PREVALENCE OF POSTPARTUM DEPRESSION AMONG MOTHERS IN THE EMIRATES OF ABU DHABI

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Abstract:

Background:

Postpartum depression is a common mental health condition that affects women in a silent and covert way and is not clearly visible to the community or to health care providers. It is defined as a non-psychotic depression that begins in or extends to the postpartum period. It can develop from a previous state of depression, or become apparent after the first weeks of delivery or continue for 14 months. It has significant effects on the mother and long-term consequences on the cognitive and emotional development of the child, while it is generally agreed that the disease can turns into a severe depression and results in significant risks leading to death.

Objectives:

• Measuring the prevalence of postpartum depression among women in the Emirate of Abu Dhabi.

• Determining the impact of social, personal and health characteristics on postpartum depression among women in the Emirate of Abu Dhabi.

Methodology:

This is a quantitative study conducted at primary health care centers in the Emirate of Abu Dhabi. The targets population is postnatal mothers who attend a vaccination clinic with their children. The sample size was calculated to be 250 participants. Selection criteria: Postpartum mothers attending these clinics in the second month, the fourth month, the sixth month. Exclusion criteria: Mothers previously diagnosed with depression and non-Arabic and non-English speakers.

The questionnaire consisted of two main parts:

1. General questions on:

   a. Socio-demographic characteristics including seven questions.

   b. Pregnancy and situation including nine questions.

   c. Health status including five questions.

   d. Social status including two questions.

2. Edinburgh Post Natal Depression EPND scale

Is a tool used to evaluate postpartum depression that is widely used and reliable and its success has been well validated in the detection of postpartum depression.

Results:

The probability of postpartum depression for female citizens was 16.7% and 16.4% for non-nationals. This study indicates a high incidence of postpartum depression (one in six women). Using the logistic regression analysis determinants of depression was found to be worries about their weight and employment status.

Recommendations:

Edinburgh Post Natal Depression EPND scale should be used in the routine care of mothers to ensure proper diagnosis and treatment of postpartum depression for the health and well-being of mother, baby and family. Further studies should be undertaken to achieve effective strategies to reduce the incidence of this condition.

Introduction

According to (Mathers&Loncar(2006)), depression will be one of the top three leading causes of death in the world by year 2030.[3] One of the most difficult periods in the women life is Postpartum period and Postpartum depression (PPD) being one of the common mental health states that affect the women. A meta-analysis, including 59 studies from North America, Europe, Australia, and Japan estimated the prevalence of postpartum depression as 13%.[6] While it is generally agreed that this illness can turn into major depression and carries substantial risk of morbidity and death, it is under-diagnosed and underrated illness.[2]

The impact of this has great consequences on the mother child and the health care system and community. It has significant impacts as well on the cognitive and emotional development of children as the studies showed.[2]

Postpartum depression (PPD) is defined as non-psychotic depressive episode that begins in or extends into the postpartum period. Symptoms include anxiety, guilt, negative maternal attitudes, and poor parenting self-efficacy. Postpartum depression can evolve from a preexisting case of the baby blues, or can become apparent after the first weeks of giving birth and can last as long as 14 months.[1]

Arab women showed high rates of post-partum depression with prevalence between 16% and 26% .[6, 11, 12]. In the United Arab Emirates it was reported to be 22% soon after giving birth using Edinburgh Postnatal Depression Scale (EPDS). At 3 months postpartum, it was found to be 22% of mothers falling into the Depression category and another 22% falling in the Borderline Depression category. At 6 months, the rate fell to 12.5% in Depression category and 19.6% Borderline Depression category. In another review done by Amber Haque in 2015 showed the prevalence of PPD in UAE population was 10% to 22% whereas in Middle Eastern Arabic women had variation of 10% to 51%.[2]

The United Arab Emirates have a strong mother and child services. Nevertheless, there is no implemented screening and management program for mental health perinataly. We aim in this study to measure the prevalence of postpartum depression among women in the Emirates of Abu Dhabi and to investigate the determinants of postpartum depression in this population.

Materials and Methods

Study design:

A quantitative questionnaire based cross-sectional study.

Setting:

It was conducted in the primary health care centers in the Emirates of Abu Dhabi.

