



Maternal Depression and Its Relation to Mental Health Problems in children

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Abstract:

This work aimed at determining the relation between maternal depression and emotional & behavioral problems in children aged 1 ½ to 5 y in the Egyptian pediatric population. This exploratory cross-sectional study was conducted at the pediatric outpatient clinic, at Beni- Suef University Hospital, over a period twenty months from September 2016 to May 2018. The total number of participants who were at the first visit was 164 participants, they completed all the questionnaires, but 20 participants didn't attend the next visit after two weeks from the first visit, so the total number that participated in the two visits was 143 participants .The current study reported that self-report screening for maternal depression is feasible in primary care settings. In our study the results showed that a large numbers of mothers have depression about 87.8 % of the participant mothers have depression in the first and the second interview. In conclusion, the current study revealed that maternal depression was significantly related to higher levels of internalizing, externalizing, and general psychopathology.

Keywords: maternal depression, emotional and behavioral problems in children,

1. Introduction:

In primary care settings, approximately 10% of preschoolers have serious mental health problems that interfere with their current functioning in family, childcare and peer contexts [1]. These problems are also associated with an elevated risk of future emotional, academic and relationship problems [2]. Mental health problems take a heavy toll on children and are the dominant cause of childhood disability. Within the last decades, mental disorders among children and adolescents have been recognized as a global public health concern as they have shown to be associated with suffering, functional impairment, exposure to stigma and discrimination, as well as enhanced risk of premature death [3]. Studies show that child mental health problems have long-term negative consequences, including lower educational attainment, lower wages, lower likelihood of employment and more crime [4]. According to global epidemiological data, 13–23% of children and youth suffer from a mental disorder [5]. A new updated classification manual of mental disorders, developed by professionals in the field, recognizes a range of conditions, such as Attention Deficit/Hyperactivity Disorder (ADHD),

Autism spectrum Disorder (ASD), Depressive Disorders, Anxiety disorders, Oppositional Defiant Disorder (ODD) and Disruptive, Impulse-Control, and Conduct Disorders [6]. There are many risk factors such as personal, biological and social factors that are positively associated with MHPs in preschool-aged children and increase the likelihood of negative mental health outcomes [5]. The association between maternal depression and various adverse child behavioral and emotional outcomes was reported in several studies [7]. It has been revealed that by middle childhood, children with depressed mothers have markedly elevated rates of mood disorders as well as other internalizing as well as externalizing problems and other difficulties in emotional development in comparison with children whose mothers aren't depressed. In a meta-analytic review in 2002, Connell & Goodman reported small influence sizes for the relations between depression in mothers and children's internalizing ($k = 78$; $r = .16$) and externalizing ($k = 79$; $r = .14$) problems, respectively. Nevertheless, substantial variability across studies was determined. This variability throws a beam of light on the need to extend work regarding the role of theory based and

research design features that significantly differ across studies. Knowledge of the strength of these associations will give an answer to the question concerning the degree to which maternal depression is responsible for the different adverse outcomes in children through explaining how much variance is and, conversely, is not, explained, after considering various levels of sampling error in studies of different sample sizes [8]. Findings from cross-sectional as well as longitudinal studies show that one of the most important risk factors for the development of maladaptive emotional and behavior outcomes in children is MHPs in a parent [9]. Within a prospective longitudinal study found that preschool-aged children of mentally ill parents displayed higher scores for behavior problems as compared to children of healthy parents [10]. In a meta-analysis of 193 studies revealed that maternal depression for example was moderately associated with higher levels of internalizing, externalizing, and general psychopathology in children [8]. Other work has focused on the heritability/genetics associated with early-onset depression [11] and, more specifically, a large body of literature has linked parental history of depression and related mental disorder to preschool-

onset depression in their children. For example, a recent epidemiologic study found 2 distinct pathways linking prenatal and postnatal maternal depression to adolescent depressive symptoms: one pathway through preschool irritability symptoms and another through preschool anxiety/depressive symptoms [12]. So, this work aimed at determining the relation between maternal depression and emotional & behavioral problems in children aged 1 ½ to 5 y in the Egyptian pediatric population.

