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# Psychiatric disorders among hospitalized women at Ibn Nafis hospital

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THESIS

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BY

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Born in June 29th, 1993 in Tantan

TO OBTAIN A MEDICAL DOCTORATE

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KEYWORDS

Hospitalized women – Schizophrenia – Bipolar I disorder  
Major depressive disorder

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سبحانك لا علم لنا إلا ما علمتنا

إنك أنت العليم الحكيم

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# ***HYPPOCRATIC OATH***

At the time of being admitted as a member of the medical profession:

I SOLEMNLY PLEDGE to dedicate my life to the service of humanity; THE HEALTH AND WELL BEING OF MY PATIENT will be my first consideration

I WILL RESPECT the autonomy and dignity of my patient

I WILL MAINTAIN the utmost respect for human life

I WILL NOT PERMIT considerations of age, disease or disability, creed, ethnic origin, gender, nationality, political affiliation, race, sexual orientation, social standing or any other factor to intervene between my duty and my patient;

I WILL RESPECT the secrets that are confided in me, even after the patient has died;

I WILL PRACTICE my profession with conscience and dignity and in accordance with good medical practice;

I WILL FOSTER the honour and noble traditions of the medical profession;

I WILL GIVE to my teachers, colleagues, and students the respect and gratitude that is their due;

I WILL SHARE my medical knowledge for the benefit of the patient and the advancement of healthcare;

I WILL ATTEND TO my own health, well being, and abilities in order to provide care of the highest standard;

I WILL NOT USE my medical knowledge to violate human rights and civil liberties, even under threat;

I MAKE THESE PROMISES solemnly, freely and upon my honour.

**Declaration of Geneva, 1948**



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**LISTE ARRÊTÉE LE 22/04/2019**



**DEDICATIONS**

*To my warrior father*  
**ELFELLAH Hamdane**

*You supported me unconditionally, and you continue to do so, in whatever path I took during my very long academic journey*

*You relentlessly encouraged me to strive for excellence and you taught me that the sky is the limit for a person's dreams*

*Whatever I achieve or hope to accomplish in the future, I know none of it is possible without your love and endless support and I hope that someday I'll make you proud...*

*Because of all the previously cited, I put you first in my list of dedications. Plus, I kind of had to too knowing that you are going to be reading this manuscript cover to cover. I know because that's how dedicated you are to following my academic journey step by step*

*To my wonder-woman mother*  
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*You are the best human being I know and the best mother I could have hoped for With your strong and kind soul, you taught me to trust Allah, believe in hard work and that so much can be accomplished with little.*

*You have always been the rock of stability in my life. You supported me with your endless love and wisdom and found the right words to lift up my spirits I can't thank you enough for putting up with my constant complaining, for being nothing but supportive of my choices and for having enough faith for both of us I dedicate this work to you, for your interest in it, as in all my ventures, was neverless than mine*

*To my little sister Khaoula*

*You are the only gift I've been given these past long years, thank you for sticking by and helping me when in need. I hope to see you successful, shining, and happy in your life*

*You have granted me the gift of sisterhood, eternal love and pure compassion you are the joy when I feel blue*

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*I hope to join your field one day, and work alongside you as a fellow psychiatrist colleague.*

*Your position in the family surpasses everyone else's, we cherish you and respect your altruism and endless support.*

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*To my dear grandmother, aunts and uncles  
Thank you for your love, encouragements and prayers*

*To the memory of my grand fathers and paternal grandmother  
May ALLAH rest your souls in peace and grant you the best place*

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*Thank you for being there to correct me when I'm wrong, to help give my work the value it deserves. I am highly grateful for your time, many advices and sharing*

*A thousand thank you*

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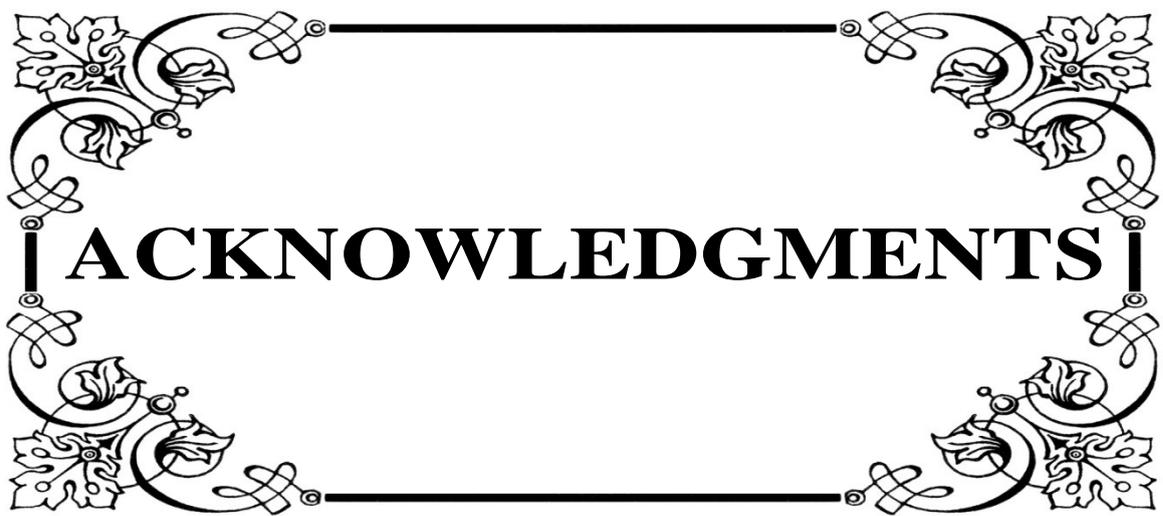
*A resident at the plastic surgery department, Arrazi hospital*

*Thank you for every message, email and call you took time to answer, to all the guidance and  
advices.*

*Your kindness and availability helped me progressing so good so fast. For that I'm thankful*

*To all those who touched my life and inspired me  
to be who I'm today, who I failed to mention*

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*To our master and thesis judge Associate Professor MANOUDI Fatiha Professor of psychiatry*

*Thank you for honoring us with your presence and your interest in our thesis topic. Thank you for your participation in the development of this work, Allow me to express my admiration for your professional qualities. Please accept the expression of my high esteem, consideration and deep respect*

*To our master and thesis judge Associate Professor EL IDRISSI SLITINE Nadia Professor of neonatology*

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*To our master and thesis judge Associate Professor BENALI Amin Professor of psychiatry  
Thank you for honoring us with your presence and your interest in our thesis topic. Thank you  
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admiration for your professional qualities. Please accept the expression of my high esteem,  
consideration and deep respect*

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*Your kindness and availability helped me progressing fast. For that I'm deeply thankful*

*To all the Psychiatry department team*

*Thank you for your undeniable efforts and contribution*

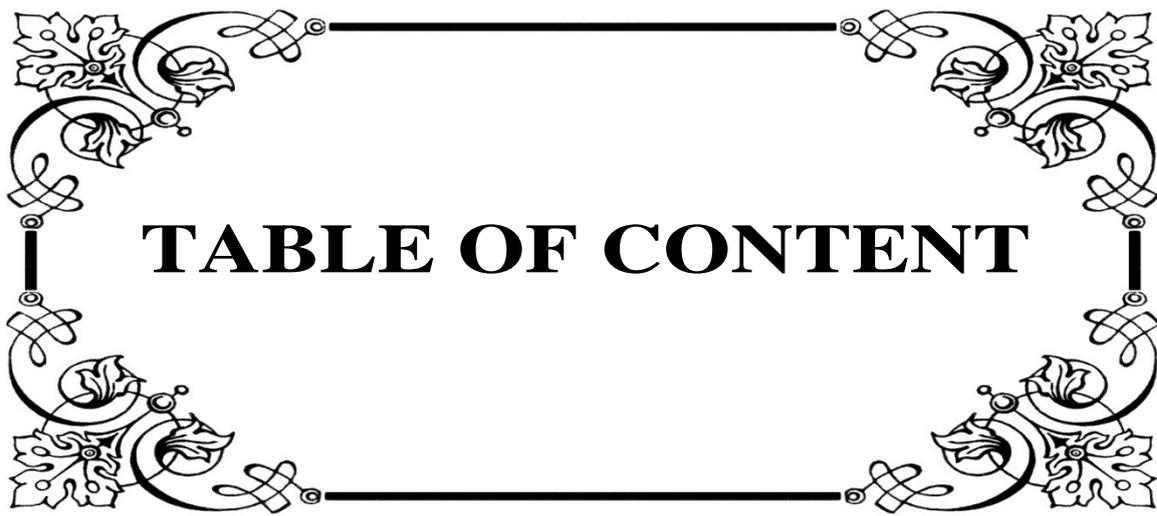
*And to all those who, in a way or another, contributed to the elaboration of this  
work. Find here the expression of my endless gratitude.*



**ABBREVIATIONS**

## Abbreviations list:

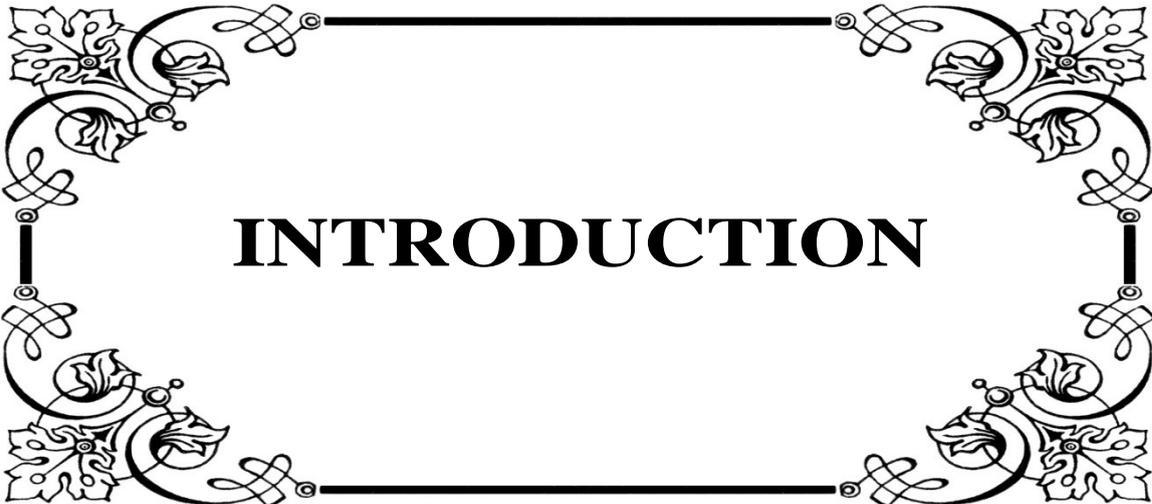
<b>DSM</b>	:	Diagnostic and statistical manual of mental disorders
<b>HAM-D</b>	:	Hamilton depression rating scale
<b>WHO</b>	:	World health organisation
<b>ECT</b>	:	Electric convulsive therapy
<b>BID</b>	:	Bipolar I disorder
<b>MDD</b>	:	Major depressive disorder
<b>CBT</b>	:	Cognitive behavioral therapy
<b>SSRI</b>	:	Selective serotonin reuptake inhibitor
<b>FGA</b>	:	First-generation antipsychotic
<b>SGA</b>	:	Second-generation antipsychotic
<b>PT</b>	:	Personal therapy
<b>MBCT</b>	:	Mindfulness-based cognitive therapy
<b>CRT</b>	:	cognitive remediation therapy
<b>BPD</b>	:	Brief psychotic disorder
<b>GAD</b>	:	General anxiety disorder
<b>MBCT</b>	:	Mindfulness-based cognitive therapy
<b>TMS</b>	:	Transcranial magnetic stimulation
<b>ALOS</b>	:	Average length of stay
<b>OR</b>	:	Occupancy rate
<b>RI</b>	:	Rotation interval
<b>LOS</b>	:	Length of stay



**TABLE OF CONTENT**

<b>INTRODUCTION</b>	<b>01</b>
<b>PATIENTS AND METHODS</b>	<b>04</b>
I. Study type	05
II. The course of the investigation	05
III. Ethical considerations	05
IV. Statistical method	06
V. The questionnaire	06
<b>RESULTS</b>	<b>11</b>
I. Descriptive study	12
1. Demographic data	12
2. Family history	22
3. Personal history	23
4. Clinical data regarding mental disorders and severity rating scales	30
<b>DISCUSSION</b>	<b>43</b>
I. Psychiatry in the late XX history:	44
II. Mental disorders and stigma:	45
III. Appearing normal:	45
IV. Women and gender differences	46
V. Discussion of our results:	61
1. Descriptive analysis	61
1.1 Sociodemographic characteristics of hospitalized women	61
1.2 Family history	67
1.3 Juridical history	69
1.4 Toxic history	71
1.5 Psychiatric history	71

1.6 Schizophrenia spectrum and other psychotic disorders	76
1.7 Bipolar disorders	78
1.8 Major depressive disorder	79
<b>VI. Limitations of our study:</b>	<b>82</b>
<b>PRISE EN CHARGE</b>	<b>83</b>
I. Pharmacological treatments : Canadian journal of psychiatry guidelines	84
II. Psychotherapies	91
III. Recommendations	101
<b>CONCLUSION</b>	<b>102</b>
<b>ANNEXES</b>	<b>104</b>
<b>ABSTRACTS</b>	<b>128</b>
<b>BIBLIOGRAPHY</b>	<b>135</b>



**INTRODUCTION**

Within mental health services, there are fewer women than men with severe mental disorders, and there is evidence that their needs are relatively neglected resulting in specific deleterious effects. In research, as in services, the abilities of women with serious mental health problems appear to be underestimated, and there is almost a total absence of research into the views and experiences of such women. For example, such women are particularly vulnerable to sexual exploitation and violence, sexually transmitted diseases, unwanted pregnancies and loss of custody of children. Within general dearth of literature concerning the problems and needs of women with mental illness, there is almost complete absence of attention into the perspectives of the women themselves. Like their male counterparts, such women are often considered too cognitively and emotionally impaired to be able to meaningfully express their views. Women want more women only space, a choice of skillful staff, an interactive environment, privacy and access to someone to talk to as an adult. Many mental disorders disrupt the peaceful lives of women, operating in different presentations: bipolar disorders, schizophrenia and other psychoses, depression, dementia and others. [1]

The statistics are expanding worldwide. 60 million are diagnosed with bipolar disorders, 23 million with schizophrenia and over 50 million with dementia. Depression is considered women's number one morbidity (after cardio-vascular disorders), and these numbers consolidate the hypotheses of sex differences regarding mental disorders, specifically psychotic disorders, anxiety and substance abuse. In the twenty-first century, where health goals have shifted to increasing disability-free years of life rather than only to increasing life expectancy, mental disorders become more considerable, representing 12% of the global burden of disease, a number that is anticipated to rise to 15% by 2020. [2]

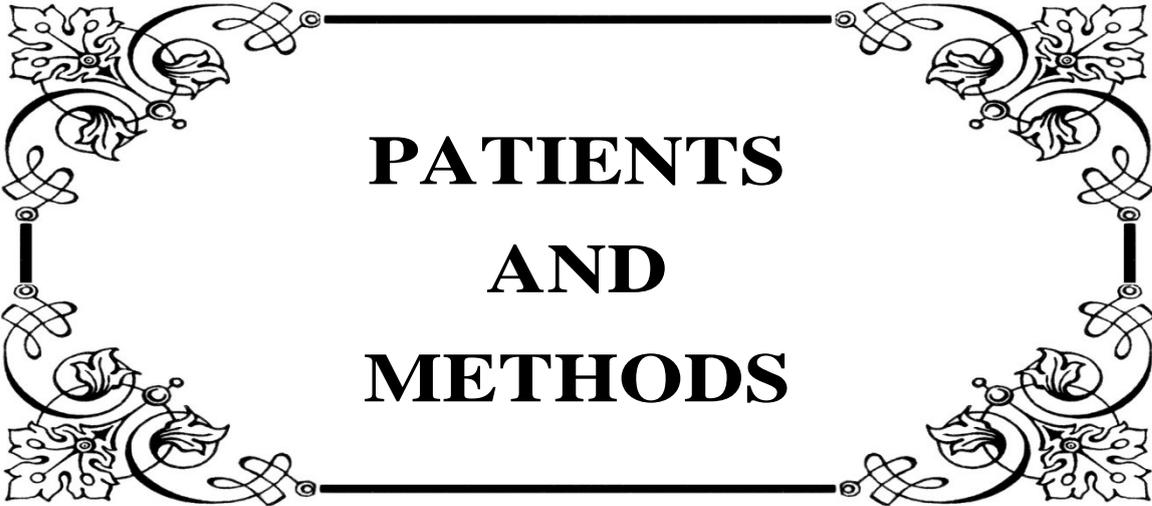
The increasing importance is combined by the fact that the weight of burden from these disorders has been increasing over the past decades. Moreover, although mental disorders are not listed as underlying causes of death on death certificates, they are associated with marked

excess mortality, from chronic diseases. Thus, their impact on global health tends to be underestimated. [3]

Two points deserve special emphasis for the future: health systems need to better respond to the needs of mentally ill women, this concerns not only the treatment gap but also other interventions needed for the people affected, and research is needed to best tailor such interventions in a cost effective and culturally acceptable manner. [3]

**Aims of the study:**

- To determine the socio-demographic profiles of our inpatients.
- To determine the prevalence of mental disorders among hospitalized patients interviewed at Ibn Nafis hospital.
- To assess the severity of the disorders using multiple scales.



**PATIENTS  
AND  
METHODS**

## I. Study type and patients:

A cross-sectional descriptive study concerning a sample of 70 female inpatient hospitalized at the psychiatry department IBN NAFIS in Marrakech, during the period: January 2019 and first June 2019.

### 1. Inclusion criteria:

- Women's consent after explaining the aim of our study.
- Female inpatients hospitalized at IBN NAFIS hospital.

