & Health Sciences, Sultan Qaboos University, Muscat, Sultanate of Oman; ²Department of Behavioural Medicine, Sultan Qaboos University Hospital, Muscat, Sultanate of Oman

*To whom correspondence should be addressed. Email: adawi@squ.edu.om

the control and eradication of communicable diseases and the improvement of reproductive, maternal, and child health, in particular in developing countries.² On the other hand, in high income countries, resources have been mobilised to 'fight' against early death due to cancer, diabetes and heart disease.³

Then came the new century and the pendulum began to swing towards the recognition of the impact of psychological disorders. Among the many and varied types of psychological disorders, depression is one of the most intriguing.⁴ Depression is something akin to feeling. It ranges from overreaction to normal sadness to pessimism and then utter despair. In severe depression, even bodily functions can slow down to such an extent that the quality of life, and sometimes life itself, can be threatened. One of the dark shadows accompanying depression is suicide - often the result of a lack of treatment. Once accepted as an integral part of human nature, recent surveys have converged on the view that depression is becoming a 'silent epidemic' which is contributing significantly to disability and mortality.⁴ Depression is known to interact adversely with other health conditions and vice-versa.^{3,5} It is predicted that depression will become the leading cause of disability by the year 2020.⁶

Various factors have been attributed to the rising tide of depressive disorders. Investigations into the cause of significantly higher depression rates in women as opposed to men in the Middle East and North Africa (MENA) region have indicated a number of contributing factors; many are psychosocial in origin, but most controversial is the role of Islam.⁷⁻⁹ This has been especially popular in Western ideations regarding women from the MENA region.¹⁰⁻¹³

One aim of the present discussion is to examine how the rate of psychological disorders in the MENA region compares to global trends. Wherever relevant, other regions or populations that bear resemblance to the MENA region will also be considered. Imbedded in this quest, is an examination of the hypothesis that Islamic beliefs and practices exacerbate stress and distress in women. In order to discuss this issue, evidence from the MENA region, including that on changing roles for women, issues related to reproductive health factors as well as inherent methodological problems of gauging subjective feelings like depression, is considered.

DEPRESSION IN WOMEN

Women across the globe have been found to be more susceptible to depression than men.¹⁴⁻¹⁶ There are a number of possible explanations. The cyclical fluctuation of female hormones intensifies the physical stress-response, which may amplify vulnerability to depression.^{17,18} Social factors present the world over also result in certain features being more typical of women's experience than men's, thus predisposing them to have a higher rate of depression. These include the greater likelihood of experiencing sexual and physical abuse, a greater dependence and higher emotional reliance on social support, along with an increased willingness to report symptoms of current and past episodes of depression to physicians.⁷ In addition, poor education, including poor health education resulting in a lack of awareness, as well as orthodox customs, compound the situation of women all over the world.¹⁹

There has been a recent increase in interest and local research into depression and anxiety in the women of the MENA region which offers insight into prevailing ideations of these women. It is pertinent here first to consider studies on depression in this region.

Ghubash, Daradkeh and Abou-Saleh²⁰ used a modified version of the World Mental Health *Composite International Diagnostic Interview* in a systematic sample of 1,390 individuals from the general population in Al Ain, a principality of the United Arab Emirates (U.A.E.). They found that lifetime rates of depression were 2.5% for males and 9.5% for females (n = 1,390). This significant sex difference, though dramatic, actually reflects the average world female to male depression ratio of 4:1.²¹ The correlating factors included age under 55 (premenopausal), divorced women with four or more children, and those who reported a higher exposure to recent adverse life events. Ghubash, Daradkeh & Abou-Saleh²⁰ concluded that the high correlation between the significant sex differences in depression rates and socio-demographic variables indicated that a significant cause of difference is likely to be based on social instead of biological factors.

El-Rufaie, Albar and Al-Dabal²² used the *Hospital Anxiety and Depression Scale* to identify the presence of anxiety and depression among Saudi primary care attendees. The prevalence rate of depression was 17%, with females showing the highest indices of depression. However, given that this sample was drawn from participants who were already patients in a clinic, and

the high rate of somatisation in the developing world, this may be a biased sample.

Alansari²¹ conducted an extensive study on depression and anxiety rates among undergraduates in seventeen Islamic countries. His sample was wide-ranging, but it must be noted that this study only tapped a certain segment of the population. This produced marked bias since women in undergraduate institutions are likely, first, to be unmarried and without children, and, second, to come from families with a relatively higher socio-economic status and a more liberal view of women's rights and freedoms. Alansari²¹ found that rates of depression among women were significantly higher than for men in nine of the seventeen countries. These countries were spread across the MENA region: Egypt, Algeria and Morocco in North Africa, Iraq and Syria in the Levant, Oman, Qatar and Kuwait in the Gulf, and Pakistan in South Asia. The countries where Alansari found no significant difference in depression rates between men and women were equally wide-ranging: Tunisia and Sudan in North Africa, Lebanon, Palestine and Jordan in the Levant, and U.A.E and Yemen in the Gulf.