Study population:

Postpartum mothers who attending the main well established well baby clinics in the Emirates of Abu Dhabi, who accompanied her baby for well-baby clinic visit at 2 month, 4 month, 6 month. Mothers' known to have depression was excluded. Moreover, non-Arabic non-English speaker also been excluded as well.

A total of 240 women in period of July 2017 until March 2018 completed the questionnaire. After removing the uncompleted questionnaires which were 15.

Sample size:

Sample size was calculated to be 230 participants, with confidence interval of 5.1 % and confidence level of 95%.

The questionnaire:

The data collection form was a well validated questionnaires to screen for post-partum depression, Edinburgh Postnatal Depression Scale EPDS.[13 14] The screening too, started with the social-demographic characteristics as the first part; including seven questions; Pregnancy and delivery including nine questions; Health states including five questions; Social state

including two questions; and postnatal depression scale. Then the second main part of the questionnaire was the Edinburgh scale EPDS which is the tool used to assess the postpartum depression. The EPDS is a widely used, reliable, and validated screening tool for Postnatal Depression (PND). It was specifically developed for screening at the primary health care level. The instrument has been translated and validated into 57 languages including Arabic and validated in 1997 in the United Arab Emirates. [5] The EPDS screens for PND using 10 inventory questions investigating feelings occurring with the new mother within the previous 7 days. Each question has four possible answers rated from 0 to 3. A test is "positive" for post-partum depression if the woman scores 10 or more out of 30.[15,16]

It would appear overall that formal validation of the EPDS following proposed process-based criteria is more likely to derive precise cut-off points appropriate to the local setting and /or population. The cut-off point is variable and not universal and is different between cultures. Having a high cut-off point imported from a high-income Anglophone setting might lead to under-detection of women with perinatal common mental disorders (PCMDs) including post-partum depression. This means women's needs might go unrecognized and unassisted and lead to under-estimation of PCMDs burden for a particular country or population [11].

Therefore scores less than 10 were considered negative for post-partum depression, scores between 10 and 12 were considered low risk for post-partum depression, scores between 13 and 14 were considered moderate risk for post-partum depression, and score of 15 or more were considered high risk of post-partum depression. [15, 16]

The tool was originally designed to be self-administered, but studies have shown that the directed interview EPDS and self-completed EPDS are equivalent screening techniques for postpartum depression. [5] The questionnaire planned to be administering to the postpartum mothers by self, interview, nurse, or other qualified staff.

Statistical analysis:

Statistical analysis performed using IBM SPSS statistics 19. Logistic regression had been performed to assess the association of postpartum depression with different factors. p value less than 0.05 been selected as level of significant.

Results

One out of four women visiting the well bay care clinics in the emirate of Abu Dhabi reported to be at risk of postpartum depression (26.4%). The study was more represented with non UAE nationals with 165 women being non UAE nationals and 78 were UAE national women. Table (1) shows the distribution of surveyed characteristics in relation to nationality (Emirati and non-Emirati nationals). The postpartum depression was found in 63 making the prevalence of postpartum depression in women who lives in the Emirate of Abu Dhabi around 26.4%. Although most of the cases were non local (n= 47) (28.66%) compared to local women (n= 16) (20.78%) but this was not found to be dependent factor with logistic regression. Figure (1) and Figure (2).

Based on the score from EPDS, the resulted score was dividing into four categories. Category one have no risk for postpartum depression as their score was less than 10. Category two are those with mild risk for postpartum depression as their score was from 10 to 12. Category three is the moderate risk for postpartum depression who got score of 13 until 15. Those who scored more than 15 were accounted as high risk for postpartum depression and this is category four.

Figure 3 shows the distribution of the study subjects by the four categories. In category one around of 158 (66%) were in this no risk category. Emirati women n= 60(78%) and non-Emirati women n= 98(60%) scored less than 10. Thirty nine of non-local (24%) and 4 of local women (5%) scored in mild risk for PPD. In the moderate risk group around 13(8%)

and 3(6%) nonlocal and local women respectively scored between 13 to 15. In high risk group around of 14 (9%) of the non-Emirati and 10 (13%) of the Emirati scored more than 15.

With regards to logistic and linear regression table (2), figure (5, 6) there was an association identified between postpartum depression risk using the Edinburg score and the presence of weight concern in the women surveyed and employment status (P <0.005). women who have weight concerns are more likely to be at risk of PPD while employed women are at lower risk.