### 2. Exclusion criteria:

- Lack of consent.
- Women admitted at the psychiatric emergencies but released the day after.
- Aggressive or sedated women who are unable to maintain the evaluation

## II. The course of the investigation:

Data collection was done following an interview with hospitalized women at the psychiatry department IBN NAFIS following their mental disorders during a six months period, inpatients were interrogated after their consent and explanation of the study's aim, by third and fourth year psychiatry residents.

## III. Ethical considerations:

Recruited patients were informed of the aim of the study, only adherent patients after free consent were recruited.

Data collection was executed anonymously, respecting patients' confidentiality.

#### IV. Statistical method:

- The data are recorded in a questionnaire sheet
- Descriptive statistics are the primary focus of this analysis. Numeric data are presented by the following descriptive statistics as most appropriate: mean, median, standard deviation, range. Categorical data we represented by frequency tables: count and percentage.
- Descriptive data are analyzed using Microsoft Excel2016.

#### V. The questionnaire:

A questionnaire (see annex 1) was elaborated at psychiatry department (Ibn nafis hospital). The questions were written in English and explained to inpatients in Arabic dialectal. The questionnaire is divided into 3 rubrics:

1<sup>st</sup> rubric: informs on patients' socio-demographic characteristics.

2nd rubric: divided into 5 chapters, every chapter contains only the disorders that lead to hospitalization at an advanced stage.

- First chapter: schizophrenia spectrum and other psychotic disorders. It gathers the following subtype disorders.
  1. Delusional disorder.
  2. Brief psychotic disorder.
  3. Schizophreniform disorder.
  4. Schizophrenia.
  5. Schizoaffective disorder.
  6. Substance-medication induced psychotic disorder.

- 2<sup>nd</sup> chapter: bipolar and related disorders, it gathers 3 subtypes.
  1. Bipolar I disorder.
  2. Bipolar II disorder.
  3. Substance–medication induced bipolar and related disorder.
- 3<sup>rd</sup> chapter: depressive disorders, it gathers 4 subtypes.
  1. Major depressive disorder.
  2. Persistent depressive disorder (Dysthymia).
  3. Substance–medication induced depressive disorder.
  4. Depressive disorder due to another medical condition.
- Fourth chapter: anxiety disorders, it includes:
  1. Panic disorder.
  2. Generalized anxiety disorder.
  3. Substance–medication induced anxiety disorder.
- Fifth chapter: feeding and eating disorders, includes:
  1. Anorexia nervosa.
  2. Bulimia nervosa.

Their severity rating scales are included due to the simple method of assessing it.

## **1. Positive and negative symptom scale PANSS: (annex 2)**

The positive and negative syndrome scale was developed in order to provide a well-defined instrument to specifically assess the positive and negative symptoms of schizophrenia as well as general psychopathology, PANSS was elaborated at first for (BPRS) brief psychiatric rating

scale and (PRS) psychopathology rating scale. Validated after so many studies (Kay et al.1987) and proved strong psychometric properties in terms of reliability and sensitivity. [4] [5]

Formed of 30 well-matched items, each one has a specific definition, so as detailed criteria corresponding to 7 psychopathological levels of increased severity. The 30 items are divided into 3 subscales.

➤ Positive scale:

Includes 7 items corresponding to a positive syndrome: (delusions, hallucinations, conceptual disorganization, hospitality ...)

➤ Negative scale:

Includes also 7 items corresponding to a negative syndrome (blunted affect, poor rapport, difficulty in abstract thinking, stereotyped thinking ...)

➤ General psychopathology scale:

Includes 16 items such (anxiety, guilt feeling, disorientation, poor attention, uncooperativeness...).

Seven points represent increasing levels of psychopathology as follows:

- 1 Absent
- 2 Minimal
- 3 Mild
- 4 Moderate
- 5 Moderate severe
- 6 Severe
- 7 Extreme

The total score corresponds to the sum of scores of previous subscales: positive score + negative score + general psychopathology score.

A high total score suggests a great severity of the disorder.

## **2. Hamilton anxiety rating scale (HAM-A): (annex3)**

The Hamilton anxiety rating scale is a clinician-based questionnaire, it consists of 14 symptom-defined elements, and caters for both psychological and somatic symptoms, comprising anxious mood, tension (including startle response, fatigability...), fears (including dark, strangers...), insomnia, cardiovascular, respiratory and genitourinary symptoms. Each item is scored on a basic numeric scoring of 0 (not present) to 4 (severe):

- >17/56 is taken to indicate mild anxiety.
- 25-30 is considered moderate-severe. [6] [7]

## **3. Hamilton depression rating scale (HAM-D): (annex 4)**

Developed in the late 1950s to assess the effectiveness of the first generation of antidepressants, the scale quickly became the standard measure of depression severity for clinical trials of antidepressants. The Hamilton depression scale retained his function and is now the most commonly used measure of depression. [8] [9]

The scale involves 17 items, the sum of the score indicates the severity of depression:

- 0 – 7: normal
- 8 – 13: mild depression
- 14 –18: moderate depression
- 19 –22: severe depression
- >22: very severe depression

#### 4. Fagerstrom Test for Nicotine Dependence (FTND): (ANNEX 5)

The Fagerström Test for Nicotine Dependence is a standard instrument for assessing the intensity of physical addiction to nicotine, the test was designed by Heatherton et al, 1991.

In scoring the Fagerström Test for Nicotine Dependence, yes/no items are scored from 0 to 1 and multiple-choice items are scored from 0 to 3. The items are summed to yield a total score of 0–10. The higher the total Fagerström score, the more intense is the patient's physical dependence on nicotine. If one of the six items is missing, the FTND score is calculated with the missing item calculated as if more than one item is missing, the FTND score is not calculated and coded as missing. A score of: [10]

- 1–2: low dependence
- 3–4: low to moderate dependence
- 5–7: moderate dependence
- 8+: high dependence



**RESULTS**

## I. Descriptive study:

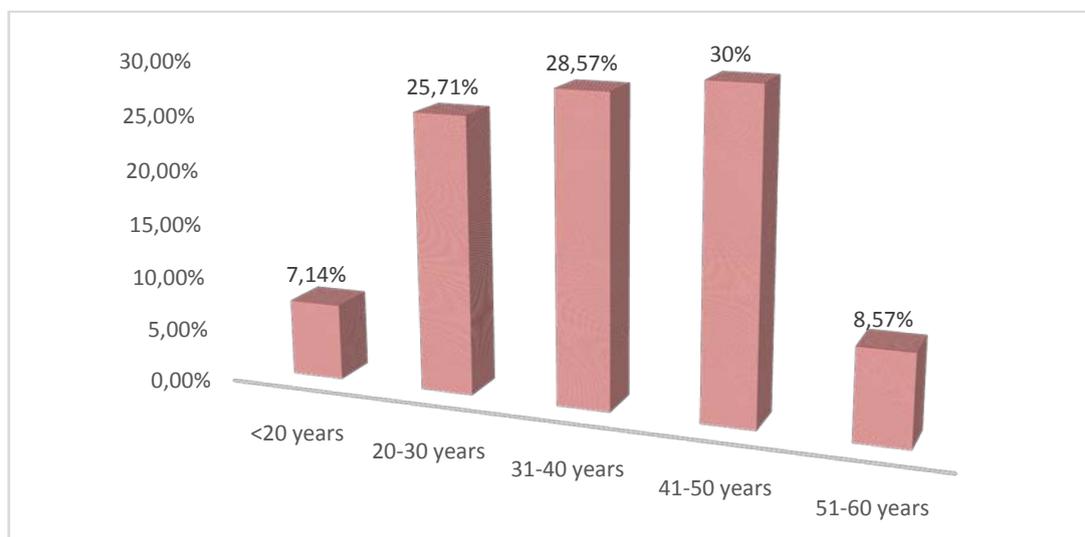
### 1. Demographic data :

#### 1.1 Age.

The average age in our case series is 37,61 years, with a minimum age of 18 years and a maximum age of 60 years. The age group between 41 and 50 years is the most represented in our sample (30%) (Figure 1). The detailed distribution of our patients by their age is presented in table I.

**Table I : Age distribution of our patients**

Age group in years	Frequency	Percentage
< 20	5	7,14%
20 – 30	18	25,71%
31 – 40	20	28,57%
41 – 50	21	<b>30%</b>
51 – 60	6	8,57%



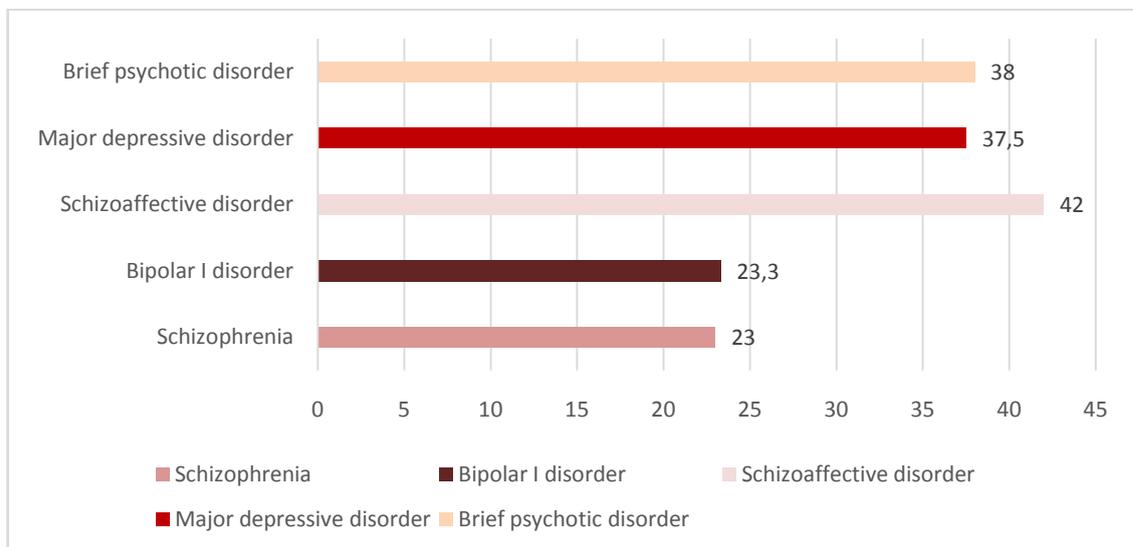
**Figure 1: Age distribution of our patients**

## Psychiatric disorders among hospitalized women at Ibn Nafis Hospital

Patients with schizoaffective disorder have the highest average age (42 years) while the lowest one, 23 years, found among schizophrenia patients (figure2).

**Table II: mental disorder specific Age distribution**

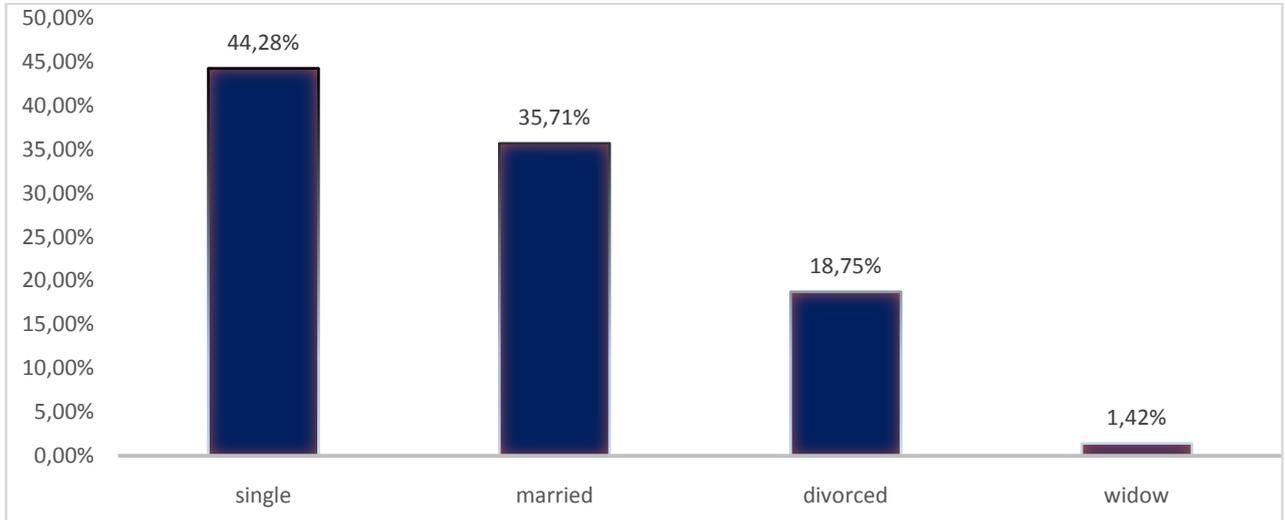
Psychiatric disorders	Average age	Age extremities
Schizophrenia	23	18 – 60
Bipolar I disorder	23,3	19 – 41
Schizoaffective disorder	42	24 – 58
Major depressive disorder	37,5	23 – 53
Brief psychotic disorder	38	19 – 60



**Figure 2: Mental disorder specific age distribution**

**1.2 Marital status.**

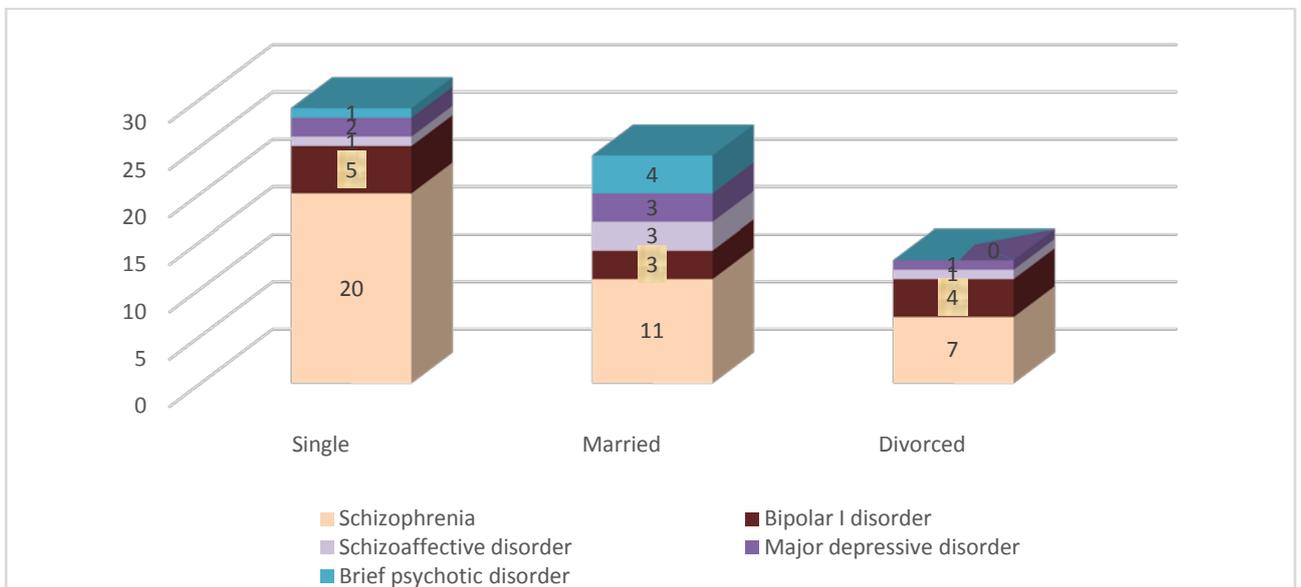
The majority of patients in our case series (31 women) are single with a percentage of 44,28%. (figure3)



**Figure3: Marital status distribution**

\*Being single predominates in schizophrenia and bipolar I disorders.

\*Married women with brief psychotic disorder predominate other marital status (figure4).

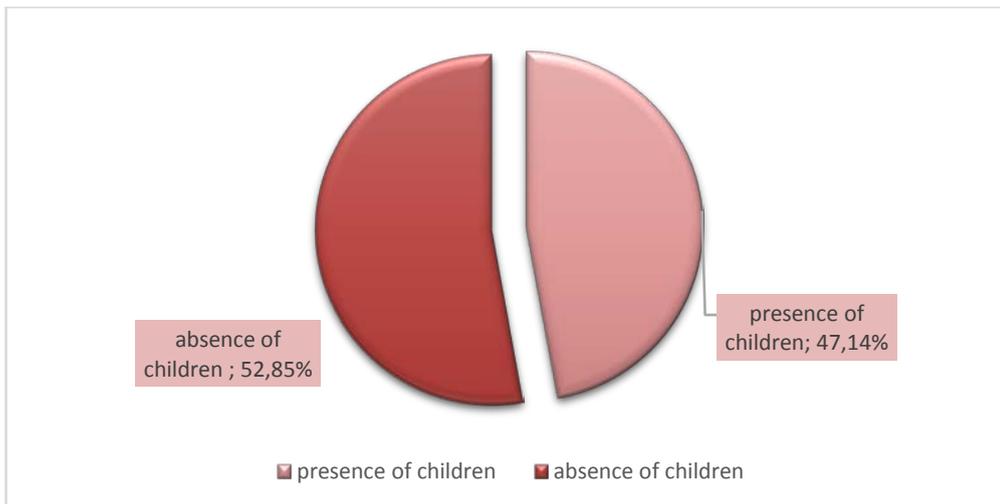


**Figure 4: Mental disorder specific distribution of marital status**

1.3 Presence of children.

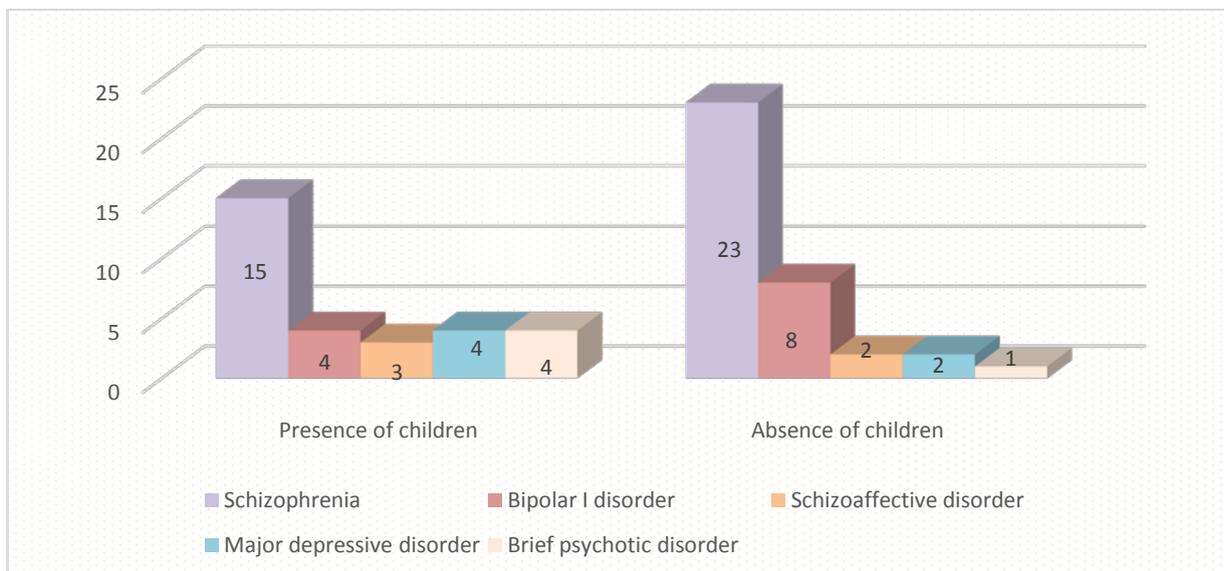
The majority of inpatients in our case series have no children 53%. (figure5)

5,71% of women in our case are single mothers with **children out of the wedding circle.** Beta HCG and STIs tests are compulsory at admission. So as CT-scans.