Other reports from outside the MENA region, but with Islamic heritage, have reached similar conclusions. For example, Mirza & Jenkins²³ in Pakistan, found depression and anxiety rates to be 46% in women as compared to 15% in men, still reflecting the international ratio of 4:1, with correlates including unemployment, non-married status (widowed, separated or divorced), more than 4 children, loss of a child or father during childhood, housewife, absence of confiding relationship with husband, middle age, low level of education, and marked independent chronic difficulties (housing, finance, health). Modabernia et al.²⁴ have conducted a community survey on the prevalence of depression among women in Iran using *Beck's Depression Inventory*. These authors found that less than 10% of the sample fulfilled the criteria for depression and the majority were marked with a less debilitating spectrum of depression rather than major depression. Low socio-economic status was a strong predictor for depression in this population of women.

On the whole, epidemiological surveys in the MENA regions have shown that rates of depression range from 13 to 18%²⁵⁻²⁸ with the highest rate occurring in Lebanon in the aftermath of the civil war.²⁹ It is important to note that none of the countries in the MENA region appear to have a rate of depression ex-

ceeding the global ratio. Therefore, although the reported rates of depression are significantly higher for women than for men in much of the MENA region, they usually do not deviate greatly from the international average.^{14, 30}

SHIFTING ROLES FOR WOMEN

Since the introduction of universal free education, established in Oman in the 1970's, there has been a gradual increase in female literacy and a subsequently increased entrance of females into the labour market.³¹ In higher education, approximately 48% of all students are male, indicating that female enrolment has now surpassed that of males.³¹

As in many societies in transition from traditional ways to modern and urbanised lifestyles, a central issue currently facing women in the MENA region is the increasing cultural struggle between women's traditional, mainly home-based, role as wife and mother, and their modern role in higher education and the workforce, which brings them out into the public sphere.^{12,31,32} Attempts to balance these conflicting roles, both valued by different elements of modern MENA society, may be quite stressful for women who are trying to define their place in society. This stress may cause heightened anxiety and depression due to women feeling unfulfilled in one of their roles: either not living up to their responsibility to their family and community, or neglecting their own self-actualisation and autonomy.¹⁶

Recent affluence and the resultant rapid socio-economic change in parts of the MENA region have significantly impacted the status of women in some countries³³ and has provided new opportunities for women. However, some experts are suggesting that this new wind of change, by virtue of its novelty is, albeit indirectly, becoming an increasing source of stress for women. For example, Al-Lamky³¹ has indicated that the rapid modernisation, made possible by economic development, has not been paralleled by an equally dramatic change in the cultural values concerning the structure or roles of the family. Many other researches, from different contexts, have reached similar conclusions.^{20,31,34} The gist of such thinking is that a large, hierarchical, and gender-segregated family is still the norm. In reference to women, this causes friction for all family members and all the stresses such a scenario may entail. The net source of anxiety in such a situation is that women see their roles rapidly

evolving outside the family, but see no corresponding changes within.

According to the World Bank,³³ in the last three decades there has been a 47% percent increase in female labour participation in the MENA region. This stems partly from increased literacy among women and partly from the demands of the rapidly shifting sands of modern economies, in which it is increasingly necessary for women to work outside the home to support their family. In such a scenario which is obviously still the exception rather than the norm, women often have to juggle what may appear to be polarised roles.³⁵ As in many parts of the world, women are still often solely responsible for childcare and care for elderly and sick family members whatever their working situation.³⁶ Although there is cause for concern about the stress inherent to shifting roles for women, from a global perspective the situation is not unique to the MENA region.¹⁶

Hamid et al.³⁷ investigated the psychosocial aggregate of depression in their sample in Jordan. Among many variables associated with depression, the contribution of marital status merits a brief comment. Married women, in contrast to widowed or separated, scored highest in the indices of depression. This implies that divorced women did not fare worse compared to married or single women. The authors speculated that ‘widows would presumably receive more sympathy and social support from their extended family system’ (p. 493). It is not clear why marriage is an important equation in psychological dysfunction in women and the question remains whether marriage becomes an added source of stress against the background of recent affluence.

An extremely important social factor that applies to the entire MENA region is the period of socio-economic flux of the last 40 years, due both to the end of colonisation and to the discovery of oil in parts of the region.³⁸ This flux has resulted in an increased exposure to elements considered to be risk factors for psychological distress in some part of the MENA region including sociopolitical instability, socioeconomic insecurity, factional and international conflicts, and population displacement.^{36, 39, 40} An additional outcome of this 40 year period has been a shift in social values, especially the erosion of traditional values and norms, which in sociological parlance could be deemed fertile ground for breeding maladjustment.⁴¹ However, such a social situation is not unique to the MENA region.^{3, 36}

FERTILITY, MOTHERHOOD AND POST-PARTUM RISK

One strong influence on the lives of women in the MENA region is fertility and child-bearing.^{12, 42} Emerging empirical evidence suggests that women who have a high rate of childbirth are more valued and respected by the significant figures in their life, by their extended families, and the community.³⁶ This may be partly due to the perception that children are ‘God’s greatest gift.’¹² Such an attitude has also been observed in other cultures.⁴³ Feminine identity is deeply tied to a woman’s role as mother and such importance is placed on child bearing in some areas of the MENA region that this might contribute to higher rates of anxiety and depression in women of child bearing age.^{14, 23, 44}

Although Oman’s birth spacing initiative, launched about a decade ago, has been internationally acknowledged as highly successful, contributing to a sharp fall in fertility rates, nevertheless the birthrate in Oman is still high compared to many industrialised countries.⁴⁵ High fertility rates not only endow many households with large concentrations of children, but, an often overlooked corollary, increase the risk of postpartum depression.

