

Screening for Depression and Anxiety Symptoms among a Sample of Working Syrian Refugees in Egypt

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Abstract

Background: Since the Arab spring, a large number of Syrian refugees arrived to Egypt. The majority of these refugees faced numerous traumatic events both in their country of origin and while moving from it. This raised the prevalence rates of depression and anxiety disorders among refugees than other populations. There are very few studies regarding the mental health of these vulnerable populations in Egypt. **Objective:** This study aims to screen for depressive and anxiety symptoms among a sample of working Syrian refugees in Cairo, Egypt and to estimate their socio-demographic and employment correlates. **Method:** A cross sectional study with convenient method of sampling was carried out. The sample was recruited from a primary healthcare center. Socio-demographic data were identified using designed questionnaires. Depressive and anxiety symptoms were evaluated using Beck Depression inventory (BDI) and Taylor anxiety scales respectively. **Results:** Ninety-four Syrian worker refugees participated in the current study. Depressive symptoms were prevalent among 63 % of the studied sample and anxiety symptoms were found among 89 % of them. The refugee's duration of being away from his/her country represents a statistical significant factor that was associated with higher rates of depressive symptoms. None of other socio-demographic & employment factors were found to be associated with the rates of depressive or anxiety symptoms among the study sample. **Conclusion:** Syrian refugees are at high risk of developing depressive and anxiety symptoms. Increased attention from primary and mental health care services to adequately support Syrian refugees' mental health needs are urgently needed.

Keywords: *depression, anxiety, Syrian refugees, Egypt.*

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Introduction:

According to the last World Bank report, about 65 million people – one percent of the world's population live in forced displacement.¹ As opposing to economic migrants who travel in a search for better economic opportunities, Refugees are usually facing extremely challenging psychological, social and financial stressors.² Till the 1970s, there were a great lack in scientific research studying the

nature, prevalence and risk factors; (including economic factors of the host country) for mental health problems amongst refugees worldwide. In the following two decades, several epidemiological studies on the refugee mental health field had taken place. However, they mainly focused on PTSD and studies on depression and anxiety remain scarce.^{3,4} Many factors can

contribute to refugee's mental health problems; including socioeconomic status, financial and employment constrains with low financial security and sometimes without any health insurance, higher risk of poverty and social exclusion, resettlement and acculturation challenges, multiple responsibilities, discriminatory treatment, and difficulty obtaining services in a timely manner due to language differences. In addition, the impact of vocational factors like job shift, job availability, working hours, monthly income and job satisfaction; could have a detrimental impact on refugees' mental health.⁵ Employment is considered one of the main elements of successful social and financial settlement for refugees, allowing economic independence, which is known to have mental health effects, helping language learning and creating contacts or bridges with the host community.⁶

Since 2011, Syrian Arab Republic and Syrian citizens, had faced a drastic change from being one of largest refugee hosting country, to becoming the second largest refugee producing country with an estimated 2.47 million Syrians already displaced outside their country. According to the United Nation High Commissioner for Refugees (UNHCR)'s statistics in, Egypt currently hosts 1,280,034 Syrian refugees of which 78,673 residing in Cairo.⁷

Despite the high rates of mental health problems among refugees and the wide range of studies investigated these problems worldwide⁸⁻¹⁰; only few studies had examined the degree to which the Syrian crisis could affect the mental status of Syrian refugees settled in Egypt.¹¹ The reason behind that may be due to the fact that; the huge burden aroused from the mass movement of refugee populations to Arab World host countries, puts mental health issues on the lowest priority level

when compared to other unmet nutritional, health, financial and employment needs. And this is worsened by the economic difficulties facing most of Arab World countries. Thus, screening for these problems is very essential for early diagnosis and management.

The above finding highlights the importance of addressing and studying this issue, which motivated the study team aimed to screen for depressive and anxiety symptoms and to identify possible socio-demographic correlates with depression and anxiety among a sample of Syrian refugees in Cairo, Egypt.

Method

This is a cross sectional study that was carried out in outpatient clinics, Ain Shams University Hospitals (Egypt). The study was conducted in accordance with the guidelines of the Research and Ethics Committee of the Institute of Psychiatry, Ain Shams University.