**Figure 5: Presence or not of children**

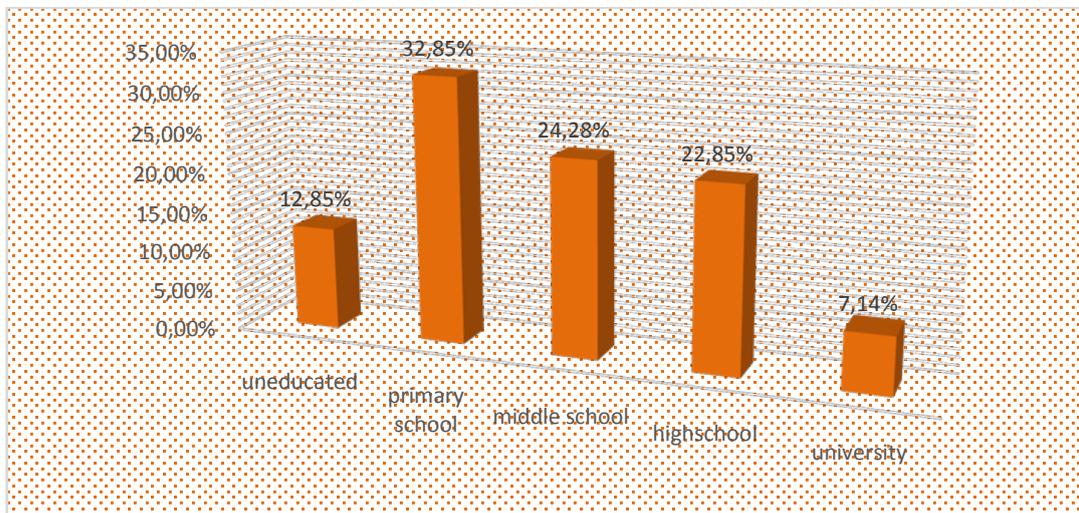
Schizophrenia and bipolar I disorder inpatients are more likely to have no children unlike women with MDD or BPD. (figure6)



**Figure 6: Mental disorder specific distribution of the presence or not of children**

1.4 Educational level

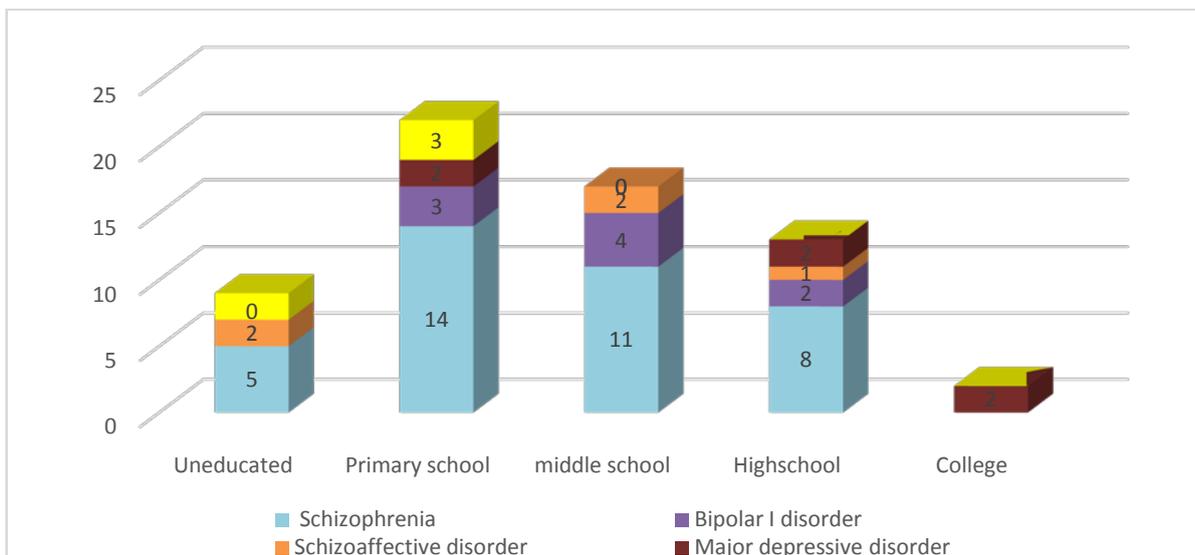
The majority of inpatients in our case series 32,85% dropped out of primary school. (figure7)



**Figure 7: The distribution of patients according to educational level.**

Regardless of specific mental disorders, the majority of inpatients dropped out of primary school.

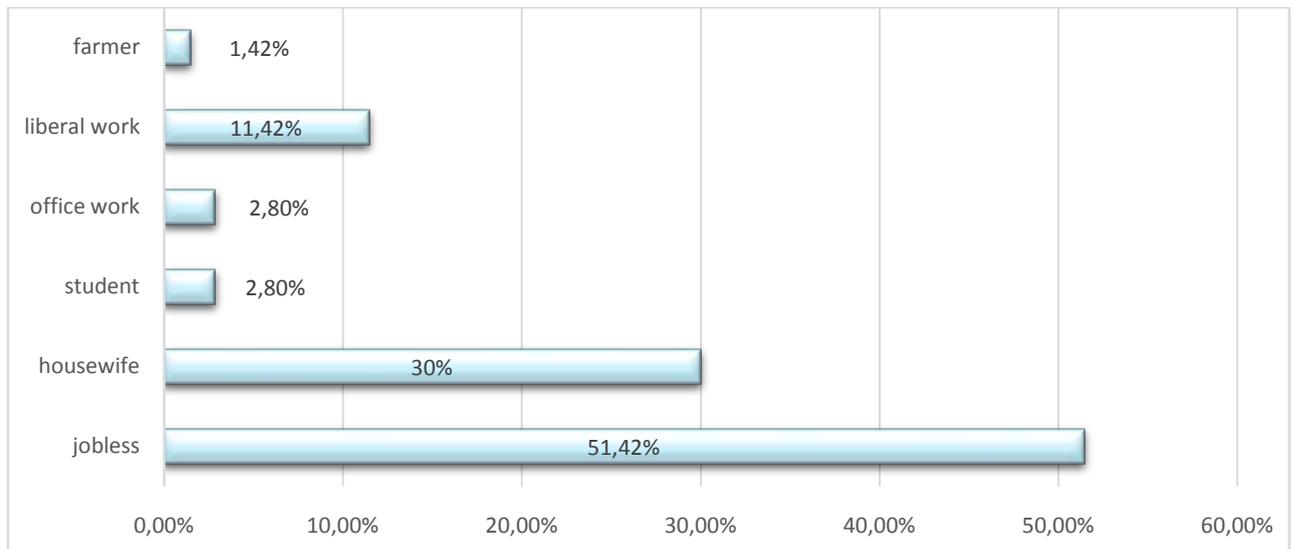
Only third of women with major depressive disorder attended college. (figure8)



**Figure 8: The distribution of patients according to their educational level**

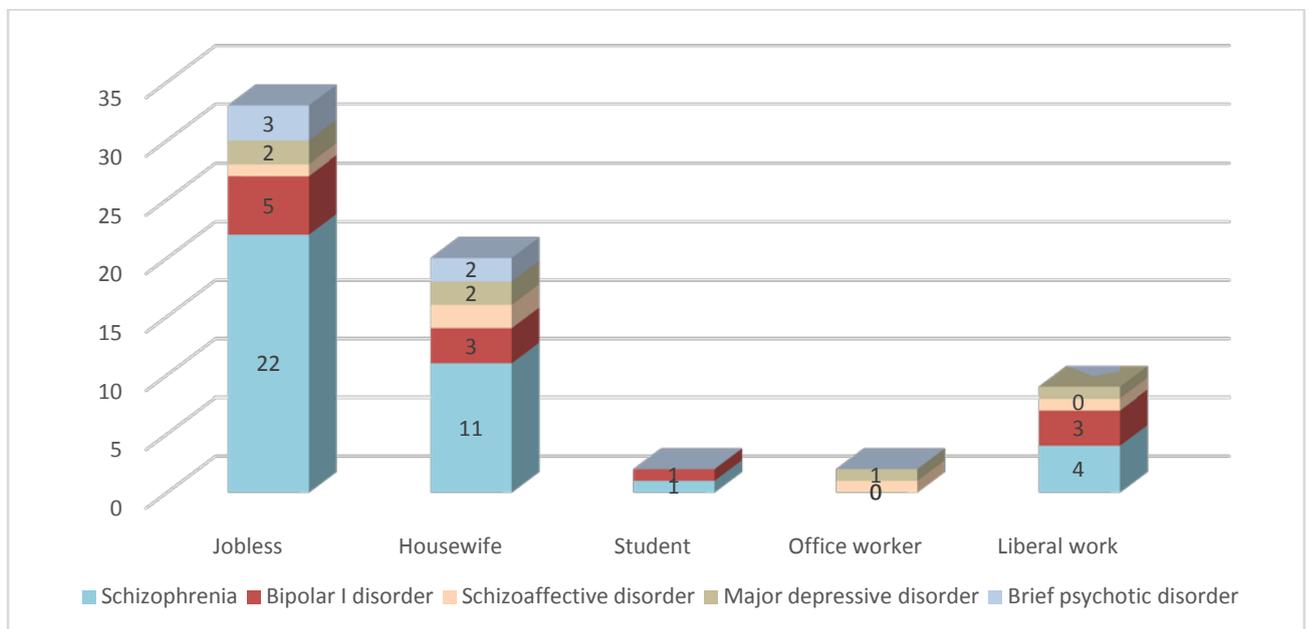
**1.5 Profession.**

51,42% of our patients are jobless (n=36). (figure 9)



**Figure 9: The distribution of patients according to their profession.**

Regardless of specific mental disorder, the majority of women in our case series are jobless 51,4%, followed by housewives in the second position 30%. (figure10)

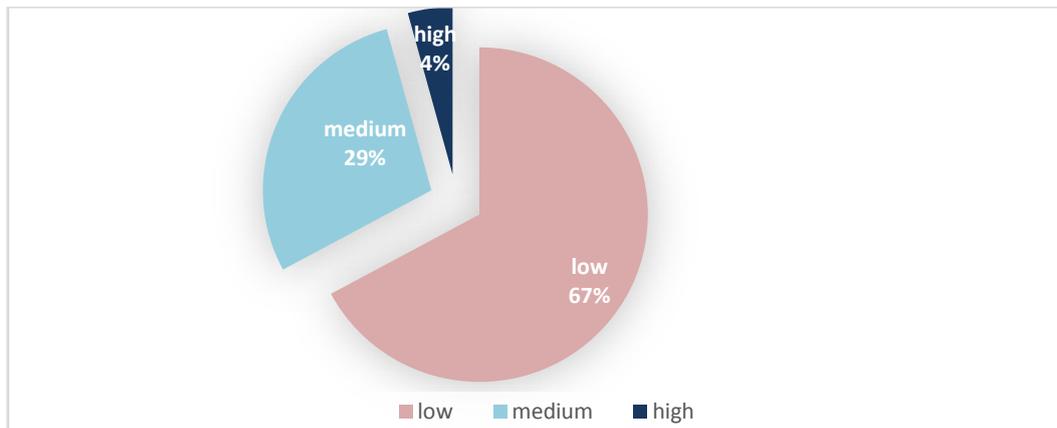


**Figure 10: Mental disorder specific distribution according to their profession.**

**1.6 Economical level.**

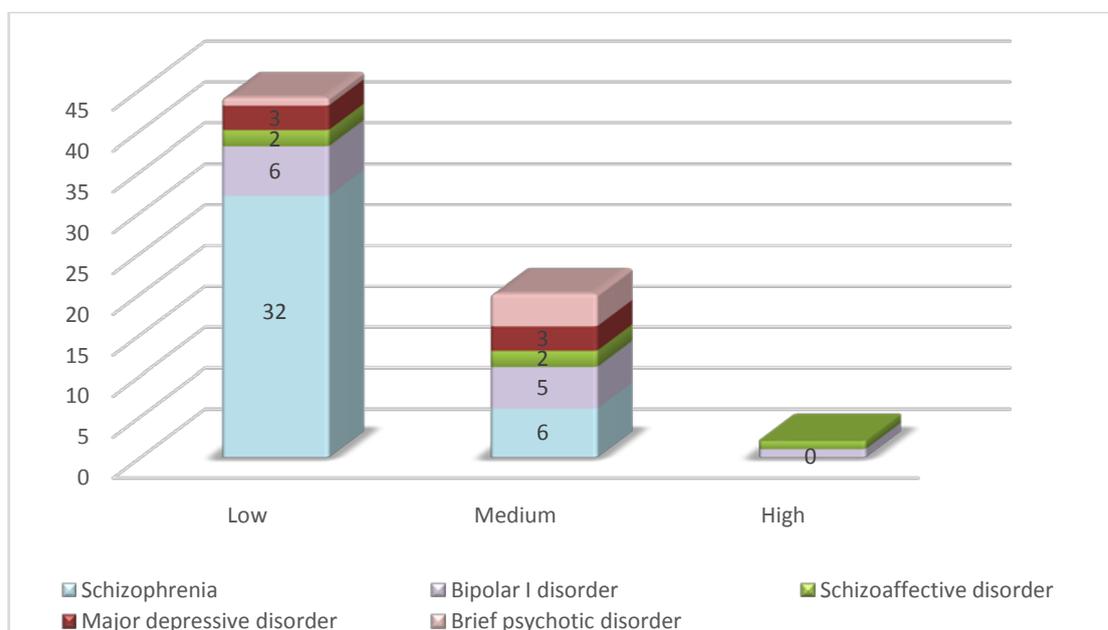
The 2/3 of patients (n=70, say 67,4%) have a low economical level. (figure11)

To mention, a low level was determined with an income that doesn't exceed 2000dh a month.