Green, Broome and Mirabella⁴⁶ and Ghubash and Abou-Saleh⁴⁷ independently sampled parturients in the U.A.E and found that 17.8% at day 7 and 22% at 3 months were diagnosed as depressed. Masmoudi et al.⁴⁸ assessed parturients in Tunisia with the Edinburgh Postnatal Depression Scale and reported a prevalence of postpartum depression of 19.2% in the initial phase and 13.2% at follow-up. Chaaya et al.⁴⁹ have examined rates of postpartum depression in two regions of Lebanon, one rural and the other urban. The data indicated that the prevalence of depression was 21%, with rural women having a higher tendency towards postpartum depression. In contrast, a study from industrialised countries by Cooper and Murray⁵⁰ reported that 10% of women sampled in Britain in the weeks immediately following delivery and 12.5% at 6 months were diagnosed as depressed. However, the rate of postpartum depression, from the data that could be extrapolated from the global perspective, appears to fluctuate in complex ways. Comparative studies on the rate of postpartum depression globally fail to suggest that women in MENA are more necessarily prone to puerperium depression than elsewhere. The rate in the MENA regions still falls within 5-25%⁴⁶ as reported in other populations.⁵¹

The correlates of postpartum depression were based on a handful of themes that are psychosocial and ecological in origin. Among women in the U.A.E, Abou-Saleh and Ghubash⁵² reported that, among numerous correlates, a history of depression appears to be critically involved in the development of postpartum psychiatric disturbance. In other regions, which nonetheless have some features similar to MENA countries, various reports have reached similar conclusions. For example, among Turkish women, it was found that a bad relationship with the family-in-law was an important factor that significantly increased women's vulnerability to post-partum depression.⁵³ Among Middle Eastern women living in Australia, Nahas and colleagues⁵⁴ found that loneliness attributed to a lack of felt social support, helplessness in facing the immense duty of the traditional wife-mother role, and intense apprehension about being thought to be a bad mother by in-laws were strong predictors of postpartum depression. As the samples from such studies are derived from immigrants populations, their generalisation to the MENA region is limited as immigration alone constitutes a potential stress factor.^{55,56}

On the whole, cultural factors, as well as a higher birthrate, may increase the risk of post-partum depression. This is despite the finding that traditional postpartum rituals, common in Islamic MENA cultures, usually reduce the risk of postpartum depression.^{47,57} It is intuitive to speculate that the high birthrate and early age of first conception common in MENA countries increases the likelihood of postpartum depression in Middle Eastern women, and that this may contribute to the higher rate of depression. Net incidence of postpartum depression appears to be critically associated with childbearing and possibly exacerbated by certain nonspecific psychosocial and ecological correlates. These correlates are ubiquitous but tend to vary from culture to culture.⁵⁴

HETEROGENEITY OF THE MENA REGION AND REPORTING BIAS

The MENA area is a particularly complex and difficult study location given the region's scepticism towards the field of psychology, and the acute stigma attached to mental health disorders.⁵⁸ Additionally, confounding factors such as the exact definition of the MENA region, as well as inherent methodological limitations in gauging subjective events like depression, pose problems when highlighting psychological disorders

in this vast mosaic of a region. These two issues are entertained in tandem in the ensuing paragraphs.

First, as for the conception of MENA, it is often difficult to disentangle features of the Islamic religion from local tribal and Arab culture, and to access data where a research culture is still developing. A distinction must be made between the terms 'Arab' and 'Muslim', which are often incorrectly used interchangeably although they are distinctly different terms.⁵⁹ 'Arab' is a descriptor for a majority of people living across the MENA region, and also for significant minority populations living in East Africa, Europe, North America, and elsewhere who share a linguistic and cultural connection with a Semitic people originating in the Arabian Peninsula.⁶⁰ The ubiquity of Arab identity throughout the MENA region is the result of 1,400 years of growth of the Islamic empires, the power vacuum left after the decline of Greco-Roman hegemony in the region, demographic differences among local populations, and more recent seismic political stirrings and historical revisionism.¹⁰ Although most Arabs are Muslims, the MENA is home to sizeable communities of Arabs whose identify includes Christianity and other creeds.⁶¹

Islam is the third-largest religion in the world, stretching across Southeast, South and Central Asia, Turkey, and the MENA region, as well as encompassing a considerable segment of the immigrant populations in Europe and the Americas. It is important to remember this when making generalizations about 'Islam' and 'Muslims'. There is incredible regional, national and tribal variation in the practice of Islam. Therefore, any statement citing Islamic traditions as responsible for the psychological distress of a sub-population across the Muslim world stands on delicate footing, and must be able to prove that the structures in Islam that are responsible for the distress are present for the majority of the Muslim sub-population.