Regarding self-harm, 9.1% of surveyed women have shown indication of risk of self-harm. This is concluded from responses to question 10 (The thought of harming myself has occurred to me) in the EPDS. 0.4% responded with quite often, 3.3% sometimes, 5.4% hardly ever, and 90.9% Never (Table 3).

Discussion:

This study investigated the prevalence of the risk of postpartum depression among women in the Emirates of Abu Dhabi which revealed a prevalence of (26.4%). Higher risk (scored more than 15) was reported among around (9%) of the non-Emirati and (13%) of the Emirati. The EPDS was found to be 68 to 95% sensitive and 78 to 96%specific for diagnosing depression in women scoring 13 or more.[6]

This is similar to previous study done in the United Arab Emirates on 2006 , which recruited Emirati women in a government maternity hospital in Abu Dhabi. They found that at 3 months postpartum period the prevalence of postpartum depression was 22% where another 22% falling in the Borderline Depression category and at 6 months postpartum period the prevalence of postpartum depression was 12.5% where another 19.6% had Borderline Depression category. This may indicate an increasing in prevalence of postpartum depression in our region.

A large meta-analysis done on 2018, estimating the global and national prevalence of postpartum depression with identification of economic, health, social, or policy factors associated with national postpartum depression prevalence, showed that the global pooled prevalence of postpartum depression was 17.7%, indicating UAE reported prevalence to be high compared to other countries.

With regard to determinants of postpartum depression the only significant association identified in this study was between postpartum depression risk using the Edinburgh Postnatal Depression Scale EPDS and the presence of weight concern in the women surveyed and the employment status (P <0.005).

Women who have weight concerns are more likely to be at risk of postpartum depression compared to women without a weight concern OD 5.499(2.618-11.548). And women who are un-employed are more likely to be at risk of postpartum depression while employed women are at lower risk of postpartum depression OD 0.483 (0.246 -0.951).

Comparing these findings with the findings from the previous study done in United Arab Emirates on 2006, they reported similar relation. The risk of postpartum depression was more with those with poor self-body image with view of weight.[12] On the other hand they found also other factors are associated with postpartum depression including; not breastfeeding, giving birth to the first child, poor relationship with mother-in-law, and an older age at marriage which were not found to be significantly influential in this study. We found that there was no association identified between postpartum depression and age, educational level, family income, planned pregnancy, mode of delivery, gender of baby, breast feeding and the people who live with the mother.

Nevertheless, other studies have reported association with other variables. For example, a Study done on Canada, on 2011, among 6,421 Canadian women and by using Edinburgh Postnatal Depression Scale, It showed that mother's stress level during pregnancy, the

availability of support after pregnancy, and a prior diagnosis of depression were the strongest significant association with the development of postpartum depression.[1] Another study done in China on 2016, where A total of 506 mothers 23 years of age and older who were within three years postpartum completed the online survey, showed that there are factors contributing to the development of postpartum depression including; education level, family income, preparation for pregnancy, a history of depression, amount of time spent with their husbands, relationships with husbands, parents, and parents-in-law, and a more anxious attachment style were strongly related to a higher risk of postpartum depression.[13]

With no previous screening study in the area of post-partum depression in UAE in Primary Health Care setting, we believe that this study form a foundation for future program to prevent and manage post-partum depression. Many women may have prolonged struggle or presented late when the impact of the illness started to affect herself and her loved ones. From this data a screening program for postpartum depression in primary health care centers among mothers coming already for their well-baby checkup for example is a necessity. Though this program we will have the means to address the maternal mental health needs of our women. As well we well spot the light on a hidden area in women health which also affects the infant well-being on the long run.

Lessons learnt from this study is that we need to strengthen mental health services in Ambulatory Health Service (AHS) by having psychologist, psychiatrists and social workers side by side working with family physician in order to provide a better care from all aspects that the patient may need.

A systematic review done on 2016, studding the evidence on the effectiveness of screening for postpartum depression in well baby clinic setting compared to no screening, regarding mother and child outcomes and showed that 4 out of 6 studies demonstrated an increase in

detection rate of depressive symptoms, referral and treatment, and thus supporting the potential of screening in well baby clinic setting with positive evidence.[14]

Through structured care system through frequent contact with new mothers up to 1 year of post-partum by regular appointment and if needed by phone calls to be sure that we are not missing any chance to help these mothers. We will be able to detect and respond to these women major complications on women, babies and families will be prevented.