**Figure11: the distribution of patients according to the economical level.**

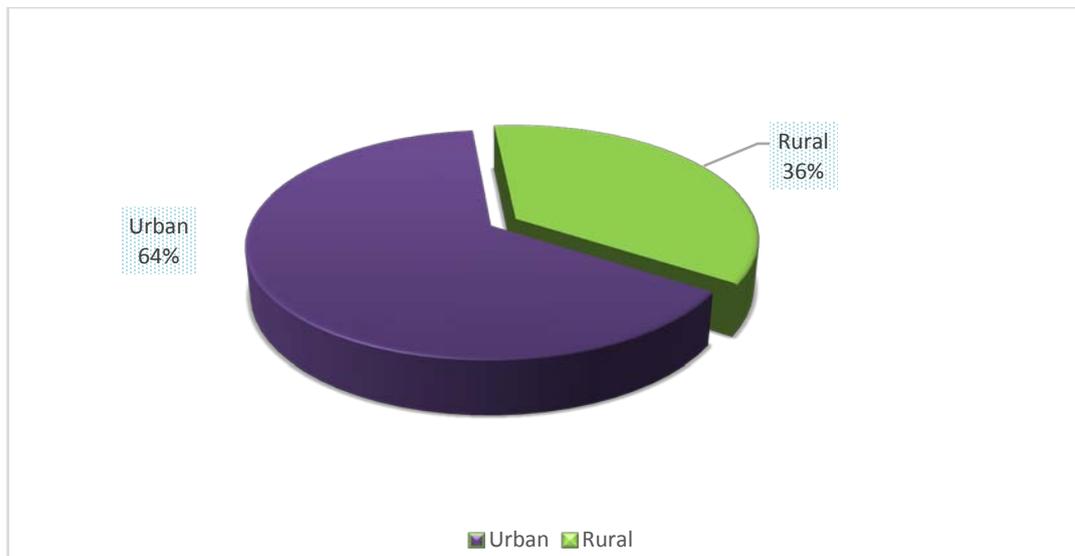
Low economical level predominates in all the disorders except for Brief psychotic disorder where 2\3 of women have a medium economical level (2000dh – 5000dh). (figure12)



**Figure 12: Mental disorder specific distribution of patients according to the economical level**

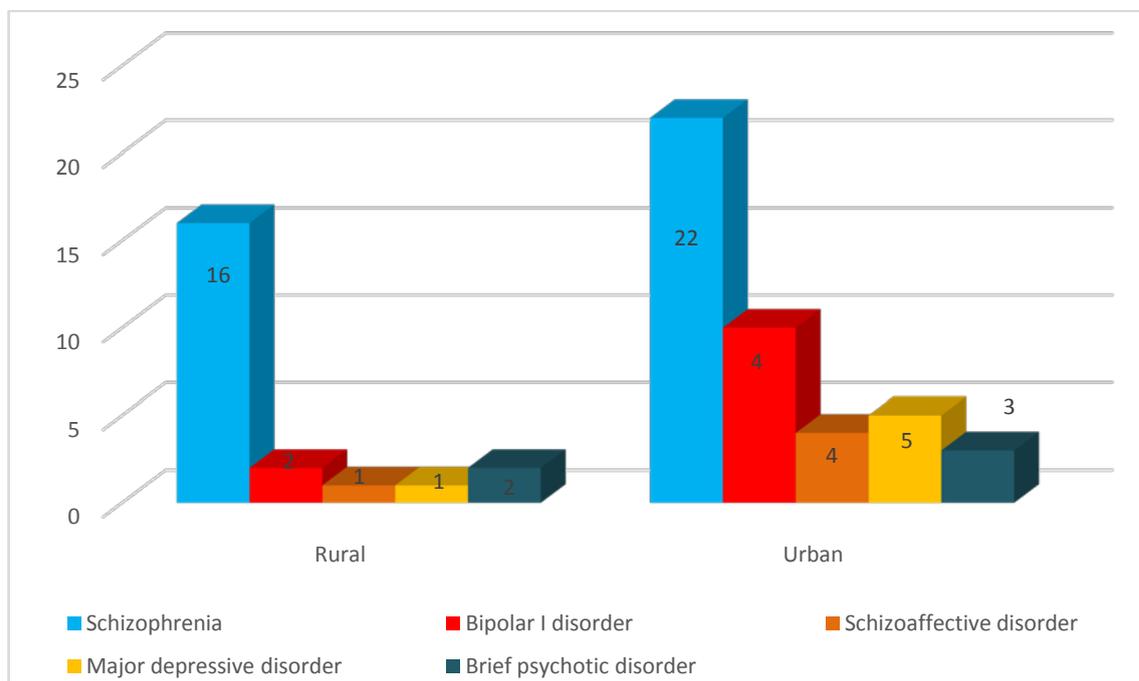
1.7 Origin.

The 2/3 of patients (n=45) are from the urban region. (Figure 13)



**Figure 13: The distribution of patients according to their origin**

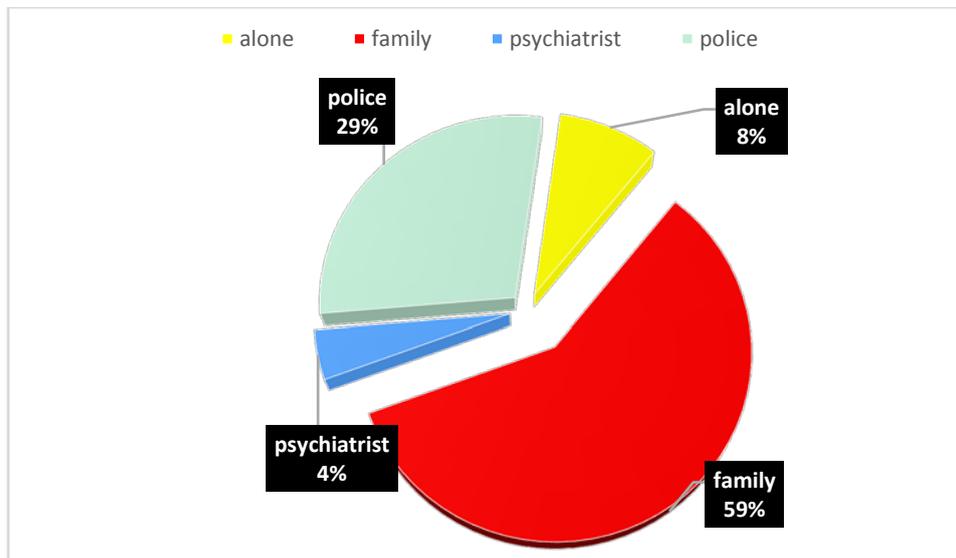
Regardless of admitted mental disorders, the urban area predominates. (Figure 14)



**Figure 14: Mental disorder specific distribution of patients according to their origin.**

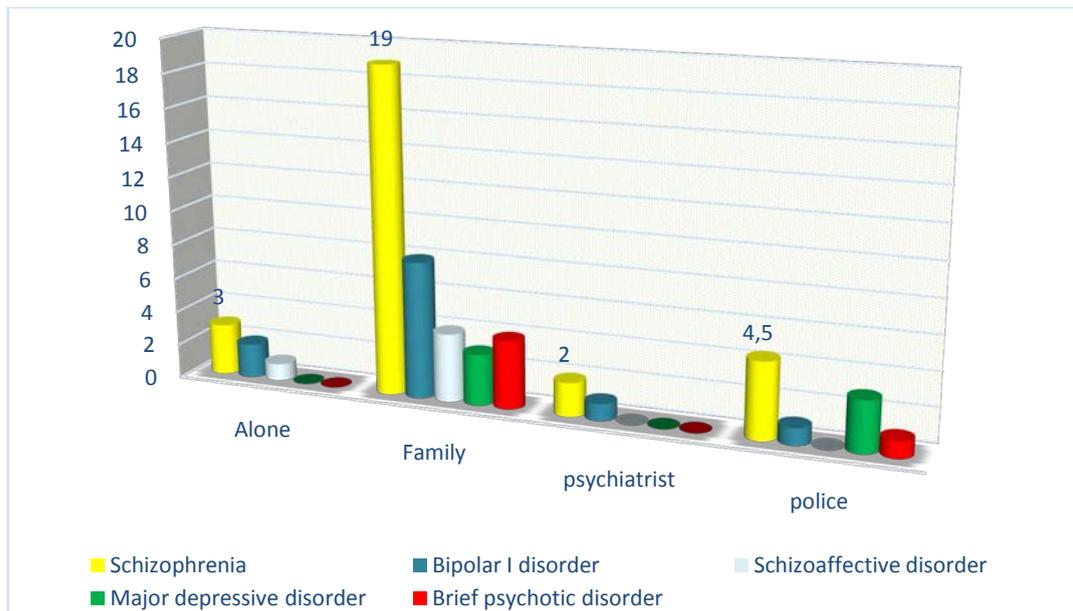
1.8 Patients addressed by.

(59%) of our patients were addressed by their families (n=41). (Figure 15)



**Figure 15: The distribution of patients according to who brought them to the hospital.**

The majority of women in our case (mental disorder specific) are brought to the hospital by their families regardless of their mental disorder. (figure16)



**Figure 16: The specific distribution of patients according to who brought them to the hospital**

Overall table I: Socio-demographic characteristics of our case series.

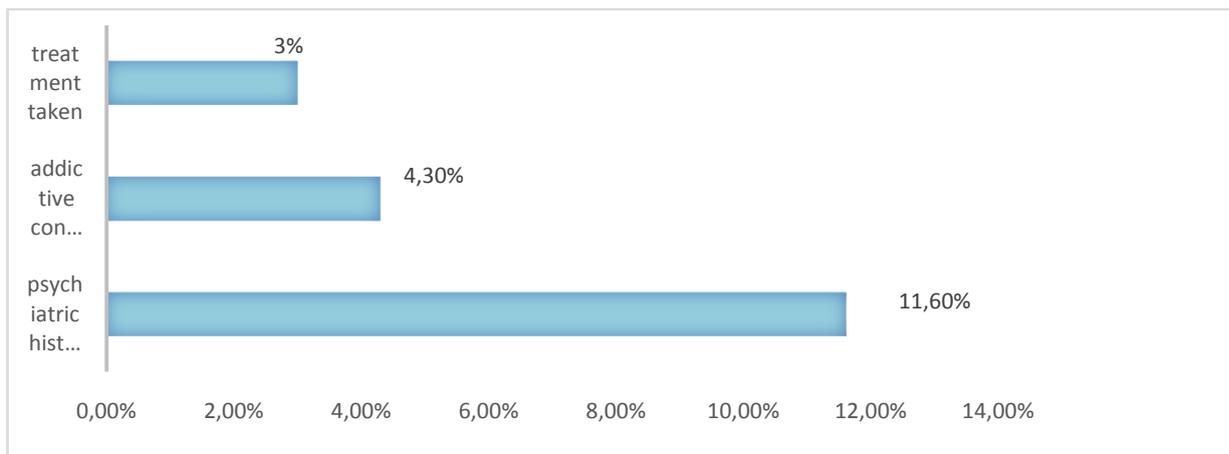
Characteristics	Frequency	Percentage
Marital status:		
- Single	31	44,28%
- Married	25	35,71%
- Divorced	13	18,75%
- Widow	1	1,42%
Presence of children:		
-Yes	33	47,14%
-No	37	52,85%
Profession:		
- Unemployed	36	51,42%
- Housewife	21	30%
- Student	2	2,8%
- Office worker	2	2,8%
- Liberal worker	8	11,42%
- Farmer	1	1,42%
Economical level:		
- Low	47	67,4%
- Medium	20	28,75%
- High	3	4,28%
Educational level:		
- Uneducated	9	12,85%
- Primary school	29	32,85%
- Middle school	17	24,28%
-High school	16	22,85%
-University	5	7,14%
Origin:		
- Rural	25	64,28%
- Urban	45	35,71%
Patients addressed by:		
-Alone	6	8,57%
-Family	41	58,57%
-psychiatrist	3	4,28%
-police	20	28,57%

## 2. Family history:

### 2.1 Distribution of family history:

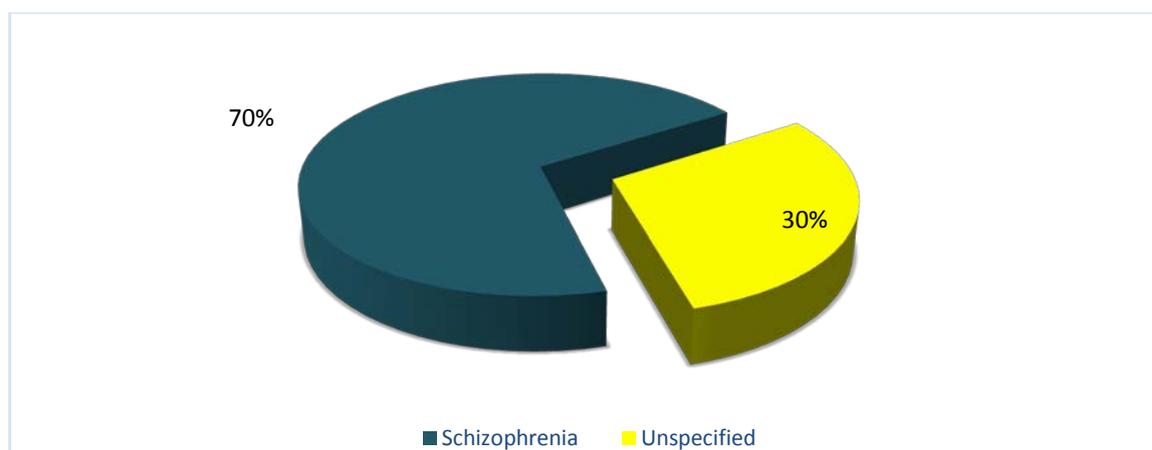
Patients with positive family history of psychiatric disorders are 11,6%, only 3% of them were under treatment. (figure17)

To mention, only women admitted for MDD and schizophrenia have psychiatric family history.



**Figure 17: the distribution of patient's family history**

70% of the patients with **positive** family psychiatric history have schizophrenia, 30% couldn't specify the nature of mental illness. (figure18)



**Figure 18: the mental disorder specific distribution of patient's family psychiatric history**

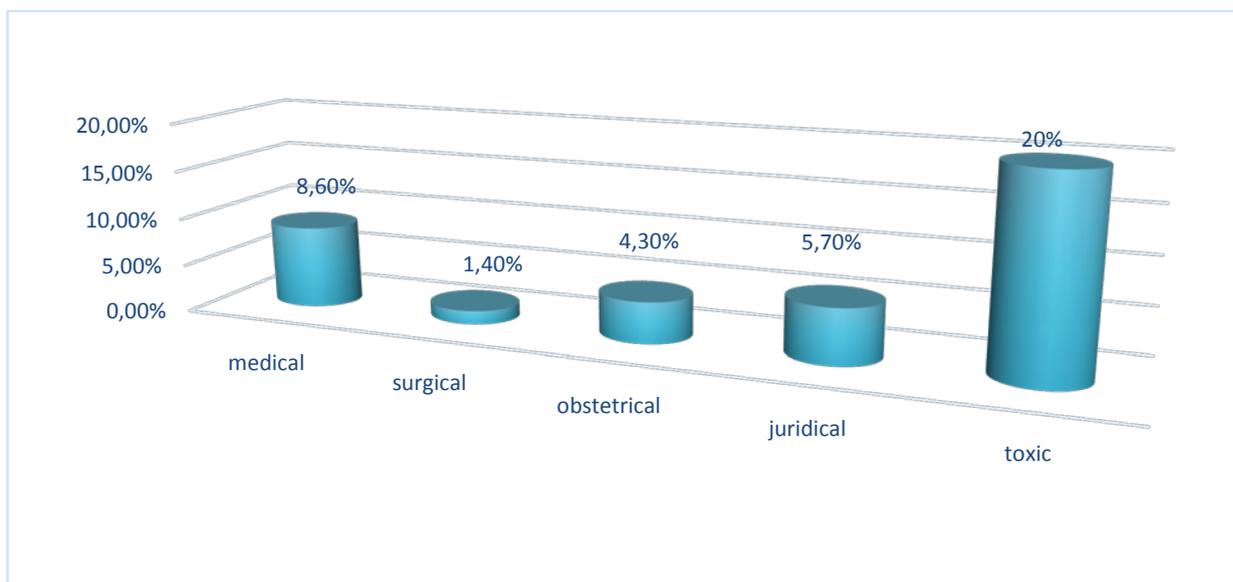
### 3. Personal history:

#### 3.1. Distribution of personal history:

The toxic history is the most represented in our case series 20% (n= 14). Here, medical history is restricted to epilepsy, heart failure, lupus and asthma. (figure19)

The four women with epilepsy have schizophrenia as a mental disorder.

Women with lupus, heart failure and asthma are hospitalized for Major depressive disorder with psychotic features.



**Figure 19: The distribution of patients personal history.**

#### 3.2. Criminal history:

Both women (n=2) with bipolar I disorder have acute episodes of mania with psychotic features, the same for a major depressive disorder case, psychotic features were noticed.

It is important to highlight that the patient admitted with a schizoaffective disorder was in an acute depressive episode. (Table 3)

**Table III: Distribution of patient’s specific criminal record**

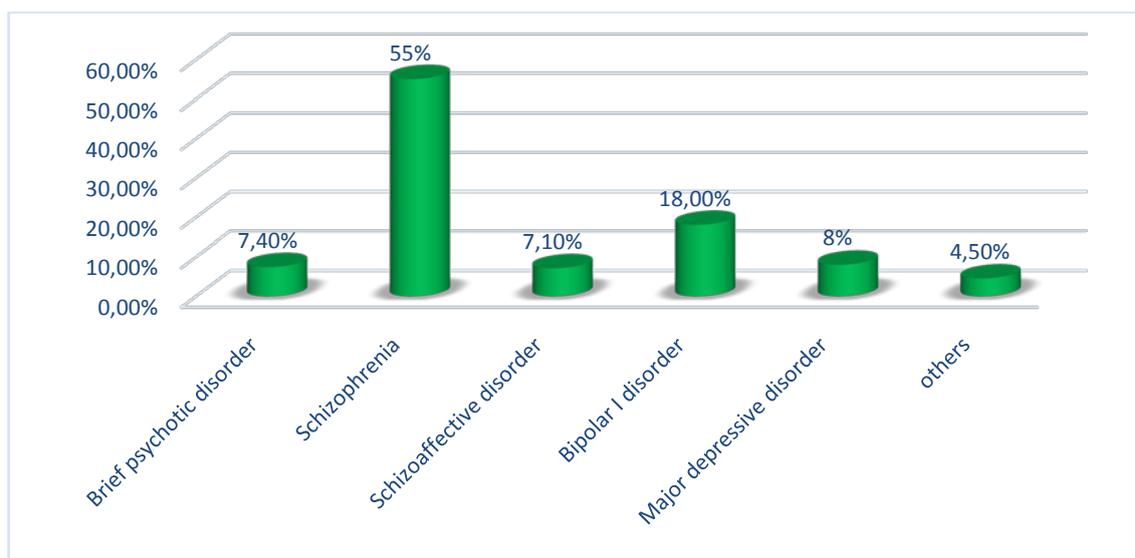
Mental disorder	Number of incarcerations	Average period of incarceration	Season	Date regarding the illness	Charges
Schizoaffective disorder	1	24 months	Winter	Simultaneously	Assault
Bipolar I disorder	2	6 months	Spring	Simultaneously	Assault and prostitution
Bipolar I disorder	1	3 months	Summer	After	Drug charges
Major depressive disorder	1	Incarcerated 2 months ago	Spring	After	Homicide

**3.3. Distribution of psychiatric history:**

Our results highlighted 55% of patients (n=40), have paranoid schizophrenia.(figure 20)

It is important to mention that 5 other mental disorders were observed once during this case series.

