



TACKLING MENTAL HEALTH IN SAUDI ARABIA IN THE LIGHT OF CONSIDERATION OF THE LIFE COURSE EPIDEMIOLOGICAL ISSUES

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ABSTRACT

Mental health disorders have started to increasingly become a public concern with more resources and efforts are being put to promote awareness and fight stigmas associated with it. Depression represents one of the most common mental health disorders with a great economic and social burden both globally and in Saudi Arabia. This study focuses on addressing depression in Saudi Arabia. The epidemiology of depression in Saudi Arabia is described using Bellingham-Young basic principles model, describing the issue from the perspectives of who; when; where; what and why. The causes of depression among patients in Saudi Arabia is described in this study, mainly in relation to chronic diseases, age and gender. Next, several approaches are suggested to tackle depression among its patients in Saudi Arabia. These approaches are described according to Ritsatakis and Jarvisalo variation of the established Dahlgren and Whitehead stages model. Lastly, depression is discussed in the light of consideration of the life course epidemiological issues and how life events may affect the development of depression in adulthood.

KEYWORDS: Depression – Life Course Issues - Mental Health – Tackling Approaches - Saudi Arabia

1. INTRODUCTION

Mental health disorders have started to increasingly become a public concern with more resources and efforts are being put to promote awareness and fight stigmas associated with it (1). As mental health disorders encompass a wide range of disorders, depression will be used as a study example in this study.

Depression is one of the most commonly diagnosed mental health disorder in adults and has been an increasingly a major health burden which is not addressed properly in many societies. The impact of depression goes beyond being an economical burden as it encompasses detrimental suffering on both personal and interpersonal level, as well as its impact on societies (2).

The World Health Organizations' (WHO) International Classification for Diseases and Related Disorders (ICD-10) requires the presence of at least four items for a duration of 2 weeks to meet the criteria for a depressive episode. These items include loss of appetite, loss of interest in activities, absence of emotional reactions, sleep disturbance, motor

retardation, losing weight, loss of libido and decreased energy (3). Although depression could be diagnosed based on slightly different criteria like the Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition (DSM-IV-TR) (4), applying these two different criteria do not yield significantly different results and hence they could be used interchangeably (5).

2. EPIDEMIOLOGY OF DEPRESSION IN SAUDI ARABIA

The epidemiology of depression will be discussed in its global prevalence and will be followed by its prevalence in Saudi Arabia (SA). To better address the issue, Bellingham-Young basic principles model (6) will be used to put it into perspective.

In a cross-sectional study including 7970 elderly patients, 3110 patients reported depressive symptoms (39%) and around 669 patients had significant depression score (7). This study has addressed several factors that strongly correlated with the prevalence of depression.



Who: Females were at higher risk of depression, which could be attributed to the masculine predominance in the Saudi society and inequality in accessing and reaching health care centres, especially in remote areas (8). People who were divorced had a higher association with developing depression which could be due to the societal stigma concerning divorce (9).

When: Elderly were higher risk of developing severe depression due to multiple reasons including significant loss of a close relative, lack of physical activity and limited participation in recreational activity. These factors were shared between elderly in SA and other countries (10).

Where: People living in a remote rural area were associated with higher depressive symptoms. This is due to the overall poor living conditions in such areas with poor housing arrangements, lack of education and unemployment.

What: These patients were diagnosed and treated correctly, but they required an appropriate social and medical support for an effective treatment.

Why: Dubovsky was the first to underpin the major religious and cultural obstacles to both seeking and committing to professional psychological and

psychiatric treatment in SA (11). He described the widespread belief in ‘In-sha’allah’, explained as it is up to god’s will only whether a person gets sick or recover from a disease, regardless of any human intervention. Furthermore, seeking professional help is the last resort after faith healing and other practices such as cauterly and topical herbs (12).

3. CAUSES OF DEPRESSION IN SAUDI ARABIA

Given the burden of depression, many researchers attempted to establish its causes (1). The use of population-scale studies such as cross-sectional studies or meta-analyses have led to finding many associations with depression. However, establishing a causality requires more than just an association. Out of these strong associations, old age, female gender and the presence of chronic diseases were chosen in this study to see whether they meet Bradford Hill Criteria (13) for establishing a causality.