More researches should be conducted on the area of post-partum care in general not only to look at the mental health but also to address any medical problems and to provide a data about implication of post-partum care program in primary health care centers.

Conclusion:

This study suggested high prevalence of risk of postpartum depression (One in four women).

There were associations between postpartum depression and both weight concern and employment status.

Further studies required to be done to investigate for effective strategies to decrease the risk of postpartum depression.

New research should explore the benefits of repeating the screening of post-partum depression during the first year of postpartum period and including any out comes on the child.

Acknowledgment:

Funding: This research received no specific grant from any funding agency.

Competing interests: None.

Ethical approval: The proposal for this study was approved by AHS ethical Committee.

Table (1) Distribution of important population Characteristic.

characteristic	Non UAE N(%)	UAE (N(%)
Age		
<20	9 (90)	1(10)
20-29	63(70)	33(30)
30-39	82(69%)	37(31%)
>=40	9(60%)	6(40%)
Educational Level		
Primary or less	8(100%)	0(0%)
Secondary	31(44%)	40(56%)
University and above	125(77%)	37(23%)
Employment		
Non employment	106(69%)	47(31%)
Employment	58(67%)	29(33%)
Number of children		
1	49(86%)	8(14%)
2 to 5	114(67%)	56(33%)
more than 5	1(7%)	13(93%)
Family income		
Not sufficient	13(81%)	3(19%)
Sufficient	120(68%)	57(32%)
Sufficient and saving	31(66%)	16(34%)
Planned pregnancy		
unplanned	71(62%)	44(38%)
planned	93(74%)	32(26%)
Mode of delivery		
Normal/ assisted vaginal delivery	92(62%)	56(38%)

Caesarean section	72(78%)	20(22%)
Gender of baby		
Female	68(62%)	42(38%)
Male	96(73%)	35(27%)
Feeding of the baby		
Exclusive breast feeding	75(77%)	23(23%)
Mixed	57(57%)	43(43%)
Formula milk	32(74%)	11(26%)
Living with		
Alone	1(50%)	1(50%)
Husband and children alone	145(71%)	59(29%)
Husband family	4(67%)	2(33%)
My family	14(48%)	15(52%)

Table 2 Determinants of high Edinburgh Postnatal Depression Scale score.

	B	Sig.	OR	95% C.I.	
Employment	-0.302	-0.147	0.015	-0.543	-0.060
Any weight concern	0.982	0.364	0.000	0.664	1.300

Table 3 Reponses of participants to question 10 “The thought of harming myself has occurred to me”.

	Number	%
Never	219	90.9
Hardly ever	13	5.4
Sometimes	8	3.3
Yes, quite often	1	.4
Total	241	100.0

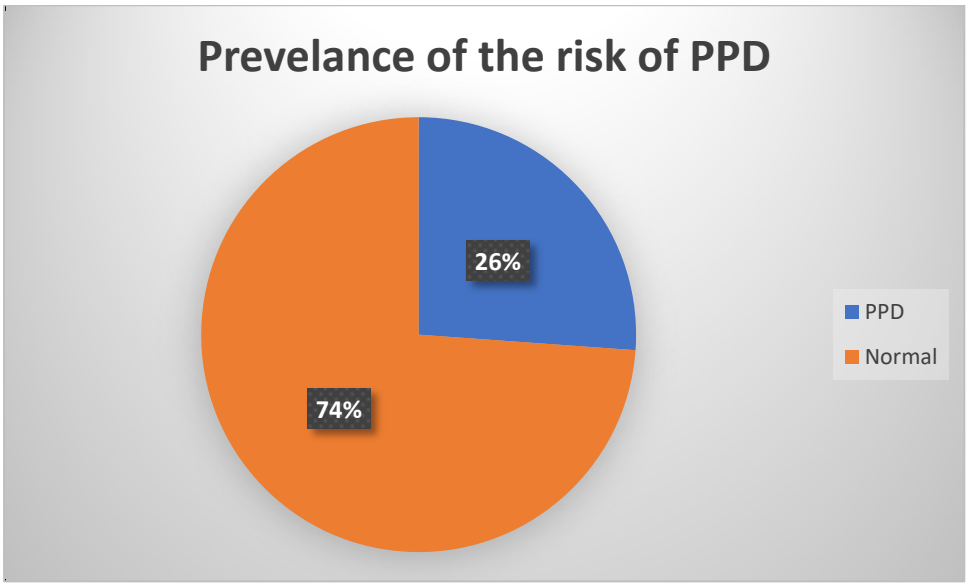

Figure 1 The prevalence of the risk of postpartum depression among women in the Emirates of Abu Dhabi.