Study sample: A convenience sample of 94 employed refugees were collected during the period between July to September, 2017 in Cairo. The exclusion criteria were to be younger than 18 years of age, or to have immigrated before the beginning of Syrian conflicts. Individuals who was having one or more major depressive episodes (MDE) before the onset of the war in 2011 or having any past history of other psychiatric illnesses or receiving any psychotropic medications. We also excluded all non-working refugees to eliminate the impact of unemployment on depression and anxiety.

Calculation of sample size: A target number of 100 participants were obtained using 95% CI with an accepted margin of error $\pm 6\%$ and based on the prevalence of depressions previously found on a population of Syrian refugees in

Table 1: Socio-demographic data of the study sample (n = 94)

		N	%
Age	Mean ± SD (range); median (IQR)	28.5 ± 8.5 (18 – 58); 26.0 (23 – 31.5)	
Gender	Male	84	89.4
	Female	10	10.6
Educational level	No formal education	9	9.8
	Primary	12	13.0
	Secondary	18	19.6
	Technical education	12	13.0
	High educational level	41	44.6
Marital status	Single	54	58.1
	Married	34	36.6
	Divorced/widow	5	5.4
Length of stay in Egypt (months)	Mean ± SD (range)	4.4 ± 2.5 (1 – 15)	
People number / residence	Mean ± SD (range); median (IQR)	4.3 ± 2.2 (1 – 15); 4 (3-5)	
Number of rooms/ residence	Mean ± SD (range); median (IQR)	2.5 ± .7 (1– 6); 2.5 (2 -3)	
Occupational level*(ILO, 2012)	Professionals	22	25.9
	Skilled workers	43	50.6
	Services and sales	20	23.5
Working days/ week	Mean ± SD (range)	5.4 ± 1.3 (1 – 7)	
Working hours/days	Mean ± SD (range)	11.5 ± 2.4 (8 – 16)	
Monthly income	<1000	19	20.7
	1000-3000	60	65.2
	>3000	13	14.1
Job satisfaction	Yes	43	46.7
	No	49	53.3
Satisfied with the relationship with your boss	Yes	57	64.0
	No	32	35.9

Lebanon.¹¹ The sample was calculated using Epi Info 2002 program. One hundred refugees were randomly recruited while they are waiting to receive their primary health care aids. They were 85 males and 15 females but only 94 refugees (84 males and 10 females) approved to participate in the study. The main causes for non-participation were lack of time, lack of definite benefit from the study and lack of husband approval in case of married females.

Clinical history was collected using a Semi-structured clinical data sheet routinely used at Ain Shams University

Institute of Psychiatry (ASUIP). It consists of socio-demographic data, including age, gender, education, social status, employment status classified according to International Standard Classification of Occupations¹², working hours, monthly income, job satisfaction and satisfaction with the relationship with boss (Yes/No). Beck Depression Inventory (BDI).¹³

This is a well-known self-report instrument. Its original version (21 items) was introduced in 1961 and its reliability and validity have been established across a broad spectrum of clinical and non-clinical populations. The scale consists of 21 questions. Scoring of each question is from

zero to 3, and the total score ranges from zero to 63, subdivided into no depression (0-20), mild depression (21-29), moderate depression (30-38) and severe depression (39-63). The Arabic version of the BDI was used in this study.¹⁴

Taylor manifest anxiety scale¹⁵: It is translated and validated in Arabic by Fahmi, Ghali, and Meleka¹⁶. It assesses the subject's awareness of estimate and willingness to report emotional habitual response rather than feeling at the time of completion of the scale. It consists of 50 items. Interpretation: zero-16: normal, 17-24: mild, 25-35: moderate, 36-50: severe.

Data Analysis:

Data were analyzed using SPSS version 20 for Windows. Prior to analysis, the data was checked for accuracy of data entry and missing values.

Normality of the continuous variables was checked through the Kolmogorov–Smirnov test (KS). It was found work duration, working hours, working days, people numbers in residence and number of persons in room (crowding index) were not normally distributed.