Secondly, it is worthwhile noting that quantification of depression in cross-cultural populations presents a number of perhaps insurmountable problems.⁸ Although the announcement of the 'global silent epidemic' should be welcomed as acknowledgment of the importance of psychological distress in health and wellbeing, the idea that psychological disorders exist outside non-western populations has an interesting and complex history. Jean-Jacques Rousseau, a leading name among philosophers during the 18th century age of Romanticism, idealised those who were on the

margins of the European landscape, unencumbered by the exigencies and stresses of civilisation. Accordingly, 'noble savages' by virtue of their intimate connection with simplicity and nature were shielded from the vagaries of psychological disorders.⁶² Such a view also found expression among the 'fathers' of modern psychology. Holliday⁶³ expounded the view that mental disorders are rare among 'savages' while Maudsley⁶⁴ thought that "the morbid mental phenomenon of an insane Australian savage will of necessity be different from the morbid phenomenon of an insane European, just as the ruins of a palace must be vaster and more varied than the ruins of a log hut"⁵⁴

While Jean-Jacques Rousseau and his followers would be turning in their graves on hearing that depression is alive and kicking even in far out regions of the world, there is still room for cautionary measures in the quantification of such a protean concept as depression in cross-cultural populations. It has well been established that applying the Western model of, say depression, to other parts of the world may be an example of what Kleinman⁶⁵ termed the 'category of fallacy' - that is, the reification of a nosological category developed for a particular cultural group that is then applied to a member of another culture for whom it lacks coherence and whose validity has not been established. The implication of the 'category of fallacy' is therefore implicit in much of the debate on the alleged higher propensity towards depression among Muslim women.

The 'category of fallacy' appears to stem partly from inherent methodological limitations in gauging subjective events like depression. Nasir and Al-Qutob⁶⁶ have reported a study conducted among primary health care physicians in Jordan. This qualitative study pointed out that, although depression is common among clinic attendees, the health professionals working in such settings are often bewildered, having such barriers to identification, diagnosis and intervention of depression that low mental health service utilisation results. These authors pointed out that there is a need to train physicians to identify and treat depression. There is no reliable evidence to suggest how well non-psychiatric physicians at primary health care institutions are equipped to detect depression, which is, by definition, without central features and therefore protean⁶⁷ and there is no evidence that current 'checklists' for the diagnosis of depression are suitable for cross-cultural populations.⁶⁸ Similarly, understanding

of psychiatric illness in the MENA region is likely to be hampered by the fact that sufferers may stay underground due to stigma until their illnesses have reached an advanced stage of irreversible pathology. Indeed, the pathway for care seeking often starts within the realm of traditional healing.⁶⁷

Another contributing factor to the disparity in depression rates across different cultural groupings across the world is likely to be reporting bias.⁶⁹ On the one hand, Coker⁷⁰ conducted a study on the social stigma of mental disorders in Egypt, and found that, although for most mental illnesses there existed no gender difference in community acceptance of mentally ill individuals, when it came to depression, women were significantly more likely to be accepted within the family than depressed males. This finding supports the hypothesis that endorsing depressive symptoms on a diagnostic survey, admitting symptoms of depression to a primary care physician, or seeing a therapist to treat depression may be more acceptable behavior for women than for men in the MENA region, and that this may compound the gender bias in depression rates. In addition, men, who are generally the public face of the family in Arab society, may feel a greater responsibility to hide their emotion so as not to bring shame on the family.¹⁰ On the other hand, additional family pressures may affect women's experience of depression.⁷¹ In the context that husbands may use an accusation of mental illness against a wife, in order to gain support for taking a second wife or for obtaining a divorce. It is therefore not surprising that some studies have shown that, contrary to established wisdom, men outnumbered women in mental health care seeking.⁷² Some studies have suggested that women are likely to 'mask' their depression,^{66,73} further confounding the issue of diagnosis of depression in the MENA region.

It has been noted that mental illness is not endorsed and is often construed in other idioms of distress.⁷⁴ In many traditional societies including those in the MENA region, it is believed that disease or ill-health is caused by a disregard for some aspect of one's spiritual life. The role of the belief system is also embodied in how people respond to adverse events, which, in turn, might shed light on how depression is handled outside the realm of biomedical care. In traditional communities around the world, misfortune, interpersonal problems and ill health, including something akin to depression, are often attributed to supernatural causes.⁷⁴ Sometimes depression is seen as a manifestation of

possession by a spirit whereby a person's behaviour is thought to be controlled by an anthropomorphic being that has entered his or her body.¹⁰ To strictly biomedically trained mental health professionals, such an appearance of distress would likely be equated with 'magical belief', further contributing to misdiagnosis and, in the present context, to reporting bias.

Another important factor that may contribute to misconceptions about depression, therefore either deflecting or inflating the situation on the ground, is the tendency of some cultural groups to express psychological distress in physical symptoms.⁶⁷ In Oman, women often come into a mental health clinic because of a referral from a primary care physician due to physical discomfort that has no apparent organic cause.⁷⁵ There is empirical support, although not widely accepted, that in Western cultures there is a tendency to 'psychologise' distress which can be contrasted with the tendency in non-western cultures to 'somatise' it. Among women in the developing world, and in much of the MENA region, physical symptoms are often seen as a more legitimate and morally acceptable manifestation of distress⁷⁶⁻⁷⁸ since the expression of negative feelings, and conflict of any kind, are generally seen as not acceptable.³⁴ According to Al-Issa,¹⁰ in reference to the MENA region, "...mood disturbance are not at all verbalized" due to cultural teaching that "expression of emotion is shameful" (p. 234). This has resulted in primarily somatic presenting complaints.⁷⁵ This adds another dimension to the likelihood of misdiagnosis and contributes to reporting bias.