In SA, the prevalence of depression was significantly higher in the elderly cohort compared to the younger ones (Table 1) (7,8). The female dominance in the prevalence of depression is also evident in the studies conducted in SA (7,14). These findings were consistent with other cohorts in the States and Europe (15–18).

	Depressive symptoms	Absence of depressive symptoms	Total
Elderly	1890	1600	3490
Young	1220	3260	4480
Total	3110	4860	7970

Table 1. Contingency table of the prevalence of depressive symptoms in a Saudi community. The calculated odds ratio (OR) is 3.15 showing that elderly subjects are more likely to develop depressive symptoms in the studied cohort. Contingency table was made from the data used in Al-Shammari study (7).

Expectedly, the development of depression happened after the presence of these risk factor, becoming old and being a female. However, it is important to notice that these factors are not specific to depression.

The comorbidity with chronic conditions is also strongly associated with depression in both the Saudi and international population (7,19,20). Although chronic diseases are not specific to depression, they occur before the development of depression. Chronic diseases and depression may be linked through the neuroendocrine activation and the elevation of inflammatory cytokines favouring the development of these chronic conditions associated with depression (21).

Despite the availability of evidence suggesting the significant association of these factors with depression, they cannot stand as sufficient causes i.e. their sole presence cannot cause depression, according to Rothman causality model (22).

However, female sex, old age and the presence of chronic diseases could be considered as component causes as they are consistently present in most depression patients.

4. APPROACHES OF TACKLING DEPRESSION IN SA.

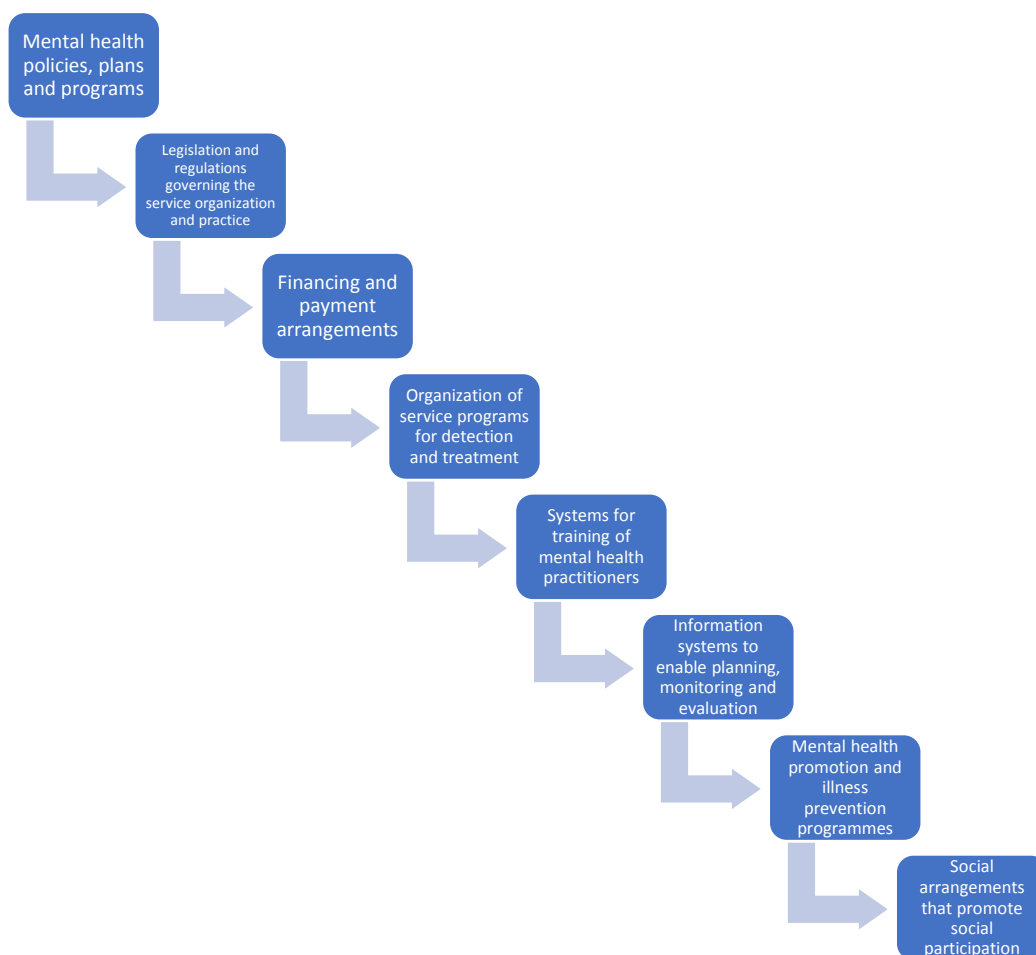
The burden and the prevalence of depression globally as well as in SA makes it a critical problem that needs to be addressed. This information can help forming a health policy it to tackle depression in SA in several steps. These steps could follow either a problem-stream or a ‘stages’ model. Problem-stream model can be explained as bringing depression to the public attention leading to a public outcry prompting policy-makers to tackle it (23). The stages model is an approach in which a series of steps are taken in a chronological manner to tackle the problem. Adopting Ritsatakis and Jarvisalo variation of the