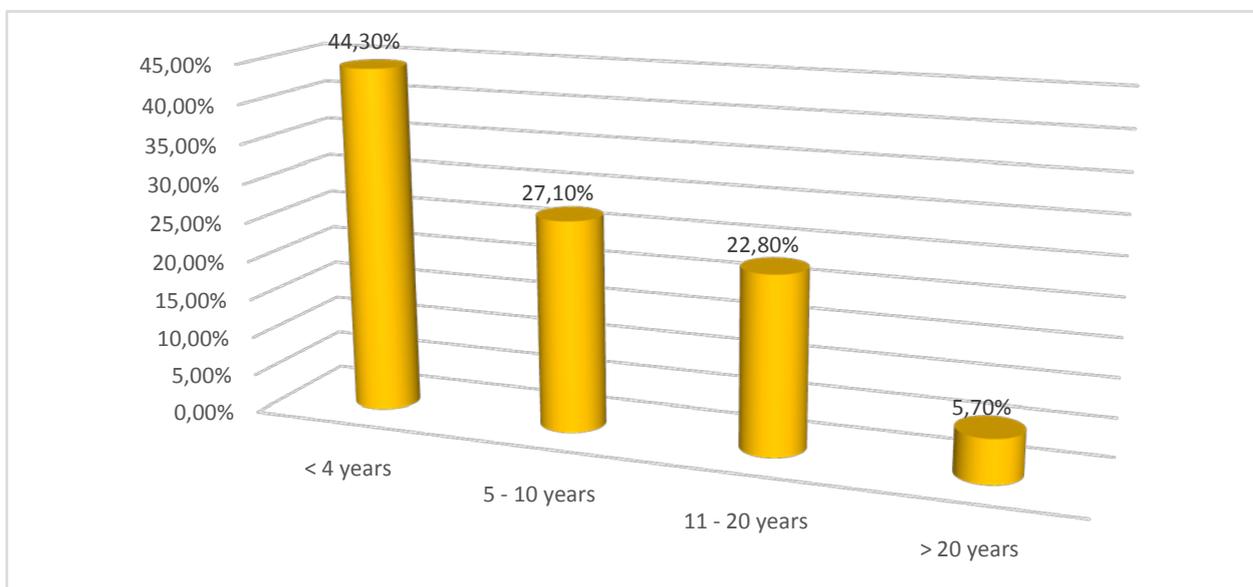
Respectively: Bipolar II disorder, Schizophreniform disorder, substance induced psychotic disorder, delusional disorder and depressive disorder due to another medical condition (lupus and heart failure).



**Figure 20: The distribution of mental disorders**

**3.4. Distribution of patients regarding the seniority of their psychiatric history**

In the last four years, 44,3% (n= 31) of patients have been diagnosed with mental illness. (Figure 21) and (Table IV)



**Figure 21: Distribution of patients regarding the seniority of their psychiatric history**

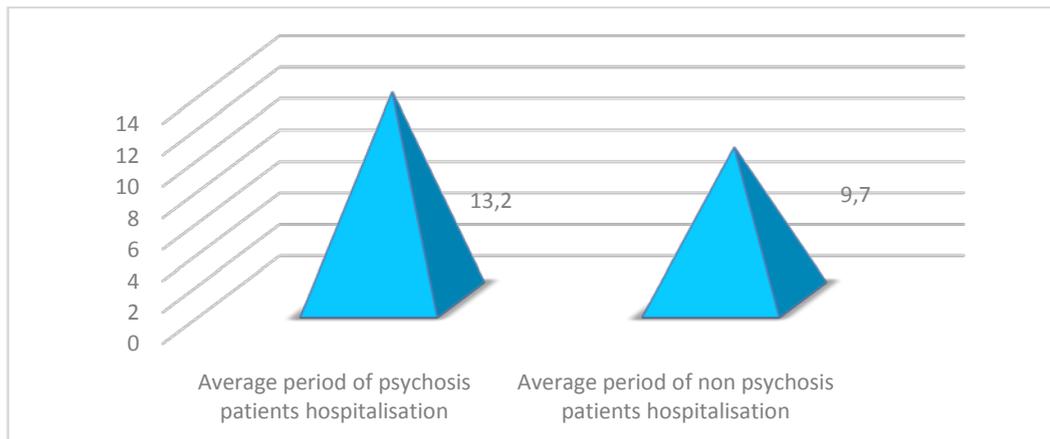
**Table IV: the seniority of the psychiatric history**

Age group in years	Frequency	Percentage
< 4	31	44,3%
5 – 10	19	27,1%
11 – 20	16	22,8%
>20	4	5,7%

**3.5. The average period of hospitalization**

Patients with psychosis in our case series spend more time indoors of psychiatric facilities 13, 2 days more than non-psychosis patients. (Figure 22)

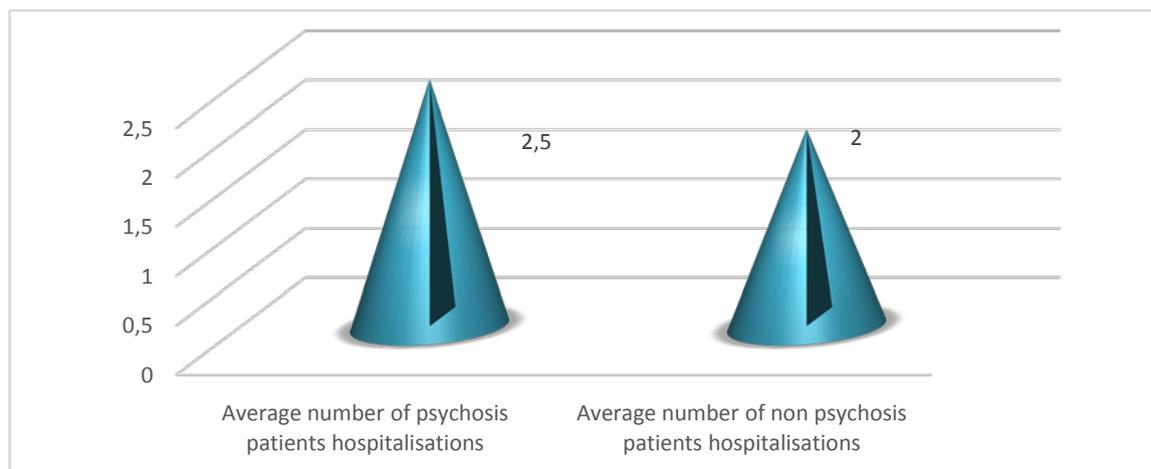
Dividing patients into these two categories is helpful when discussing results with literature findings.



**Figure 22: Distribution of patients regarding the average period of hospitalization**

**3.6. Number of admissions**

The non-psychosis category is observed to be admitted two times 2 versus 2, 5 for the psychosis group. (Figure 23)



**Figure 23: Distribution of group patients regarding the number of admissions**

3.7. Performance indicators at Ibn Nafis hospital from first January to the 31st of May

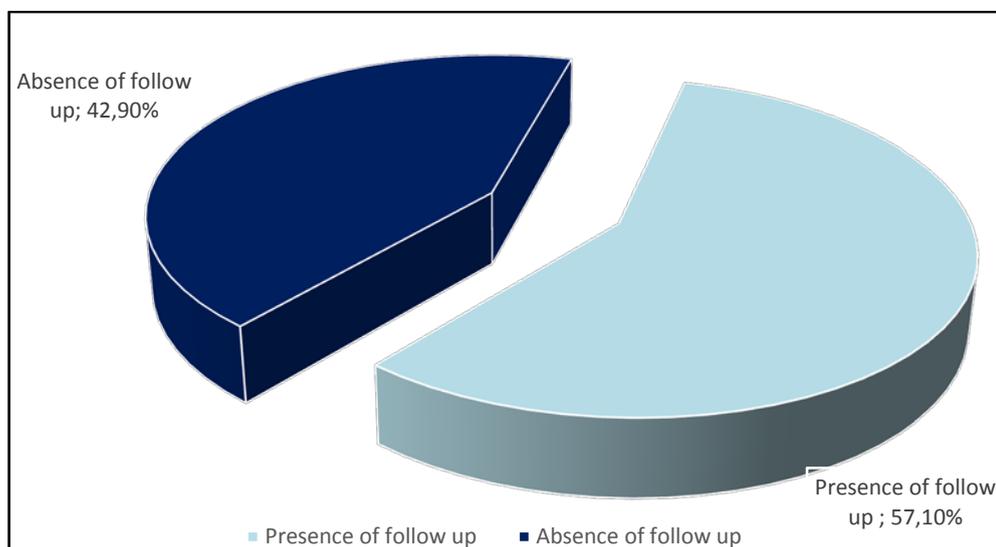
Table V: performance indicators at Ibn Nafis hospital from first January to the 31<sup>st</sup> of May

	ALOS	OR	RI	LOS
Women	19,2	73%	5,7	3859
Men	23	96,7%	6,2	21970

3.8. Follow up

In our case series, 57,1% (n=40) patients continued to show on outdoor consultations.

(figure24)



**Figure 24: Distribution of patients according to their follow up**

3.9. Suicide attempts

In our case series, 15,7% of women have attempted suicide (n=11), methods observed are: drowning, slitting wrists and poisoning. (Figure 25)

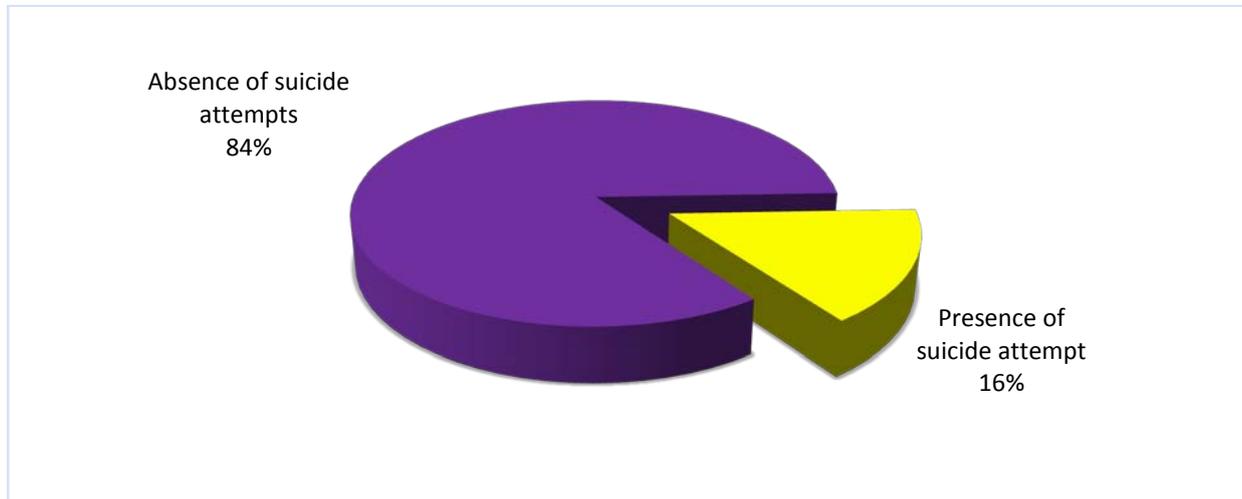


Figure 25: Distribution of suicide attempts

3.10. Toxic history

a. Distribution of toxic substances

Cigarettes are the most frequent toxic, representing 14,5%. (n= 10) (Figure 26)

It is very important to mention the **cannabis** abuse rate 12,5%.

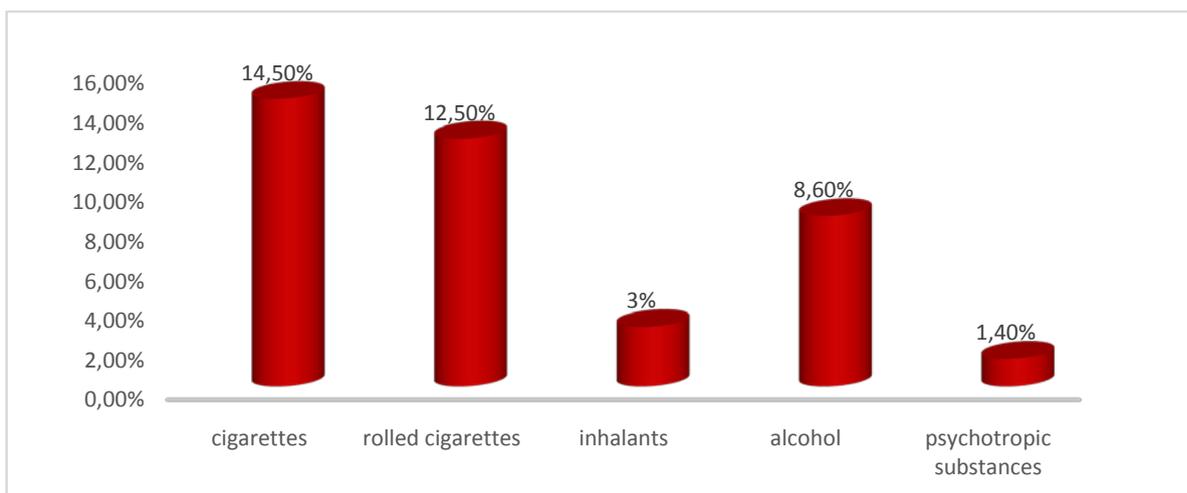
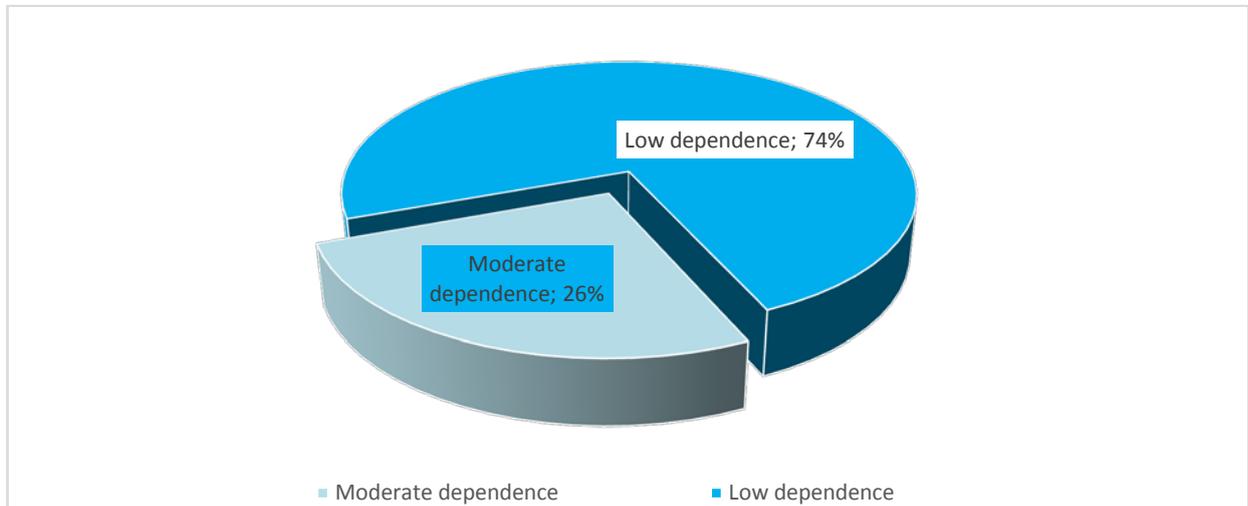


Figure 26: The distribution of patients' toxic behavior.

*b. Nicotine: FTND rating scale*

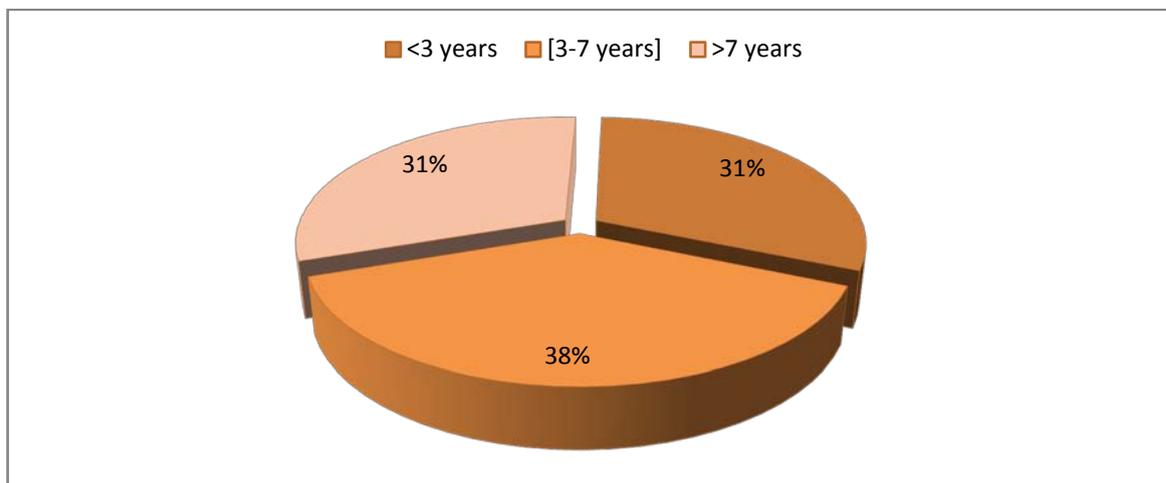
Low nicotine dependence according to FTND rating scale was observed among 74% (n=11) of our patients. (Figure 27)



**Figure 27: Distribution of patients regarding FTND rating scale**

*c. Period of using*

For a period between 3 and 7 years, 38% of our patients have been using toxics. (Figure 27)

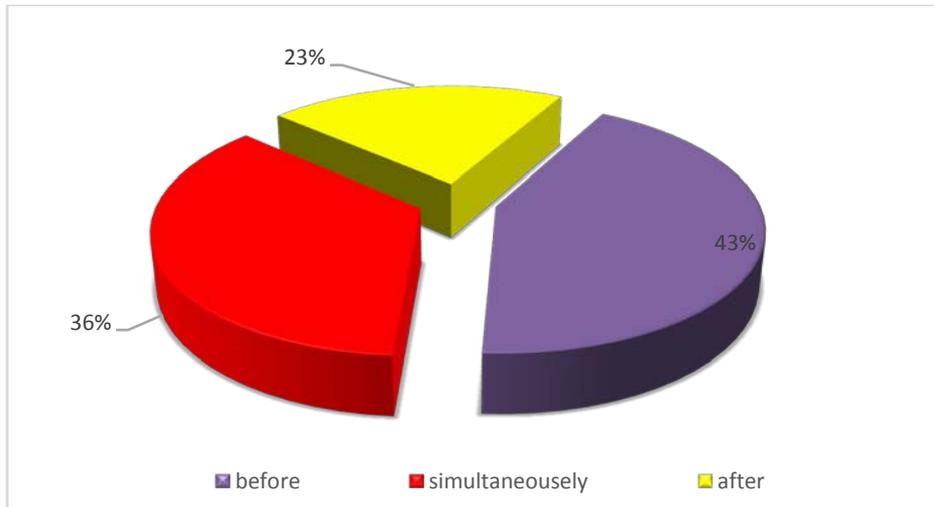


**Figure 28: Distribution of patients according to the average period of substance use.**

*d. Timing of substance use*

23% (n=6) of our patients developed a toxic habit after being diagnosed, 43% had the toxic habit prior the mental disorder. (Figure 29)

Only one patient (1,4%) tried to quit the toxic behavior, alone. No institution was involved.