2. Patients and Methods:

This exploratory cross-sectional study was conducted at the pediatric outpatient clinic, at Beni- Suef University Hospital, over a period twenty months from September 2016 to May 2018.

Study population

The study population was mothers of children having mental & behavioral problems and are served by the pediatric clinic at Faculty of Medicine, Beni- suef University and recorded in the service statistics at the facility level.

Sample size and Technique

The total number of participants who were at the first visit was 164 participants, they completed all the questionnaires, but 20 participants didn't attend the next visit after two weeks

from the first visit, so the total number that participated in the two visits was 143 participants

Inclusion criteria:

Mothers of children having mental & behavioral problems aged one and a half to five years old of both sexes.

Exclusion criteria:

- Mothers who refused to sign the informed written consent
- Mothers of children with apparent medical distress requiring urgent medical attention or constant parental attention.

Candidates were selected using systematic random sampling technique where every fifth participant was selected.

Data collection tools:

After inclusion, children were clinically evaluated and interviewed at two predefined dates on entering the study after two weeks using structured questionnaire form by the researcher. The data collection form gathered the following data using both closed and open-ended question format:

1--Brief socio-demographic form:

This included the mothers' age, marital status, educational level, job status child medical problems, parental age and educational background, and family history of psychiatric or mental health problems.

Time of the study: Study was performed over a period of twenty months from September 2016 to March 2018.

Ethical considerations:

The Medical Research Committee in the Psychiatry Department at Faculty of Medicine Beni- suef University revised and approved the study protocol. The data collection forms were approved by the study supervisors. Informed consent from each caregiver was obtained after proper orientation of them regarding the objectives of the study. Only those who agreed were included and those who refused were excluded from the study.

Statistical analysis:

Data was entered on the computer using "Microsoft Office Excel Software" program (2010) for windows. Data was then transferred to the Statistical Package of Social Science Software program, version 23 (IBM SPSS Statistics for Windows, Version 23.0. Armonk, NY: IBM Corp.) to be statistically analyzed.

Data was presented using range, mean and standard deviation for quantitative variables and frequency and percentage for qualitative ones. Comparison between groups was performed using

independent sample t-test or Mann Whitney test for quantitative variables and Chi square or Fisher's exact test for qualitative ones. Pearson correlation coefficients were calculated to assess the

association between different quantitative variables. P values less than 0.05 were considered statistically significant.

3. Results

1) Socio-demographic data of the participants

Table (1&2): Socio-demographic data of the participants

Table (1):

Participant Mother's Age	Range	Mean ± SD	Median (IQR)
Mothers' age	19 - 48	29.4 ± 5.3	30 (25 - 32)

Table (2):

Participant mothers Marital status	Total =164 (100%)
Married	161 (98.2)
Divorced	1 (0.6)
Widow	2 (1.2)
Educational level of the participant mothers	Total =164 (100%)
Illiterate	24 (14.6)
Read and write	28 (17.1)
Intermediate level	74 (45.1)
High educational level(university degree)	38 (23.2)
Mother Job Status	Total =164 (100%)
House wife	136 (83.4)
Working	27 (16.6)

Table (3) Mothers items:

	always	Sometimes	Always
1. Feeling down, depressed, hopeless	41 (25)	84 (51.2)	39 (23.8)
2. Feeling less interest or pleasure on doing things	41 (25)	110 (67.1)	13 (7.9)
3. feeling too stressed to enjoy with the child	68 (41.5)	69 (42.1)	27 (16.5)
4. get more frustrated with the child behaviour	117 (71.3)	28 (17.1)	19 (11.6)

Table (4) Mothers depression :

Mother depression	n=164
Not depressed (score =0)	20 (12.2%)
Depressed (score >1)	144 (87.8 %)

Table (5) CBCL Results:

Internalizing CBCL score	Total =164(100%)
Negative cases	149(90.9 %)
Positive cases	15 (9.1 %)
Externalizing CBCL score	Total =164(100%)
Negative cases	153(93.3 %)
Positive cases	11 (6.7%)
Total CBCL score	Total =164(100%)
Negative cases	150(91.5 %)
Positive cases	14 (8.5%)