established Dahlgren and Whitehead stages model (24), the stages will include:

- 1- Raising public awareness.
- 2- Securing and ensuring the validity of the available data.

- 3- The formulation and implementation of a proposed policy.
- 4- Seeking and including non-governmental alliances.
- 5- Provisions for implementation (25).



SA has adopted a similar approach that to establish its mental health system summarised in Figure 1.

Figure 1. Mental health system in Saudi Arabia. The different component of the mental health system used in SA. Adopted from Qureshi's study (26).

5. CONSIDERATION OF THE LIFE COURSE EPIDEMIOLOGICAL ISSUES

The seminal work of Baker and colleagues have led to the generation of the Developmental Origins of Health and Diseases (DOHaD) theory (27,28). This theory suggests that adulthood conditions are influenced by factors happening early in life, as early as the embryological stages.

This theory, although requires a series of scientific explanations in order to link early events to

adulthood diseases, could explain why certain diseases like hypertension or lung cancers could happen on some people who do not live a sedentary life or smoke, respectively (29).

Although sometimes the association between early and later events could be easily understood and linked scientifically, the association between embryological events and adulthood diseases is far from being simple and straightforward rationale. For example, malnutrition of a pregnant woman will lead to the delivery of underweight or underdeveloped



baby, however, it is not clearly understood how coronary artery diseases could be attributed to being underweight at birth.

In the context of depression, there has been an increasing evidence of the early onset of depression and how likely for it to reoccur in adulthood (30,31). Cases of mood disorders, including depression, have a very early onset. Fifty percent of these cases have an onset at 14 years of age and 75% of these cases start by 24 (32,33). Zisook and colleagues have also demonstrated that earlier onset of depressive symptoms is greatly associated with a bigger disease burden and poorer prognosis (34).

In SA, early adverse childhood experiences (ACEs) were common, reaching almost 80% (35). These ACEs demonstrated a significant likelihood to develop depression, especially among women, as well as other chronic conditions. In 2 cross-sectional studies including 2286 school boys and girls, Al-Gelban and colleagues reported an early onset of depressive symptoms at 14 years of age, affecting almost one third of the subjects (36,37). However, these studies did not consider important living and social aspects such as parents mental health awareness, type of the house the pupils live in and privacy at home. The absence of some of these aspects are an important contributor to the development of depression both in Saudi and international cohorts (7,34).

Although it is yet to be explained how early events in life such as ACEs could lead to adulthood depression, current evidence highlights the urgent need to:

- 1- Pay more attention to the youth mental health in SA.
- 2- Raise public awareness of mental health issues especially among the younger age groups.
- 3- Early detection and intervention to such conditions.

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