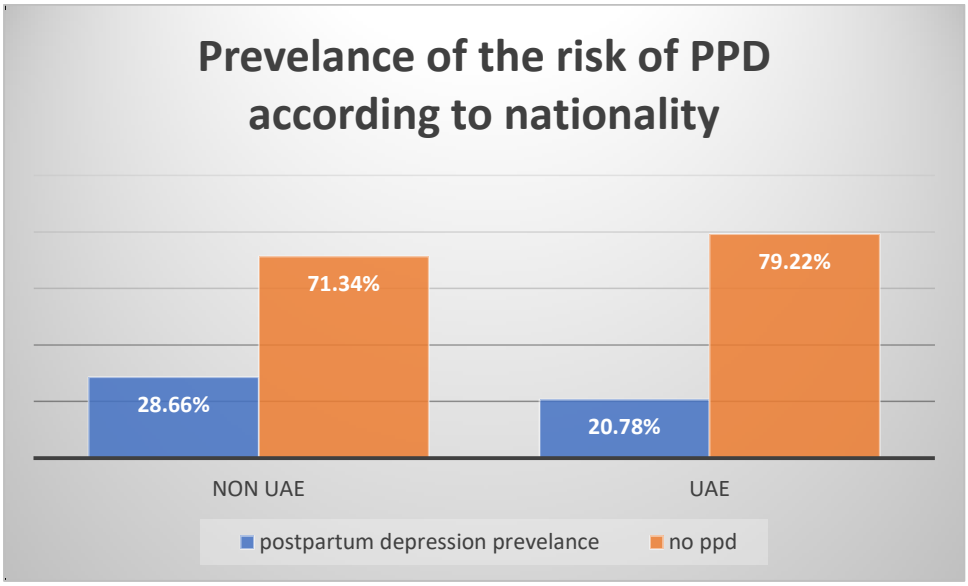

Figure 2 Prevalence of the risk of Post Partum Depression according to nationality.

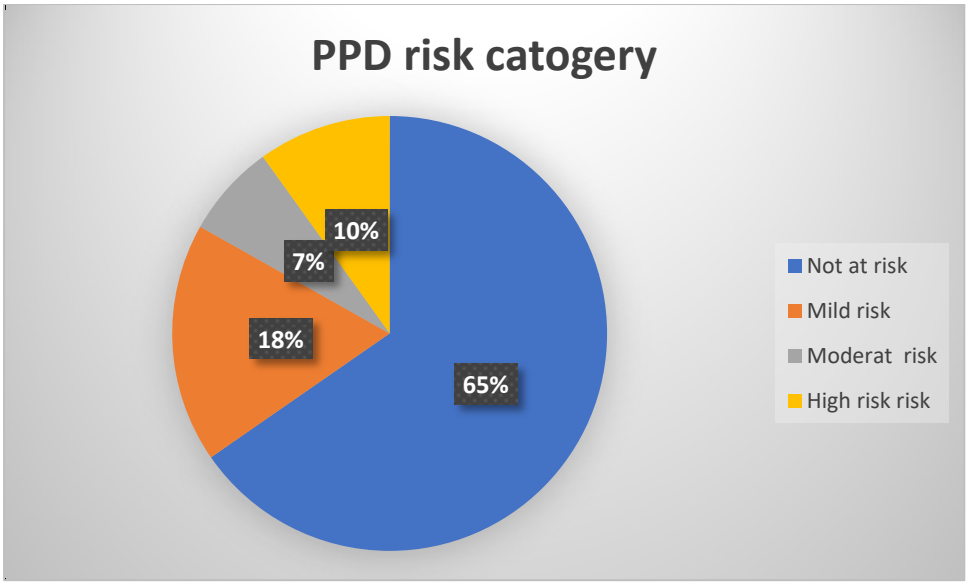

Figure 3 Prevalence of the risk of Post Partum Depression according to severity.