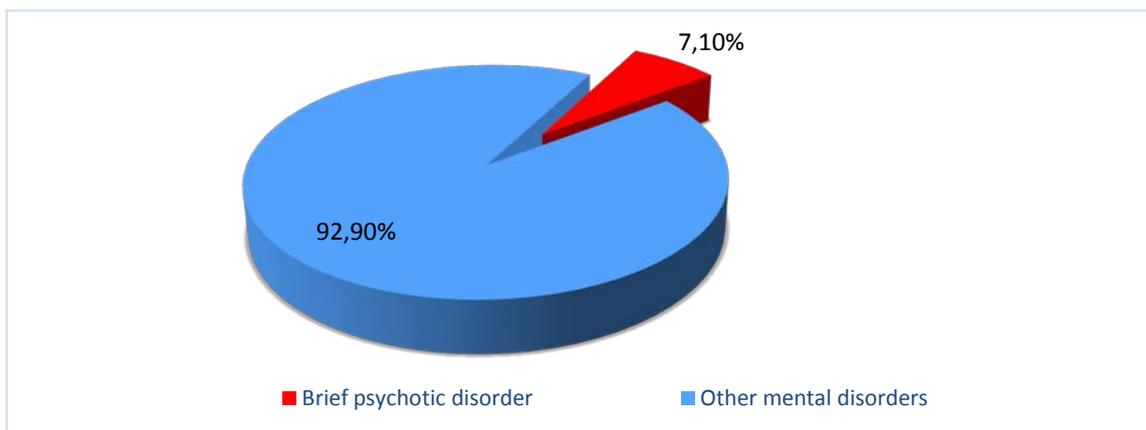
**Figure 29 : Distribution of patients according to the onset of toxic use.**

**4. Clinical data regarding mental disorders**

**4.1. Brief psychotic disorder BPD**

*a. Presence of BPD*

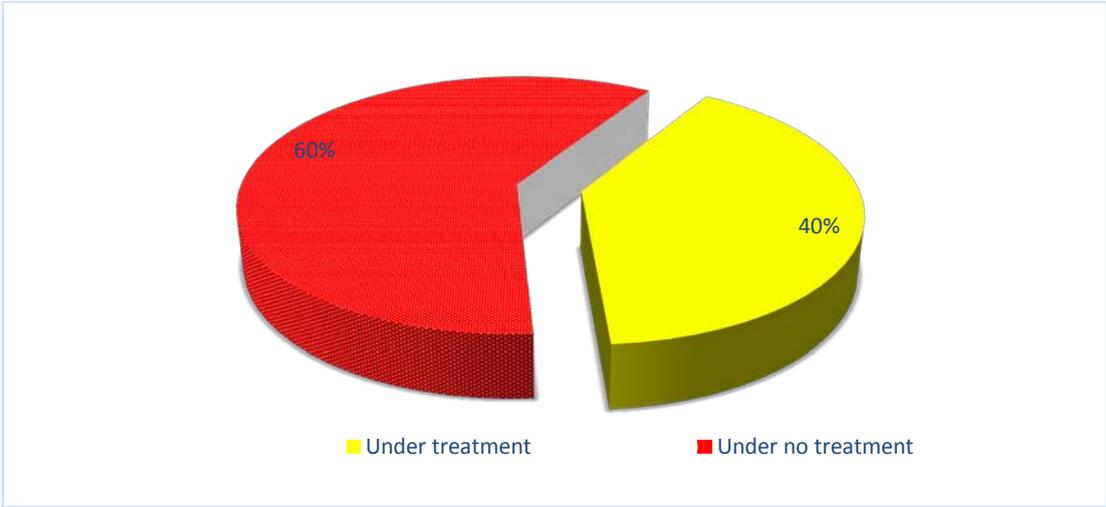
BPD represents 7,1% of the total inpatients included in our case series. (Figure 30)



**Figure 30: Percentage of Brief psychotic disorder among other mental disorders**

*b. Treatment taken in the last 6 months*

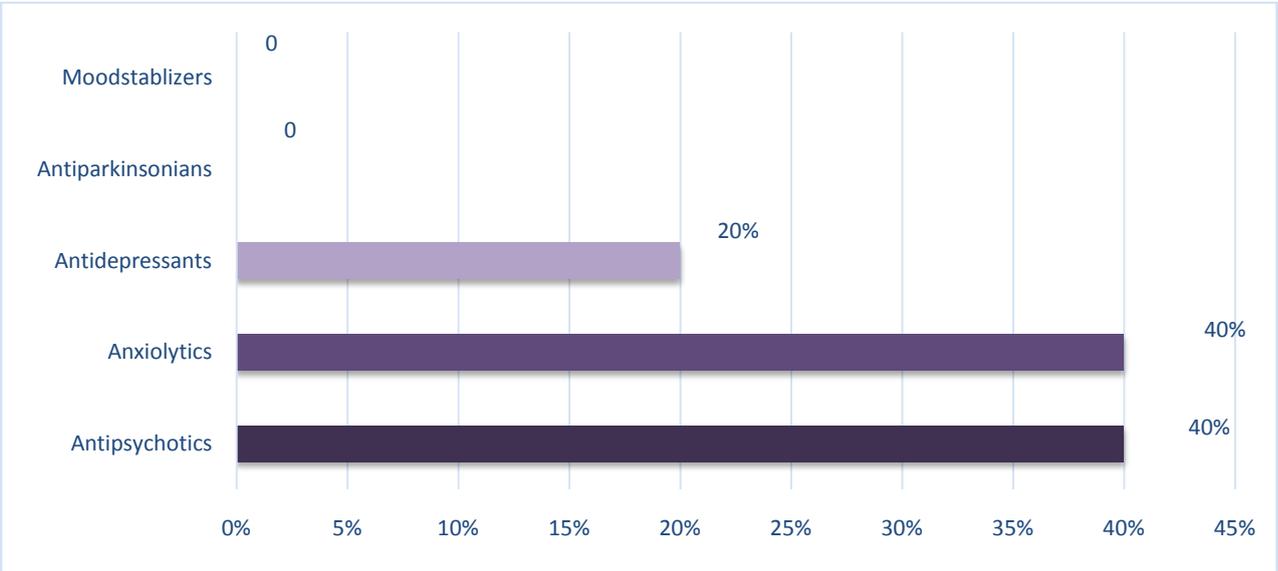
60% of BPD patients were under no treatment in the last six months prior to their hospitalization. (Figure 31)



**Figure31: Percentage of treatment taken by Brief psychotic disorder patients**

*c. Specific distribution of treatment*

40% of BPD inpatients are under a combination of antipsychotics and anxiolytics. (figure32)

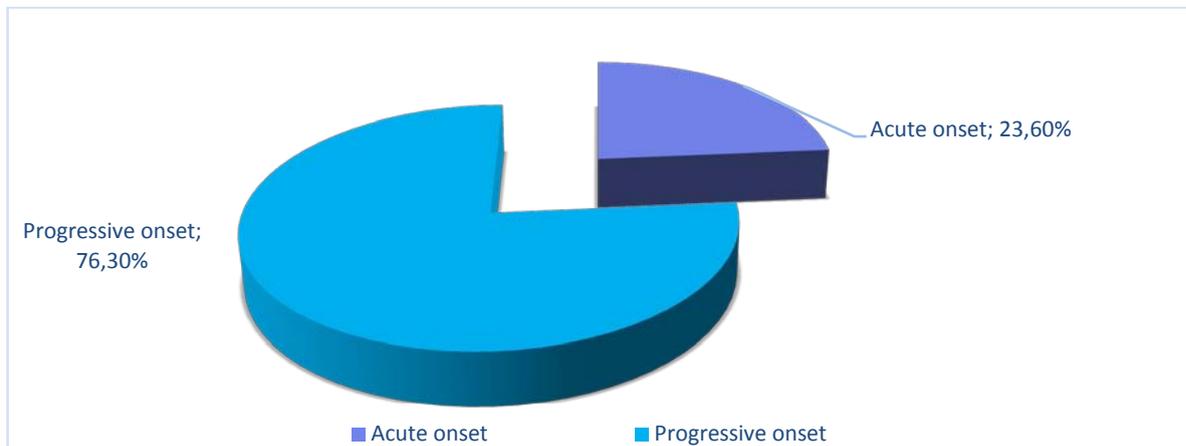


**Figure 32: Distribution of treatment taken by brief psychotic disorder patients**

4.2. Schizophrenia

a. Onset and current episode of schizophrenia

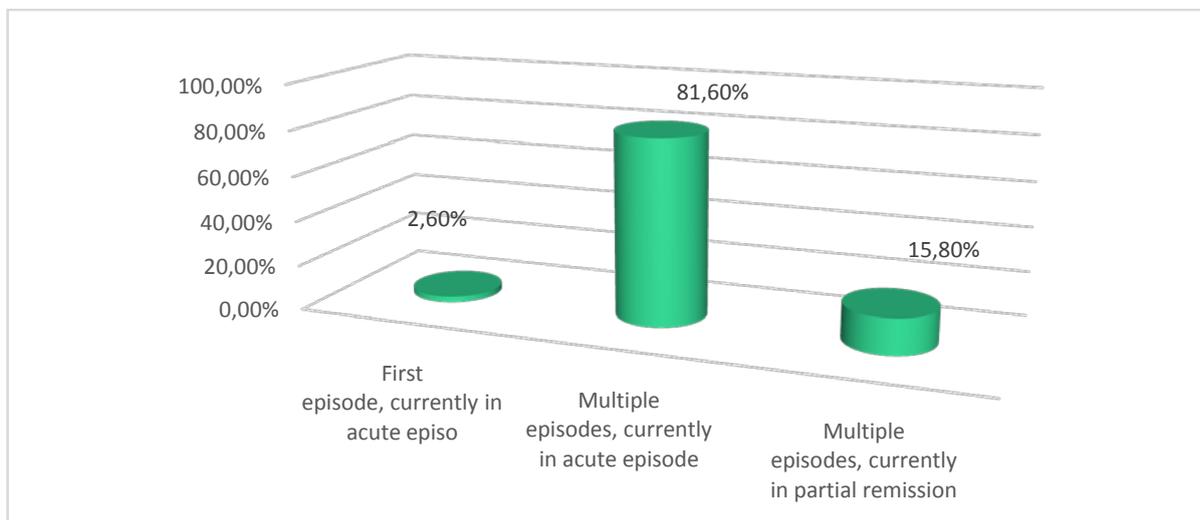
76,3% of our case series have a progressive (>6 months) onset of schizophrenia. (Figure 33)



**Figure 33: Distribution of schizophrenia patients according to the disorder's onset**

b. Actual episode status of schizophrenia

81,6% of admitted women with schizophrenia diagnosis are on multiple episodes, currently in acute episode status. (Figure 34)



**Figure 34: Distribution of schizophrenia's actual status**

c. Positive psychotic symptoms

Moderate positive psychotic symptoms were observed among 44% of patients(Figure 35)

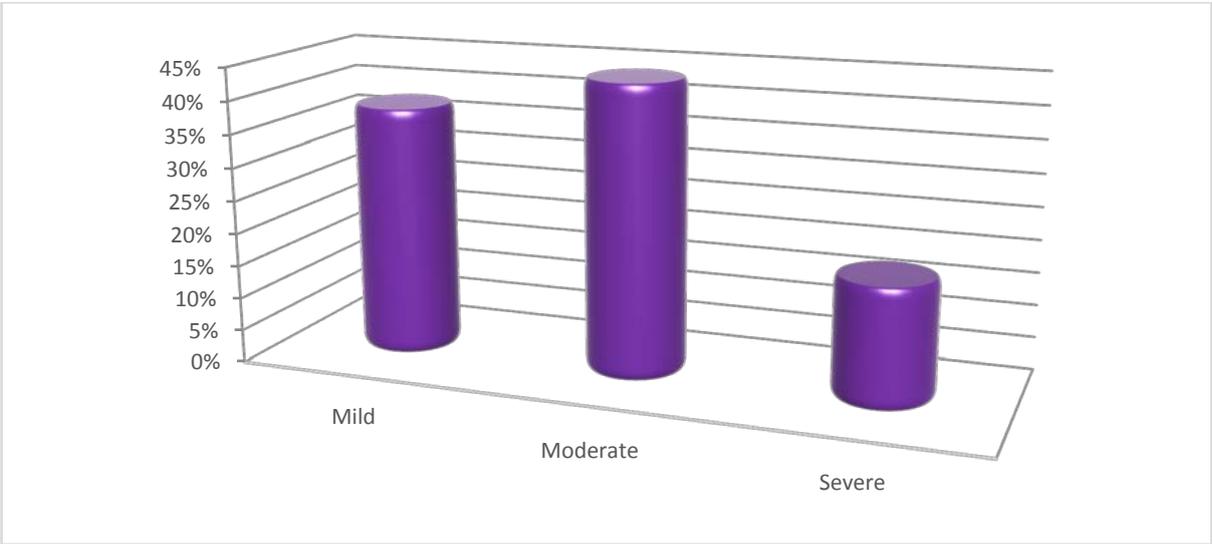


Figure 35: Distribution of schizophrenia's actual status

d. Negative psychotic symptoms

Mild negative symptoms were observed among 50% of patients. (Figure 36)

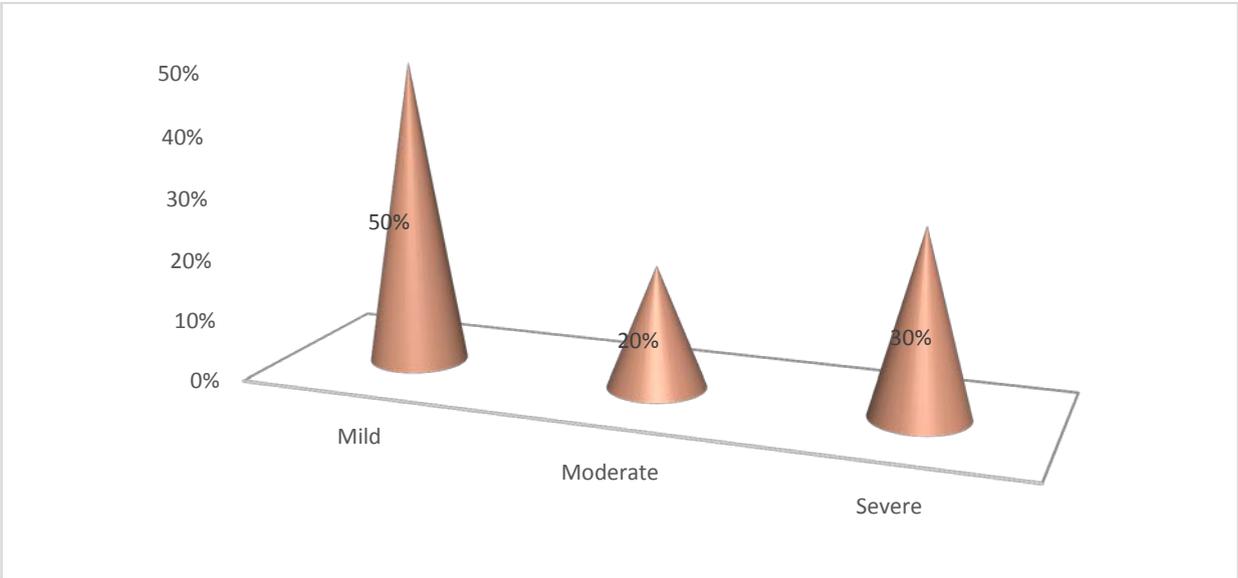
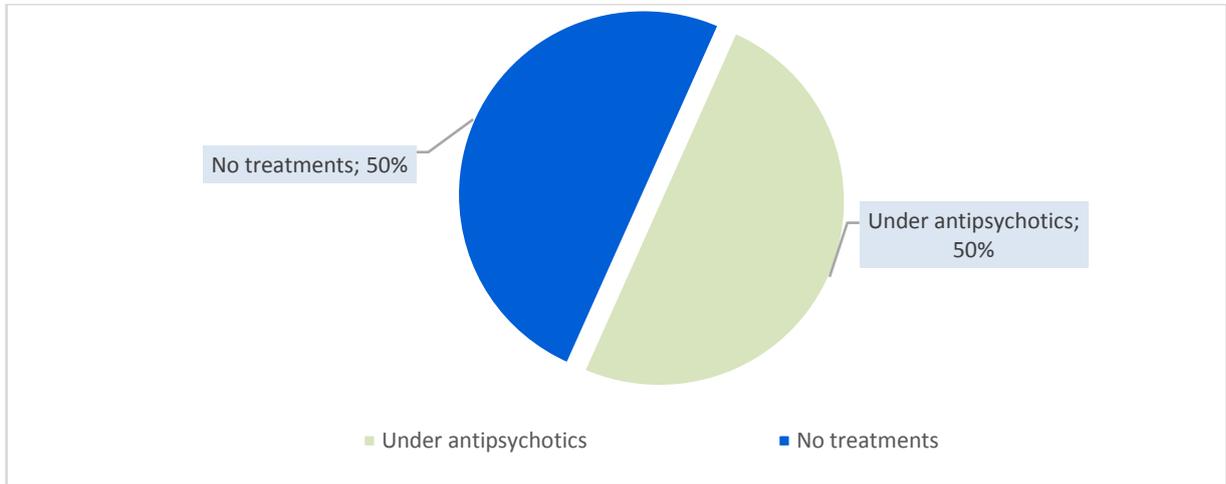