The results were tabulated, grouped and statistically analyzed using the suitable statistical parameters. Continuous variables were presented as mean \pm SD, and categorical variables as absolute numbers & percentages while median and interquartile range was used for not normally distributed continuous data. Data were tested for statistical significance by using the chi-square test for categorical variables and the independent t test for difference in means for normally distributed continuous variables and non-parametric tests were applied to continuous data which are not normally distributed P value was considered significant when $p < 0.05^*$ and highly significant when $P < 0.001^{**}$

Ethical consideration:

Ethical approval was obtained from Ain Shams University Ethical Committee. In addition, administrative written approval was obtained from each refugee. Participants were educated about the study and the tools and their approval was collected.

Results:

Baseline socio-demographic characteristics of 94 respondents who agreed to participate in the study are presented in (table 1). Among them, 84 (89.4%) were males. Most of them 54 (58.1%) were single with mean age of 28.3 ± 8.5 (range 18-58) and the mean number of people / residence was 4.3 ± 2.2 . A large proportion of participants were highly educated 41 (44.6%). Nearly half of them 43 (50.1%) were working in skilled job and at shops. The income of 43 (65.2%) of participants was ranging between 1000- 3000 Egyptian pounds. Over half of the participants 49 (53.3%) were not satisfied with their job, but 57 (67.4%) were satisfied with the relationship with their boss.

A total of 53 (63.1%, 95% CI: 52.4–72.6%) of participants were having depressive symptoms at the time of data collection where most of them 53.8% suffer from moderate depressive symptoms. Seventy-seven participants (89.5%) had anxiety symptoms among whom 39 (45.3%) had severe anxiety symptoms (table 2).

Occurrence rates for depression symptoms were statistically indifferent across age, marital status, occupation, SES, and education ($p > 0.05$ for all). Uncommonly, they did not even vary with gender. However, Refugees who stayed longer outside their country showed higher rates of depressive symptoms than short stayed refugees (table 3).

Table 2: Occurrence rates of depression and anxiety symptoms among a sample of Working Syrian Refugees in Egypt (n =94)

		N	%
Beck Depression Inventory score	Mean ± SD (range)	14.49 ± 9.30(0 – 36)	
Depressive symptoms	No	31	36.9
	Yes	53	63.1
Severity of depressive symptoms	No	31	36.9
	Mild	17	20.2
	Moderate	19	22.6
	Severe	17	20.2
Taylor Anxiety scale	Mean ± SD (range)	26.99 ± 8.32 (6 – 43)	
Anxiety symptoms	No	9	10.5
	Yes	77	89.5
Severity of Anxiety symptoms	No	9	10.5
	Mild	8	9.3
	Moderate	22	25.6
	Severe	8	9.3
	Extreme	39	45.3

On the other hand, anxiety rates were not significantly associated with most of socio-demographic factors and occupational history except number of rooms in residence place ($P = .013$) and satisfaction with the relationship with boss ($P = .047$) as detailed in (table 4).

Discussion:

Depression is the third leading cause of disability-adjusted life years (DALYs) in all age categories for both genders, as per the World Health Organization (WHO).¹⁷ However, till now, only few studies had assessed the degree to which the Syrian crisis could affect the mental health of Syrian refugees settled in the Arab World.^{11,18} In contrast to Western world, where language, social, cultural, lacking the knowledge about existing treatment possibilities and physical distance to mental health care services; are considered the main barriers for seeking mental health care¹⁹⁻²¹, the main obstacle in Arab world for Syrian refugees to seek mental health service would be due to financial and economic reasons. This may hinder the

ability for early diagnosis and management of mental health problems among refugees. To the best of our knowledge, the current study would be the first reflection of Syrian refugees in Egypt, using screening tools to assess for the emergence of a depressive and/or anxiety symptoms since the outbreak of the Syrian civil war in a sample of working Syrian refugees. As we considered that having a stable employment status could act as a potential protective parameter that could alleviate depressive and /or anxiety symptoms among war migrants.

The current study, indicates that refugees from Syria that resettled in Egypt following the war that started in 2011 have 63 % occurrence rates for depressive symptoms. While the high prevalence of depression rates in our study; may reflect the truly surprisingly high levels of depressive symptoms encountered by this population, it may also be due to the fact that the BDI as a screening tool is too sensitive and not specific enough for a refugee population with recent exposure to war trauma.