SYNTHESIS FROM THE LITERATURE ON WOMEN AND DEPRESSION

Depression has been suggested to be a growing public health problem in different parts of the world and likely to remain so in the foreseeable future.⁷⁹ There is no single causal factor for such an emerging trend. Against the background of the ongoing debate that many Arab/Islamic societies are generally falling short of the much heralded 'UN Millennium Development Goals',⁶² the present discourse has aimed to address whether Islam may be an important catalyst for the emerging trend of depressive disorders in the MENA region. The present view, which does not pretend to be exhaustive in such a mosaic region, suggests that the depression rate in women in the MENA region reflects the world average, and that the stressors on women

are similar to those present in many developing societies across the globe.³⁶ The problem of increased rates of depression in women is often systemic, not necessarily cultural or religious. This would suggest that accessibility to culturally-tailored mental health services should be part of the health agenda in the region.

In answer to opinions that depression rates in women in the MENA region are exceptional and due to some facet of Islamic teaching, we found that this could not be proven from the present review. The role of religion hinges on the assumption that there is a monolithic view and practice of Islam and that Islam has a single effect as a determinant of depression. As demonstrated in various studies, religious practice is considerably modified by local traditions, social conventions, and socio-demographic characteristics.^{80,81} The fact that measured depression rates in women from the MENA region vary greatly, sometimes exceeding rates reported by men, sometimes demonstrating no significant difference, but in no case found by this paper to exceed the world average, emphasises a pluralistic experience, and underscores the role of local norms and socio-cultural and political variables in women's experience and expression of mental health.

The variability in the rate of depression would certainly point to complex social and ecological factors. Data from Oman attest to the complexity of this issue. The country is a higher middle income group country with little gender gap.²⁷ Yet, Oman is an Islamic country, though with a distinctive history and subcultures further testifying to the view that the Islamic part of the world is not homogenous. Studies in Oman have reported that there is gender discrepancy in the presentation of mental illness, but, contrary to ideation in the literature,⁹ female predominance was not marked in these domains, including those that are often attributed to 'female disorders' such as propensity toward spirit possession,⁷⁴ somatisation,⁷⁵ dissociative disorders,⁸² eating disorders⁸³ and social phobia.⁸⁴ Contrary to what would be expected in such a patriarchal society as Oman, males are more likely to seek psychiatric consultations and women are therefore underrepresented in mental health care seeking. It is intuitive that gender roles found in patriarchal societies with a strong public/private dichotomy would reinforce the under-presentation of females in mental health settings. However, community surveys in Oman have reached the conclusion that being female, when considered with other confounding factors, was

not a significant predictor of depression.⁸²

Most studies reviewed in this paper did not distinguish the religious views of their participants, so it is difficult to determine whether there exist any differences along religious lines. If the role of religion in female depression, as opposed to societal factors, is to be accurately investigated, it will be important to conduct comprehensive comparative studies between religious minority populations and a Muslim majority sample. In addition, very little data on Muslim women in Southeast Asia is currently available. This is another important point of comparison, as this region has a significant Muslim population, but retains very different cultural and social behavior.

CONCLUSION

This paper has found a few factors common to the region that may play a role in depression among women. It is far more likely that the higher rate of depression in women in some MENA countries has to do with the higher exposure to postpartum depression, as well as the changing role of women in modernising Arab culture, and the stress of their resultant conflicting dual roles as the centre of the family in the home and the modern necessity of participating in the workforce. However, these factors are also common to many areas of the developing world, and are likely to play a role outside the region as well. It is important to remember that, indeed, no culture has totally overcome the marginalisation and lack of empowerment of women, and that even in developed countries, women still report a rate of depression twice as high as men. The take-home message emanating from the present discussion is that a lowered view of women, not inherent to religion, but sometimes practised in the name of socio-cultural values, may reduce self-esteem in women and increase susceptibility to depression. However, it must be noted that the MENA region is by no means the extent of the Muslim world, and that distinctions must be made between religious, cultural and societal aspects. Most important however, it appears that ideations regarding women in the region do not fare well when considered in terms of global epidemiological surveys of gender and depression. Further research is imperative to understand why women appear to be more susceptible to depression than men. In order to come to grips with this complex issue, more vigorously designed epidemiological studies are needed to quantify the situation of women in the world. As

the concept of depression has no universally accepted 'phenotype', studies using taxonomies that are standardised for the MENA region are needed to quantify the psychological functioning of women. Qualitative research with focus groups to procure in-depth information on women and men in the MENA region related to depression would be essential groundwork for such a quest.

ACKNOWLEDGEMENTS

We acknowledge our gratitude to Dr Sanjay Jaju, Professor Amin Gadit and Ms Sabah Al-Bahlani for their constructive comments and suggestions.