Figure 36: Distribution of schizophrenia's actual status

***e. Treatment status in the last 6 months***

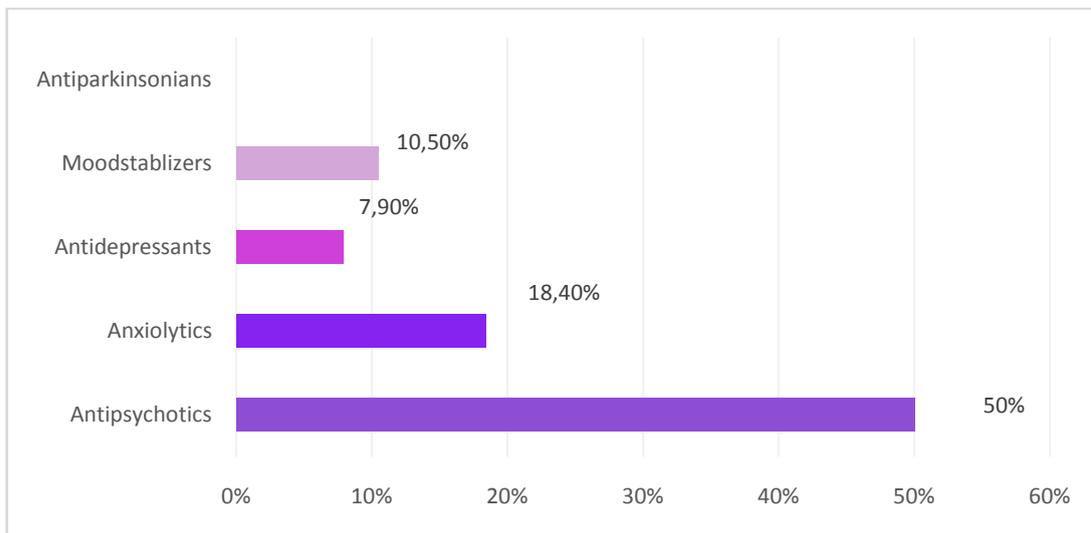
Schizophrenia patients in our case series who were under treatment (antipsychotics) in the last 6 months prior to their hospitalization 50%. (Figure 37)



**Figure 37: Distribution of schizophrenia treatment status**

***f. Treatment modalities in the last 6 months***

The amount of inpatients admitted for schizophrenia who were under antipsychotics in the 6 months prior their admission was 50 % . (Figure 38)

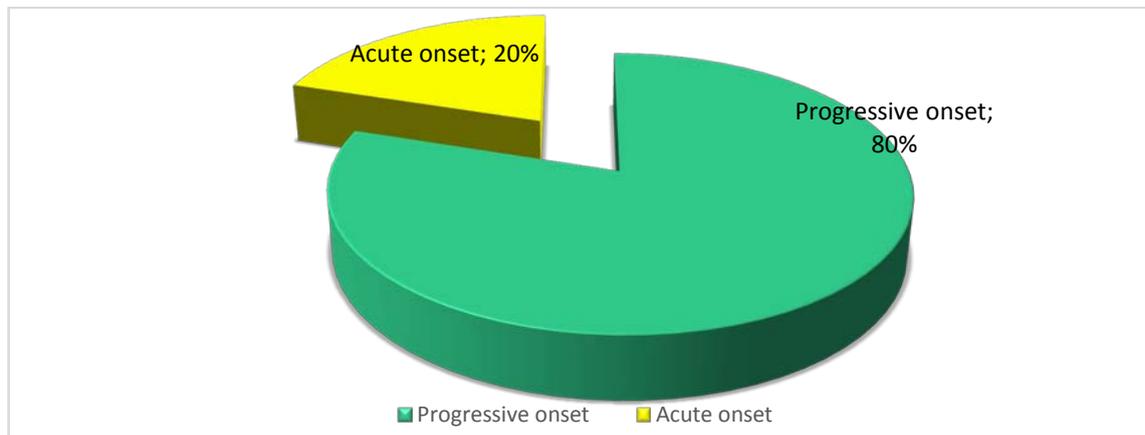


**Figure 38: Distribution of schizophrenia treatment subtypes**

4.3. Schizoaffective disorder

a. Schizoaffective disorder onset

Schizoaffective women of our case series who have a progressive onset of the disorder 80%. (Figure 39)

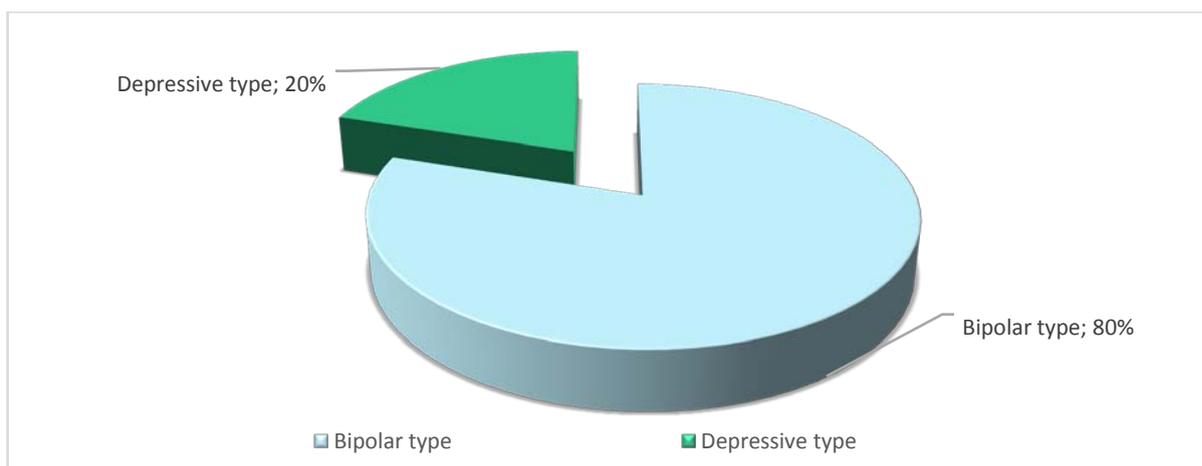


**Figure 39: Distribution of schizoaffective disorder patients according to the disorders onset**

b. Schizoaffective disorder subtypes

80% of women with a schizoaffective diagnosis present a bipolar type. (figure 40)

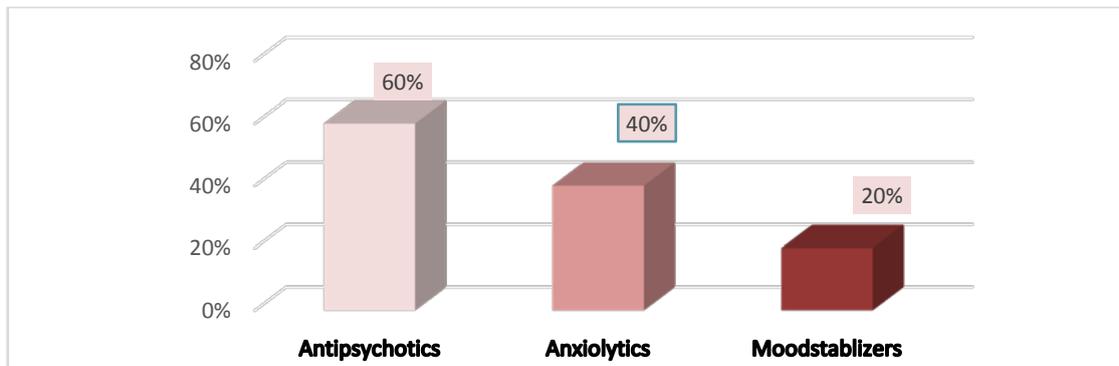
To specify, all schizoaffective inpatients in our case series are on multiple episodes, currently on an acute episode status.



**Figure 40: Distribution of schizoaffective disorder types**

*c. Treatment modalities in the last 6 months*

60% of inpatients admitted for schizoaffective disorder were priorly under antipsychotic treatment (6 months), to highlight, none of schizoaffective patients was under antidepressants nor antiparkinsonians. (Figure 41)



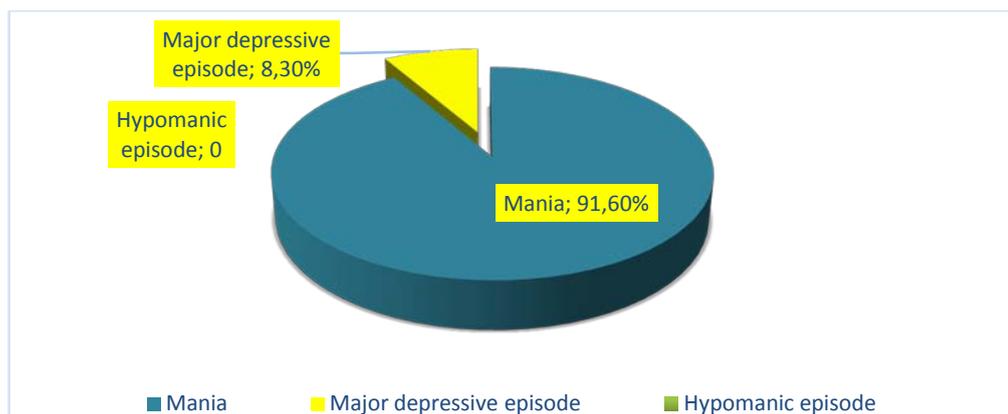
**Figure 41: Distribution of treatment taken by schizoaffective disorder inpatients**

**4.4. Bipolar I disorder**

*a. Bipolar I disorder subtypes*

Only 8,3% of inpatients diagnosed with bipolar I disorder presented a major depressive episode. The big majority 91,6% was on a mania episode. (figure42)

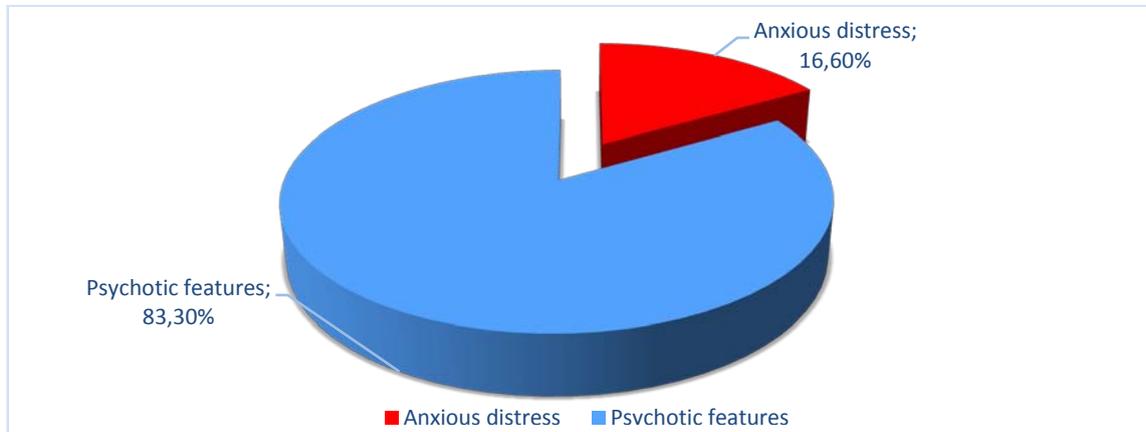
It is important to mention that only one case of bipolar II disorder was admitted during our study period.



**Figure 42: Distribution of bipolar I disorder types**

***b. Presence of psychotic features***

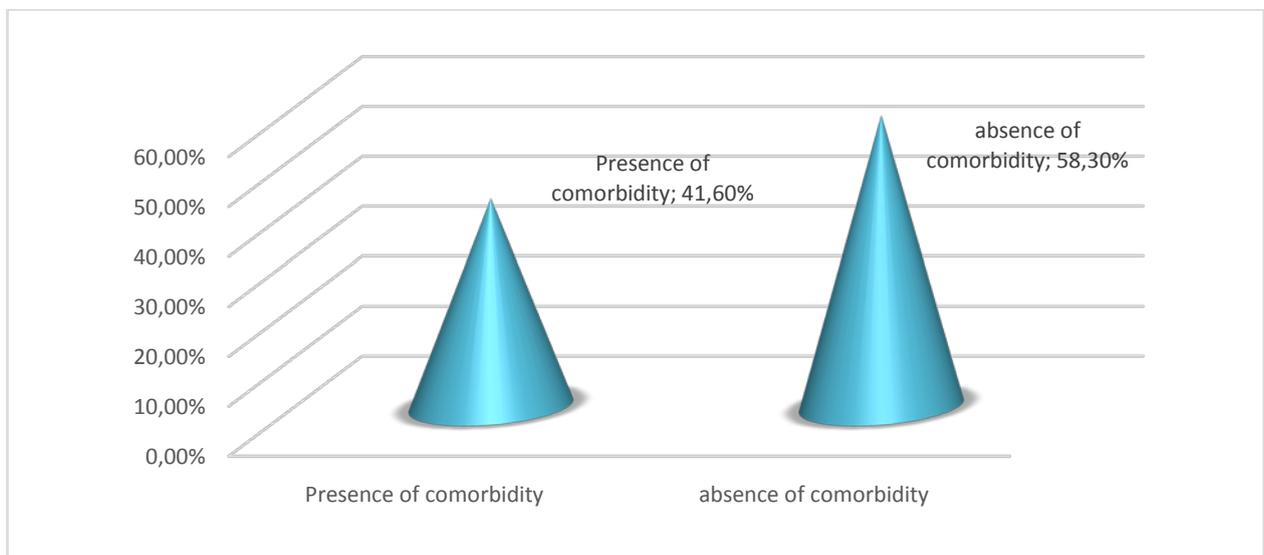
Bipolar I inpatients who got admitted into the psychiatric hospital with psychotic features 83,3%. (Figure 43)



**Figure 43: Distribution of bipolar I disorder subtypes**

***c. Presence of comorbidities***

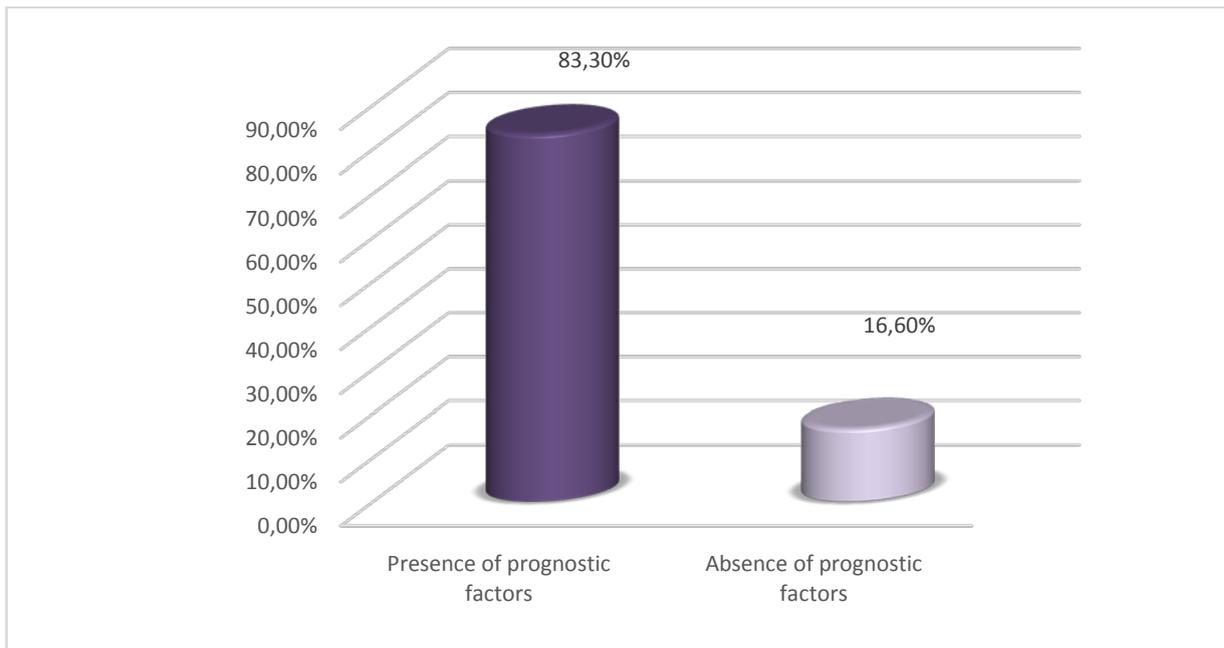
Bipolar I patients who had a co-occurring comorbidity 58,3%. (figure 44)



**Figure 44: Presence of comorbidities**

***d. Presence of prognostic factors***

A big majority of bipolar I inpatients had prognostic factors. 83,3% (Figure 45)

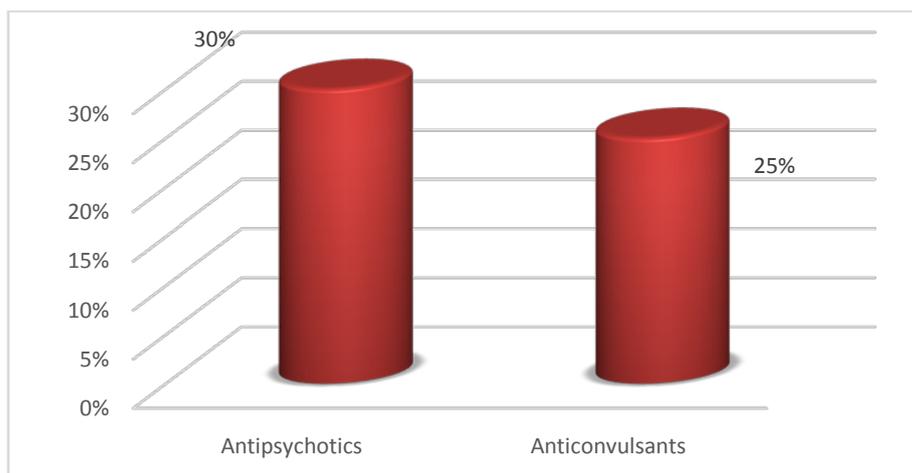


**Figure 45: Presence of prognostic factors**

*e. Treatment modalities in the last 6 months*

Bipolar I inpatients who were under antipsychotics in the 6 months prior their admission 30% . (Figure 46)

The patient with bipolar II disorder was admitted and diagnosed for the first time.