Our results are slightly higher than the

Table 3: Association between depressive symptoms and socio-demographic and occupational factors among the study sample (n =94)

		Depressive symptoms		P		
		Absent N (%)	Present N (%)			
Age	Mean ± SD	27.2 ± 8.7	28.2 ± 8.2	.550 [¶]		
Gender	Male	26	83.9	49	92.5	.220
	Female	5	16.1	4	7.5	
Educational level	No formal education	2	6.5	7	13.7	.082
	Primary	5	16.1	7	13.7	
	Secondary	4	12.9	12	23.5	
	Technical education	1	3.2	8	15.7	
	High educational level	19	61.3	17	33.3	
Marital status	Single	19	61.3	31	59.6	.872
	Married	11	35.5	18	34.6	
	Divorced/widow	1	3.2	3	5.8	
Length of stay in Egypt (months)	Mean ± SD	3.4 ± 1.2	5.1 ± 3.0	.001*		
No of people/ residence	Mean ± SD	4.2 ± 1.8	4.0 ± 1.8	.533 [¶]		
Number of rooms/ residence	Mean ± SD	2.6 ± .7	2.4 ± .8	.119 [¶]		
Occupational level*(ILO, 2012)	Professionals	11	37.9	10	21.3	.220
	Skilled workers	15	51.7	25	53.2	
	Services and sales workers	3	10.3	12	25.5	
Monthly income	<1000	6	20.0	11	21.2	.984
	1000-3000	19	63.3	33	63.5	
	>3000	5	16.7	8	15.4	
Job satisfaction	Yes	14	45.2	23	44.2	.934
	No	17	54.8	29	55.8	
Satisfied with relationship with your boss	Yes	16	57.1	32	62.7	.626
	No	12	42.9	19	37.3	
Working hours/ day	Mean ± SD	10.4 ± 2.1	10.7 ± 2.7	.408 [¶]		
Working days/ week	Mean ± SD	6.1 ± 1.6	6.5 ± 1.3	.589 [¶]		

Chi square test was used for qualitative data. Independent t test was used for normally distributed data. (¶) Mann Whitney test was used for not normally distributed data. (*) statistically significant.

rates found in other studies on Syrian refugees, like a recent study in North Bekaa, Lebanon which showed a 43.9% depression rate at the time of evaluation using the WHO-UNHCR Assessment Schedule of Serious Symptoms in Humanitarian Settings (WASSS).¹⁸ And the study in Jordan, which revealed that (29.5%) of respondents had significant depressive symptoms using Beck Depression Inventory-II (BDI-II).²² The high rates of depressive symptoms in our sample compared to Syrian refugees

residing in other Arab countries, could be due to methodological differences. This also confirm our concerns about the need to address this issue. Other studies of different populations, with various cultures hosting countries yielded inconsistent results. One study on Iranian, Afghan, and Somali asylum seekers and refugees residing in the Netherlands reported depression prevalence of up to 68%.²⁰ While Laban *et al* study among

Table 4: Association between anxiety symptoms and socio-demographic and occupational factors among Working Syrian Refugees in Egypt (n =94)

		Anxiety symptoms				P
		Absent N (%)		Present N (%)		
Age	Mean ± SD	27.2 ± 8.0		28.3 ± 8.3		.822[¶]
Gender	Male	8	88.9	69	89.6	.947
	Female	1	11.1	8	10.4	
Education	No formal education	1	11.1	8	10.5	.191
	Primary	0	0.0	11	14.5	
	Secondary	1	11.1	16	21.1	
	Technical education	0	0.0	12	15.8	
	High educational level	7	77.8	29	38.2	
Marital status	Single	5	55.6	43	56.6	.771
	Married	3	33.3	29	38.2	
	Divorced/widow	1	11.1	4	5.3	
Length of stay in Egypt (months)	Mean ± SD	3.6 ± 1.4		4.6 ± 2.6		.619
Number of people/ residence	Mean ± SD	6.3 ± 4.2		4.2 ± 1.8		.190
Number of rooms/ residence	Mean ± SD	3.0 ± .7		2.5 ± .6		.030*
Occupational level*(ILO, 2012)	Professionals	2	28.6	17	23.9	.771
	Skilled workers	4	57.1	35	49.3	
	Services and sales workers	1	14.3	19	26.8	
	<1000	1	11.1	15	19.7	
Monthly income	1000-3000	5	55.6	51	67.1	.269
	>3000	3	33.3	10	13.2	
	Yes	6	66.7	31	40.8	
No	3	33.3	45	59.2		
Satisfied with relationship with your boss	Yes	8	88.9	47	64.4	.140^a
	No	1	11.1	26	35.6	
Working hours/ day	Mean ± SD	10.6 ± 1.6		11.1 ± 2.2		.482
Working days/ week	Mean ± SD	6.8 ± .4		6.6 ± 1.1		.356

Chi square test was used for qualitative data. Independent t test was used for normally distributed data.