REFERENCES

1. Constitution of the World Health Organization. Geneva: World Health Organization, 1948.
2. Stonington S, Holmes SM. Social Medicine in the Twenty-First Century. *PLoS Med* 2006; 3:1661-2.
3. Prince M, Patel V, Saxena S, Maj M, Maselko J, Phillips MR, et al. No health without mental health. *Lancet* 2007; 370:859-77.
4. Ebmeier KP, Donaghey C, Steele JD. Recent developments and current controversies in depression. *Lancet* 2006; 367:153-67.
5. Moussavi S, Chatterji S, Verdes E, Tandon A, Patel V, Ustun B. Depression, chronic diseases, and decrements in health: results from the World Health Surveys. *Lancet* 2007; 370:851-8.
6. Murray CJ. Rethinking DALYs. In: Murray CJ, Lopez AD, Eds. *The global burden of disease*. Geneva: World Health Organization, Harvard School of Public Health, World Bank, 1996.
7. Douki S, Zineb SB, Nacef, F, Halbreich U. Women's mental health in the Muslim world: cultural, religious, and social issues. *J Affect Disord* 2007; 102:177-89.
8. Nikelly AG. Does DSM-III-R diagnose depression in non-Western patients? *Int J Soc Psychiatry* 1988; 34:316-20.
9. Chesler P. *Women and Madness*. New York: Palgrave Macmillan, 2005.
10. Al-Issa I. Culture and Mental Illness in Algeria. *Int J Soc Psychiatry* 1990; 36:230-40.
11. Winslow WW, Honein G. Bridges and Barriers to Health: Her Story--Emirati Women's Health Needs. *Health Care Women Int* 2007; 28:285-308.
12. Moghadam VM. Patriarchy in Transition: Women and the Changing Family in the Middle East. In: *Modernizing Women: Gender and Social Change in the Middle East* 2nd ed. Boulder, CO: Lynne Rienner Publishers, 2003. pp.137-63.

13. Laird LD, de Marrais J, Barnes LL. Portraying Islam and Muslims in MEDLINE: a content analysis. *Soc Sci Med* 2007; 65:2425-39.
14. Trivedi JK, Mishra M, Kendurkar A. Depression among women in the South-Asian region: The underlying issues. *J Affect Disord* 2007; 102:219-25.
15. AbuMadini MS, Rahim SI. Psychiatric admission in a general hospital. Patients profile and patterns of service utilization over a decade. *Saudi Med J* 2002; 23:44-50.
16. Schwartz S. Women and depression: a Durkheimian perspective. *Soc Sci Med* 1991; 32:127-40.
17. Seeman MV. Psychopathology in women and men: Focus on female hormones. *Am J Psychiatry* 1997;154:1641-7.
18. Kaminsky Z, Wang SC, Petronis A. Complex disease, gender and epigenetics. *Ann Med* 2006; 38:530-44.
19. Mabry R, Al-Riyami A, Morsi M. The prevalence of and risk factors for reproductive morbidities among women in Oman. *Stud Fam Plann* 2007; 38:121-8.
20. Daradkeh TK, Ghubash R, Abou-Saleh MT. Al Ain community survey of psychiatric morbidity II. Sex differences in the prevalence of depressive disorders. *J Affect Disord* 2002; 72:167-76.
21. Alansari BM. Gender differences in depression among undergraduates from seventeen Islamic countries. *Soc Behav Pers* 2006; 34:729-38.
22. El-Rufaie OE, Albar AA, Al-Dabal BK. Identifying anxiety and depressive disorders among primary care patients: a pilot study. *Acta Psychiatr Scand* 1988; 77:280-2.
23. Fido A, Zahid MA. Coping with infertility among Kuwaiti women: Cultural perspectives. *Int J Soc Psychiatry* 2004; 50:294-300.
24. Modabernia MJ, Tehrani HS, Fallahi M, Shirazi M, Modabernia AH. Prevalence of depressive disorders in Rasht, Iran: A community based study. *Clin Pract Epidemiol Ment Health* 2008, 4:20.
25. El-Akabawi AS, Fekri I. Anxiety and depressive disorder among users of general practice clinic in an industrial community in Cairo. *Egypt J Psychiatry* 1983; 8:107-15.
26. Ghubash R, Hamdi E, Bebbington P. The Dubai community psychiatric survey III. *Soc Psychiatry Psychiatr Epidemiol* 1994; 24:121-31.
27. Afifi M, Al Riyami A, Morsi M, Al Kharusil H. Depressive symptoms among high school adolescents in Oman. *East Mediterr Health J* 2006; 12:S126-37.
28. Okasha A, Kamel M, Sadek A, Lotaif ZB. Psychiatric morbidity among university students in Egypt. *Br J Psychiatry* 1977;131:149-54.
29. Karam EG. The nosological status of bereavement-related depression. *Br J Psychiatry* 1994;165:48-52.
30. Weissman MM, Wickramaratne P, Greenwald S, Hsu H, Ouellette R, Robins LN, et al. The changing rate of major depression. Cross-national comparisons. *JAMA* 1992; 268:3098-105.
31. Al-Lamky A. Feminizing leadership in Arab societies: the perspectives of Omani female leaders. *Women in Management Review* 2007; 22:49-67.
32. Mazawi AE. Besieging the King's Tower? En/gendering academic opportunities in the Gulf Arab states. In: Brock C, Levers LZ, Eds. *Aspects of education in the Middle East and North Africa*. Oxford: Symposium Books, 2007. pp. 77-97.
33. World Bank. *Gender and development in the Middle East and North Africa: Women in the Public Sphere*. Washington, DC: World Bank, 2003.
34. Mirza I, Jenkins R. Risk factors, prevalence, and treatment of anxiety and depressive disorders in Pakistan: A systematic review. *Br Med J* 2004; 328:794-7.
35. Khayata GM, Rizk DE, Hasan MY, Ghazal-Aswad S, Asaad MA. Factors influencing the quality of life of infertile women in United Arab Emirates. *Int J Gynaecol Obstet* 2003; 80:183-8.
36. World Health Organization. *Women's Mental Health: An Evidence Based-Review*, Geneva: WHO, 2000.
37. Hamid H, Abu-Hijleh NS, Sharif SL, Raqab MZ, Mas'ad D, Abbas A. A primary care study of the correlates of depressive symptoms among Jordanian women. *Transcult Psychiatry* 2004; 41:487-96.
38. Yousef M. Development, growth and policy reform in the Middle East and North Africa since 1950. *J Econ Perspect* 2004;18:91-116.
39. El-Sendiony MF, Abou-El-Azaem MG, Luza F. Culture change and mental illness. *Int J Soc Psychiatry* 1977; 23:20-5.
40. Ibrahim AS, Alnafie A. Perception of and concern about sociocultural change and general psychopathology in Saudi Arabian university students. *J Soc Psychol* 1991; 131:179-86.
41. Ibn Khaldūn. *The Muqaddimah: An introduction to history*. Rosenthal F, Transl; Dawood NJ, Ed. Princeton and Oxford: Bollingen Series, Princeton University Press, 2005.
42. Al-Ghanim KA. The Increase of Fertility and its Influence on Development Procedures: Analysis of the Arab Women Case. *J Soc Sci* 2004; 32:297-325.
43. Orji EO, Kuti O, Fasubaa OB. Impact of infertility on marital life in Nigeria. *Int J Gynaecol Obstet* 2002; 79:61-2.
44. Kadri N, Moussaoui D. Women's mental health in the Arab world. In: Okasha A, Maj M, Eds. *Images in Psychiatry: An Arab Perspective*, Cairo: WPA Publications, 2001. pp. 189-206.