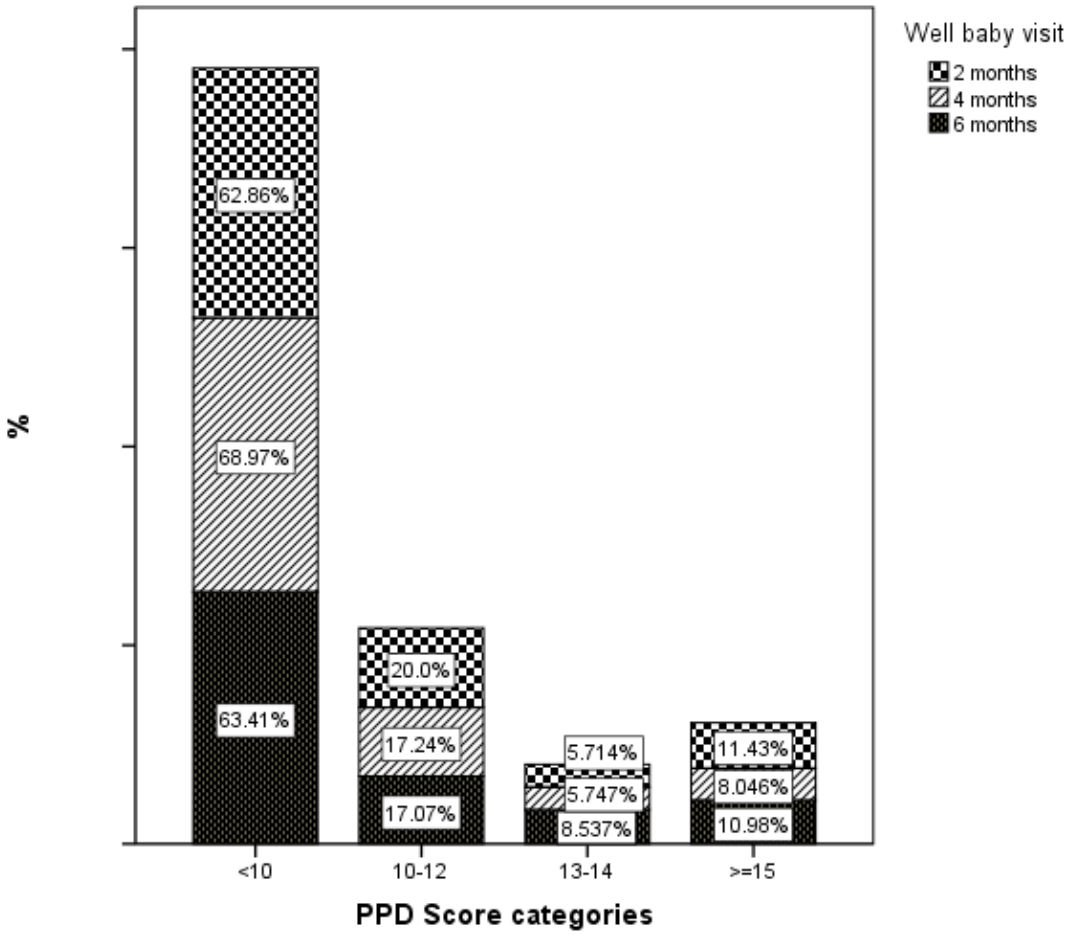

Figure 4 Post-Partum Depression risk according to the well-baby visits.