4. Discussion:

The World Health Organization (WHO) reports that major depression is the number one cause of disability worldwide [13]. Depression is especially prevalent in women of childbearing years [14], resulting in millions of children throughout the world who have mothers struggling with

depression. The risks to children of maternal depression are well documented, yet little work has focused on how to reduce this risk. Shifting the standard of care from individual-focused treatment to family-focused prevention requires collaboration among researchers, practitioners, and policy

makers, as well as collaboration across professions, in order to provide targeted interventions in the multiple settings in which depressed mothers and their children seek out services [15]

In this study, socio-demographic of the participants, table (1) that the lower range of age of the participant mothers is low (19 years old) which is quite common in rural areas compared to the urban areas in Egypt in 2017 CAPMAS (2017)[16]. The mean age of the participant mothers is 29.4 years old and it is at a range between 19-48 years. In addition, table (2) showed that the majority of the parents are married up to 98.2% which is quite characteristic of rural societies where the divorce is very low. The percentage of married women in Beni-suef in 2017 was 85.4% [16], (CAMPAS (2017) and in Egypt for the same year was 85%. As we can see the percentage of married women in Beni-suef is very similar to the percentage on the national level but in our study the percentage is quite higher. This may be explained by several factors.

First of all, the majority of the attendants of governmental hospital in Egypt (and Beni-suef is not an exception) are of lower socio economic status who generally have lower percentage of divorce. Also the majority of the mothers in our sample are not employed and therefore financially dependent on their husbands and this understandably reduce the likelihood of divorce.

Also, the results of the current study revealed that the majority of the participant mothers are of low educational level (illiterate, read and write, intermediate level of education) 76.8% and only about 23.2% are of high educational level (university level), this is quite characteristic of the rural societies in Egypt. It is in agreement with the finding of the 2017 census (the percentage of university graduates among rural females is 5.6. [16],

Besides, the results of the present study proved that the unemployment of the participant mothers is very high as 83.4% are house wives and this is in line with the expected characteristics of the rural societies in Egypt. This percentage is much higher in comparison with the national average of 21.2% according to the findings of the Central Agency for Public Mobilization and Statistics [16]

Research also suggests that when parental psychopathology is treated the risk conferred to offspring is reduced. For example, children who have a parent with a depressive disorder are four times more likely to develop psychopathology [17]. When maternal depression is treated, children show reduced rates of psychopathology, improved academic performance, and enhanced overall functioning [18]. The reduction in child problem behaviors associated with the successful treatment of maternal depression

is maintained at 6 months, one, and four years follow up [18]. Thus, treating parental psychopathology, can promote mental health in the offspring.

Maternal depression is one of the many factors that may contribute to a mother's experience of a child's behavior as particularly difficult and depressed mothers may endorse more symptoms on a screen than may non depressed mothers [19].; In such cases, although further evaluation may reveal that the clinical disorder lies within the parent, the positive screen facilitates intervention that will enhance maternal mental health—a key component in early childhood mental health [20].

Research has demonstrated as shown in table (3&4) that self-report screening for maternal depression is feasible in primary care settings [21]. In our study the results show that a large numbers of mothers has depression about 87.8 % of the participant mothers have depression in the first and the second interview. These finding were in accordance with Goodman et al.,2011[8] who documented that Maternal depression was significantly related to higher levels of internalizing, externalizing, and general psychopathology.

Discussion of screening in primary care is not complete without acknowledgment of real world issues in implementation of screening. Screening must be considered only as one step in a coordinated system of

care. To be considered for use in primary care, screens must be easily available, must identify disorders that tend not to be identified otherwise but which are associated with significant adverse outcomes, and for which effective interventions exist [22].

In conclusion, children of depressed mothers are not only at risk for the development of psychopathology, but also for behavior problems. The risk of depression for children of depressed mothers is clear as they are up to 6 times more likely than other children to develop depression.

Of note, our study has some limitations; as it was conducted at one center and therefore the sample is not representative of all pediatric/primary care practices. Future studies should ideally be multicenter which include both urban and rural samples and ought to be conducted in both primary and secondary care settings from different geographical sites which will allow for comparisons to be made between those centers and if the results were replicated, this will significantly increase their generalizability and applicability in diverse settings across Egypt.

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