45. Al-Rawahi S. Birth spacing initiative in Oman. *J Cult Divers* 2002; 9:23-6.
46. Green K, Broome H. Mirabella Postnatal depression among mothers in the United Arab Emirates: socio-cultural and physical factors. *J Psychol Health Med* 2006; 11:425-31.
47. Ghubash R, Abou-Saleh MT. Postpartum psychiatric illness in Arab culture: Prevalence and psychosocial correlates. *Br J Psychiatry* 1997;170:65-8.
48. Masmoudi J, Tabeis S, Charfeddine F, Ben Ayed B, Guermazzi M, Jaoua A. Study of the prevalence of postpartum depression among 213 Tunisian parturients. *Gynecol Obstet Fertil* 2008; 36:782-7.
49. Chaaya M, Campbell OM, El Kak F, Shaar D, Harb H, Kaddour A. Postpartum depression: prevalence and determinants in Lebanon. *Arch Womens Ment Health* 2002; 5:65-72.
50. Cooper PJ, Murray L. Postnatal depression. *Br Med J* 1998; 316:1884-6.
51. Stuchbery M, Matthey S, Barnett B. Postnatal depression and social supports in Vietnamese, Arabic and Anglo-Celtic mothers. *Soc Psychiatry Psychiatr Epidemiol* 1998; 33:483-90.
52. Abou-Saleh MT, Ghubash R. The prevalence of early postpartum psychiatric morbidity in Dubai: a transcultural perspective. *Acta Psychiatr Scand* 1997; 95:428-32.
53. Danaci AE, Dinç G, Devci A, Sen FS, İçelli, I. Postnatal depression in Turkey: Epidemiological and cultural aspects. *Soc Psychiatry Psychiatr Epidemiol* 2002; 37:125-9.
54. Nahas V, Amashen N. Culture care meanings and experiences of postpartum depression among Jordanian Australian women: A transcultural study. *J Transcult Nurs* 1999; 10:37-45.
55. Appleby L, Luchins DJ, Freels S, Smith ME, Wasmer D. The impact of immigration on psychiatric hospitalization in Illinois from 1993 to 2003. *Psychiatr Serv* 2008; 59:648-54.
56. Momartin S, Steel Z, Coello M, Aroche J, Silove DM, Brooks R. A comparison of the mental health of refugees with temporary versus permanent protection visas. *Med J Aust* 2006; 185:357-61.
57. Good B. Culture and Psychopathology: Directions for Psychiatric Anthropology. In: Schwartz T, White G, Lutz C, Eds. *New Directions in Psychological Anthropology*. Cambridge: Cambridge University Press, 1992. pp. 181-205.
58. Jumaian A, Alhmoud N, Al-Shunnaq S, Al-Radwan S. Comparing views of medical employees and lay people towards stigma in mental health issues. *Jordan Med J* 2004; 38: 80-3.
59. Fonte J, Horton-Deutsch S. Treating Postpartum Depression in Immigrant Muslim Women. *J Am Psychiatr Nurses Assoc* 2005; 11:39-44.
60. Padela AI, Shanawani H, Greenlaw J, Hamid H, Aktas M, Chin N. The perceived role of Islam in immigrant Muslim medical practice within the USA: an exploratory qualitative study. *J Med Ethics* 2008; 34:365-9.
61. Hourani A. *A History of the Arab Peoples*. London: Faber and Faber, 2005.
62. Kleinman A, Cohen A. Psychiatry's global challenge. *Sci Am* 1997; 276:74-7.
63. Holliday A. *A general view of the present state of lunatics and lunatic asylums in Great Britain, Ireland and in some other Kingdoms*. London: Thomas & George Underworld, 1828.
64. Maudsley H. *The Physiology and Pathology of Mind*. New York: Appleton, 1867.
65. Kleinman A. Depression, somatization and the new cross-cultural psychiatry. *Soc Sci Med* 1977; 11:3-10.
66. Nasir LS, Al-Qutob R. Barriers to the diagnosis and treatment of depression in Jordan. A nationwide qualitative study. *J Am Board Fam Pract* 2005; 18:125-3.
67. Al-Sinawi H, Al-Adawi S. Psychiatry in the Sultanate of Oman. *Int Psychiatry* 2006; 3:14-16.
68. Al-Adawi S, Dorvlo AS, Al-Naamani A, Glenn MB, Karamouz N, Chae H, et al. The ineffectiveness of the Hospital Anxiety and Depression Scale for diagnosis in an Omani traumatic brain injured population. *Brain Inj* 2007; 21:385-93.
69. Groenwold RH, Van Deursen AM, Hoes AW, Hak E. Poor quality of reporting confounding bias in observational intervention studies: a systematic review. *Ann Epidemiol* 2008; 18:746-51.
70. Coker EM. Selfhood and social distance: toward a cultural understanding of psychiatric stigma in Egypt. *Soc Sci Med* 2005; 61:920-30.
71. Maziak W, Asfar T, Mzayek F, Fouad F, Kilzieh N. Sociodemographic correlates of psychiatric morbidity among low-income women in Aleppo, Syria. *Soc Sci Med* 2002; 54:1419-27.
72. El-Sayed SM, Maghraby MM, Hafeiz HB, Buckley MM. Psychiatric diagnostic categories in Saudi Arabia. *Acta Psychiatr Scand* 1986; 74:553-4.
73. Al-Krenawi A. Women of polygamous marriages in primary health care centers. *Contemp Fam Ther* 1999; 21:417-30.
74. Al-Adawi S, Martin R G, Al-Salmi A, Ghassani H. *Ment Health Relig & Cult* 2001; 4: 47-61.
75. Al Lawati J, Al Lawati N, Al Siddiqui M, Antony SX, Al Naamani A, Martin RG, et al. Psychological morbidity in primary healthcare in Oman: A preliminary study.