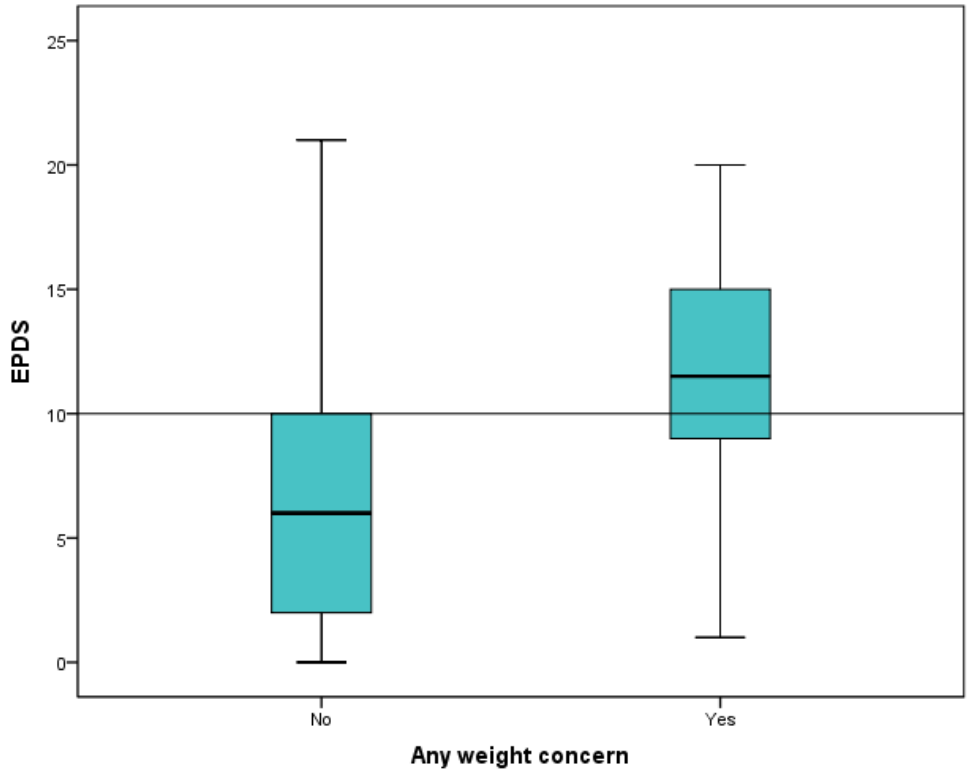

Figure 5 The relation between high EPDS score and the presence of any weight concerns

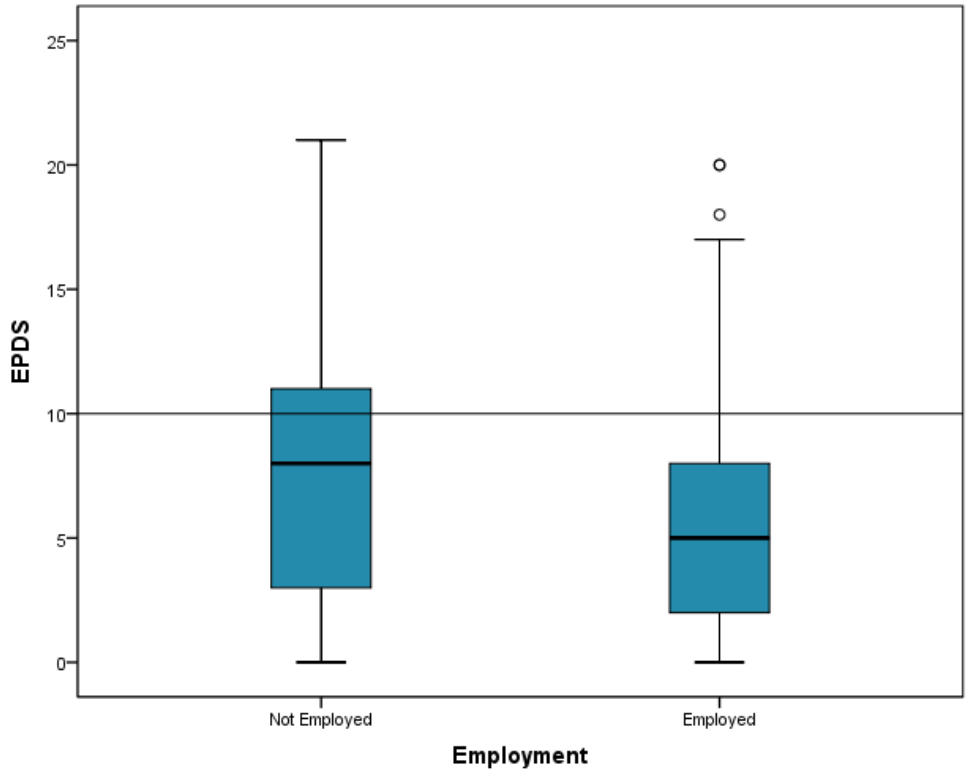

Figure 6 The relation between EPDS score and employment

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