(¶) Mann Whitney test was used for not normally distributed data. (*) statistically significant.

Iraqi asylum seekers in the Netherlands, reported 34% prevalence rate of depressive symptoms among their participants.²³ On the other hand, a large meta-analysis reported a very low prevalence rate of 5% for the 14 studies with at least 200 participants.²⁴ Several studies attributed these low rates to the lack of validity of the assessment tools, originally developed for Western population, when applied to refugees from underdeveloped countries, could lead to underestimated values.²⁵⁻²⁷

The high prevalence rates of anxiety symptoms in this study (89.5%). High rates of anxiety among the Syrian refugees could be due to their high exposure to war-related traumatic events during the Syrian conflict. But our study rates are higher than many others obtained from previous larger studies on refugees²⁸⁻³⁰, but these studies focused mainly on PTSD prevalence rates among refugees. Any comparison should, however, be done taking in consideration the different methodological aspects and the inclusion

criteria between studies. Similarly, the high rates among our study population may be due to the use of screening tools (Taylor Anxiety scale). The main aim of the screening tool is not to provide a diagnosis, but rather to aid in the referral to a special mental health unit, which may help in early diagnosis and management.

On studying the association of socio-demographic and employment correlates with depression and anxiety rates among our sample, we found that both depression and anxiety rates were not significantly correlated with most of socio-demographic factors and occupational history. But only refugees who stayed longer outside their country; showed higher rates of depressive symptoms than short stayed refugees. This finding is still unclear with contradictory results in various studies. Some researchers confirmed the idea of improved mental health of resettled refugee populations over time.³¹ Similarly, Krupinski & his colleagues³² noted that some Jewish refugees resettled in Australia had lower rates of mental health disorders, compared to other Eastern European refugee groups, despite their high level of exposure to traumatic events. And the study by Steel and colleagues³³ who found that that mental health problems decreased steadily over time Vietnamese refugees resettled in Australia Further. In line with our results, other studies showed greater psychological impairment over time. Like a cross-sectional study conducted in the US which denoted high prevalence rates of mental health disorders among Cambodian refugees 20 years after resettlement, with 62% for PTSD and 51 % for depression.³⁴ This highlight the impact of war related trauma on mental health and it continue to be problematic many years post resettlement in some refugee groups and in some cases, it may increase over time.²

Although, different studies highlighted that employment (access, type, security and match to skill levels), housing (conditions, area and future options) and education (in country of origin, including access to language learning where necessary) are considered the main indicators for the proper integration of refugees in their host country and hence their mental wellbeing.³⁵ None of other socio-demographic and employment factors were found to be significantly associated with depression and anxiety rates among our study sample. This may dente a good integration of Syrians among the Egyptian community.

Conclusion:

Our study shows that prevalence of mental ill health, in terms of anxiety and depression, is highly elevated among refugees from Syria. Our study has implications for both for government and non-government funded organizations who should take in consideration the need for development of assistance programs beyond the initial arrival period. On the basis of the above results, we highly recommend early screening, diagnosis and management of mental health problems among Syrians. Further studies are needed include additional factors, large size population and diagnostic tools. Prompt measures have to be taken to better identify and prevent mental health problems of this fragile population.

This study is considered a highlight for the psychological problems of Syrian refugees in Egypt. An essential problem due to their increasing number in the Egyptian community, and stressful economic burden. This work is considered of value because of the scarcity of this type of study within the Egyptian community.

Limitations

The current work used only simple tools to screen for depression & anxiety as a result of shortage of time due to the high flow rate of patients at outpatient clinic of the institute of psychiatry. Another study is recommended with bigger sample size and in depth tools to accurately assess their morbidities.

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