- SQU J Sci Res: Med Sci 2000; 2:105-10.
76. Bazzoui W. Affective disorders in Iraq. *Br J Psychiatry* 1970; 117:195-203.
 77. Bensmail AB, Bentorki H, Touari M. Depression in Algeria: Cultural aspects and epidemiological evolution. *Psychopathologie Africaine* 1981; 17:143-53.
 78. Hamdi E, Amin Y, Abou-Saleh MT. Performance of the Hamilton Depression Rating Scale in depressed patients in the United Arab Emirates. *Acta Psychiatr Scand* 1997; 96:416-23.
 79. Murray CJL, Lopez AD. The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries and risk factors in 1990 and projected to 2020. *Global Burden of Disease and Injury Series, Vol. 1*. Cambridge, MA: Harvard School of Public Health on behalf of the World Health Organization and the World Bank, 1996.
 80. Al-Adawi S, Burjorjee RN, Al-Issa I. Mu Ghayeb: A culture-specific response to bereavement in Oman. *Int J Soc Psychiatry* 1997; 43:144-51.
 81. Alansari BM, Kazem AM. Optimism and pessimism in Kuwaiti and Omani undergraduates. *Soc Behav Pers* 2008; 36:503-18.
 82. Chand SP, Al Hussaini AA, Martin R, Mustapha S, Zaidan Z, Viernes N, et al. Dissociative disorders in the Sultanate of Oman. *Acta Psychiatr Scand* 2000; 102:185-7.
 83. Al-Adawi S, Dorvlo ASS, Burke D, Al-Bahlani S, Martin RG, Al-Ismaily S. Presence and severity of anorexia and bulimia among male and female Omani and non-Omani adolescents. *J Am Acad Child Adolesc Psychiatry* 2002; 41:1124-31.
 84. Al-Hinai SS, Al-Saidy O, Dorvlo ASS, Al-Riyami BMS, Bhargava K, Northway MG, et al. Culture and prevalence of social phobia in a college population in Oman. In: Landow MV, Ed. *College Students: Mental Health and Coping Strategies*. Hauppauge, New York: Nova Science Publishers, 2006. pp.2-19.