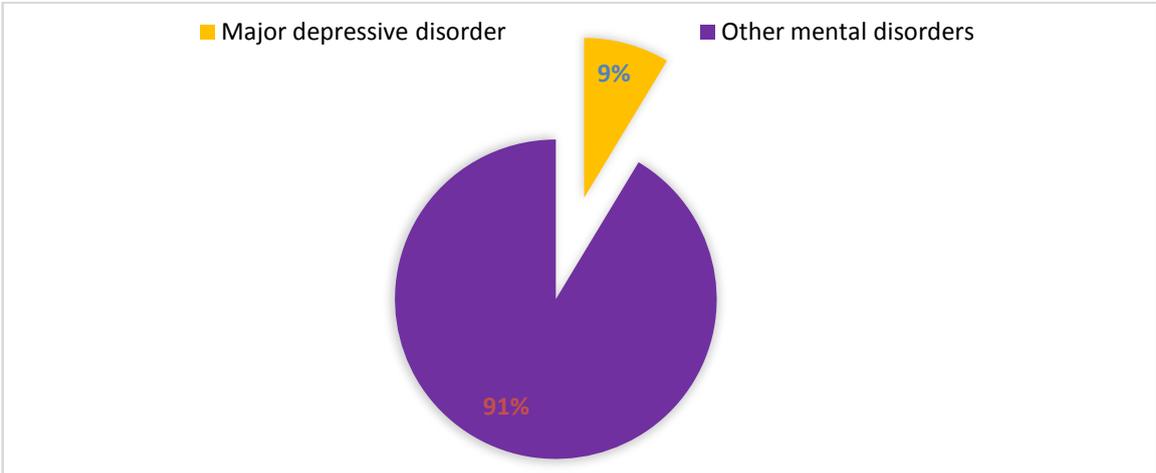


**Figure 46: Distribution of treatment modalities**

4.5. Major depressive disorder

a. Presence of major depressive disorder

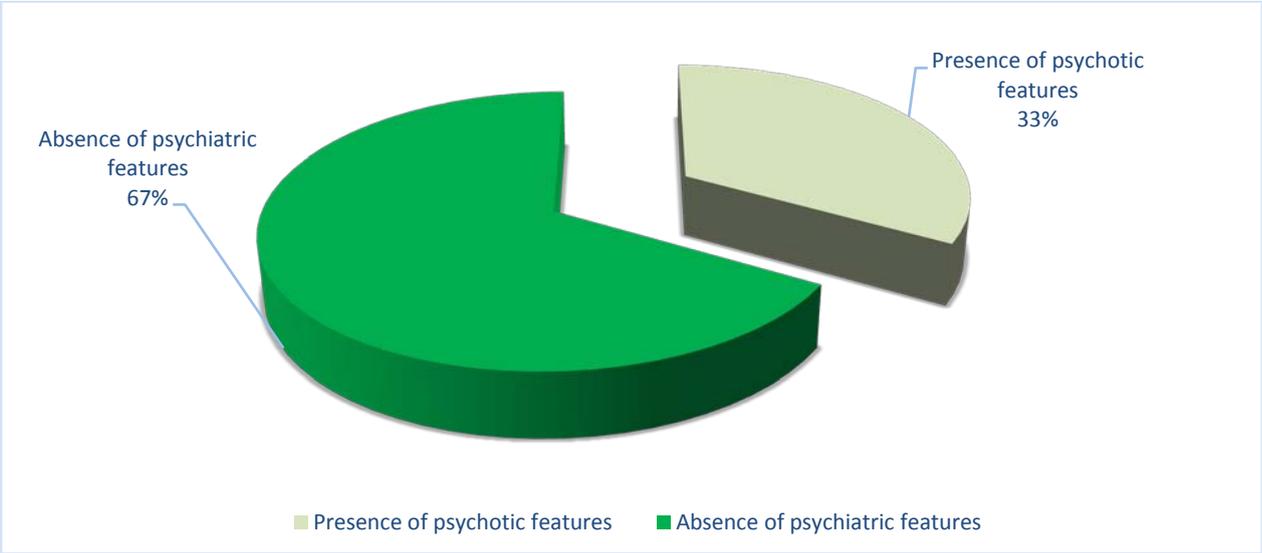
Inpatient women diagnosed with major depressive disorder represent 9% of the total hospitalized rate. (Figure 47)



**Figure 47: Major depressive disorder among other mental disorders**

b. Presence of psychotic features

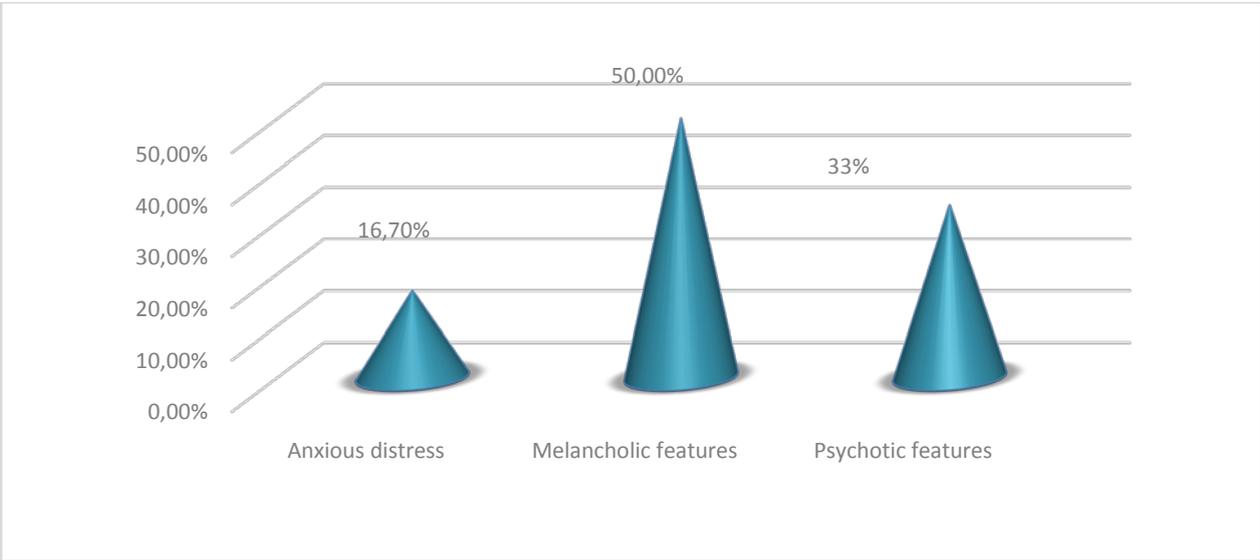
67% of admitted women with MDD presented co-occurring psychotic features. (Figure 48)



**Figure 48: Presence or not of psychotic features**

*c. Major depressive disorder subtypes*

MDD patients in our case series who presented melancholic features 50% . (figure49)

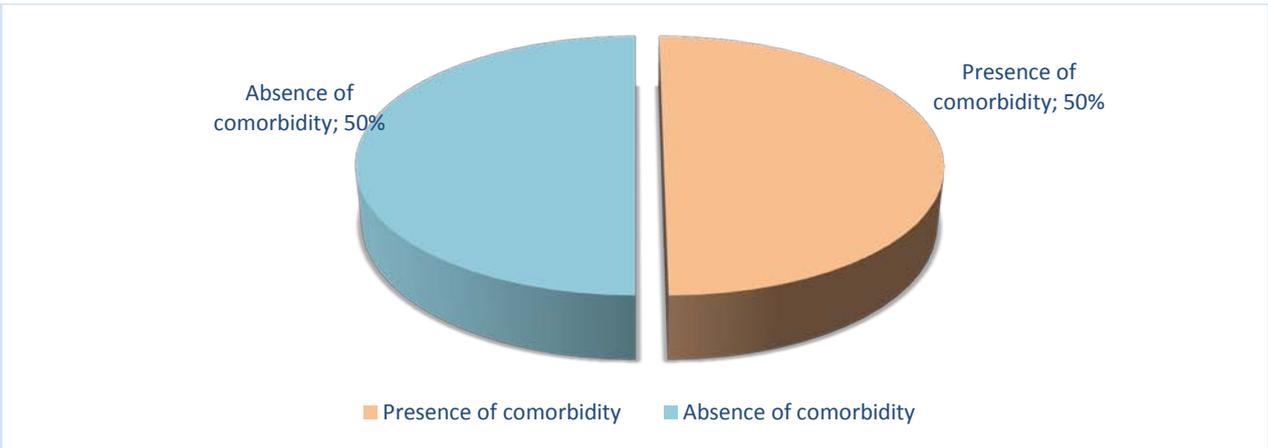


**Figure 49: Distribution of major depressive disorder subtypes**

*d. Presence of comorbidities*

Major depressive disorder patients in our case series who have a positive co-occurring comorbidity 50%. (Figure 50)

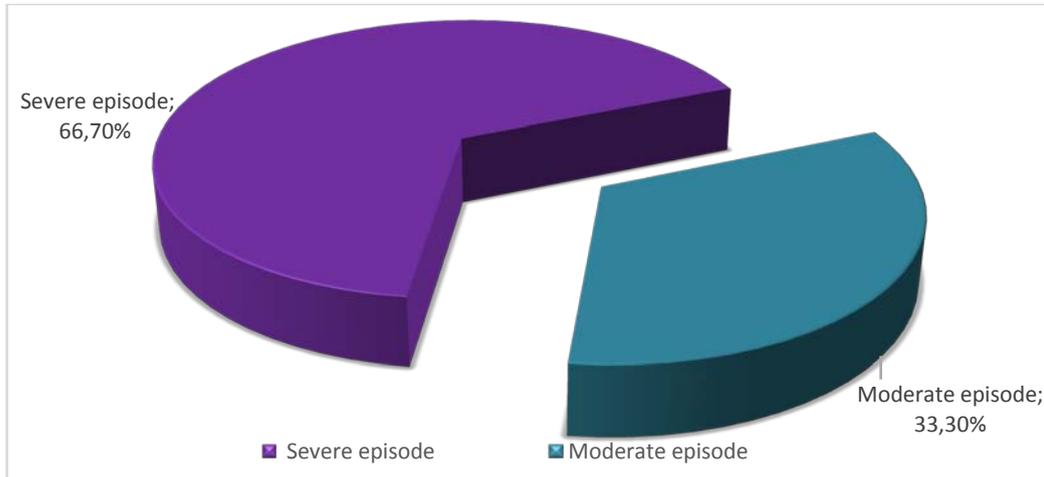
To mention: lupus, asthma, heart failure and generalized anxiety disorder.



**Figure 50: Presence or no of comorbidities**

*e. Severity of depression*

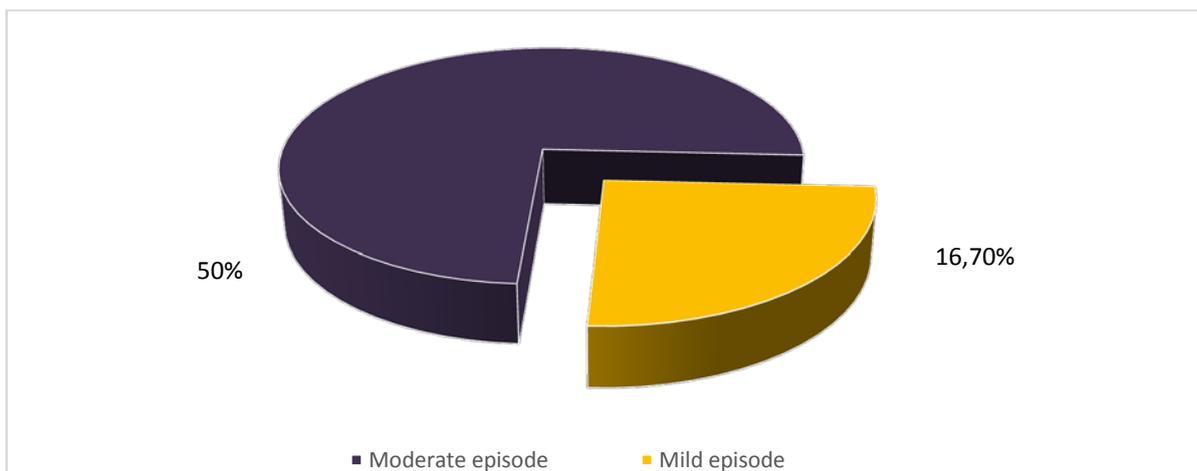
According to the severity rating scale of depression HAMILTON–D. (66,3%) of major depressive disorder inpatients are admitted for a **severe** major depressive episode. (33,7%) are admitted for a moderate major depressive episode. (Figure 51)



**Figure 51: Severity depression according to HAMILTON–DEPRESSION**

*f. Anxiety comorbidity*

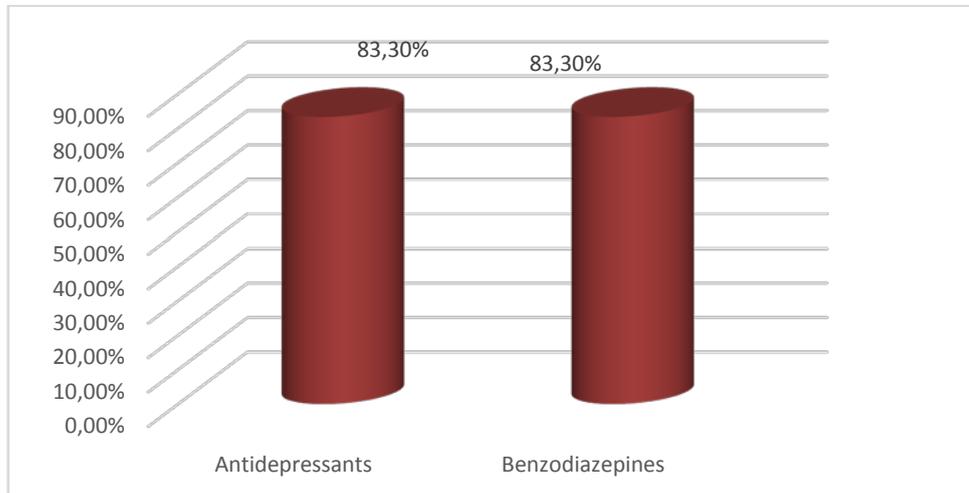
According to the severity rating scale of anxiety HAMILTON–A. 50% of major depressive disorder inpatients are admitted for a **moderate** general anxiety episode. 16,7% are admitted for a mild generalized anxiety episode. (figure 52)



**Figure 52: Anxiety comorbidity according to HAMILTON–ANXIETY**

*g. Treatment modalities in the last 6 months*

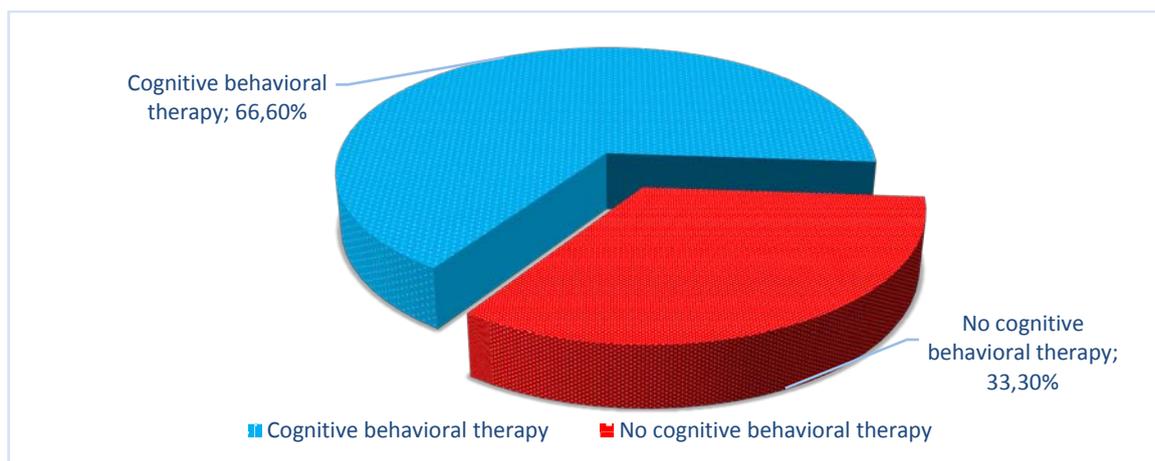
MDD inpatients in our case series who were under a combination of antidepressants and benzodiazepines 83% . (figure53)



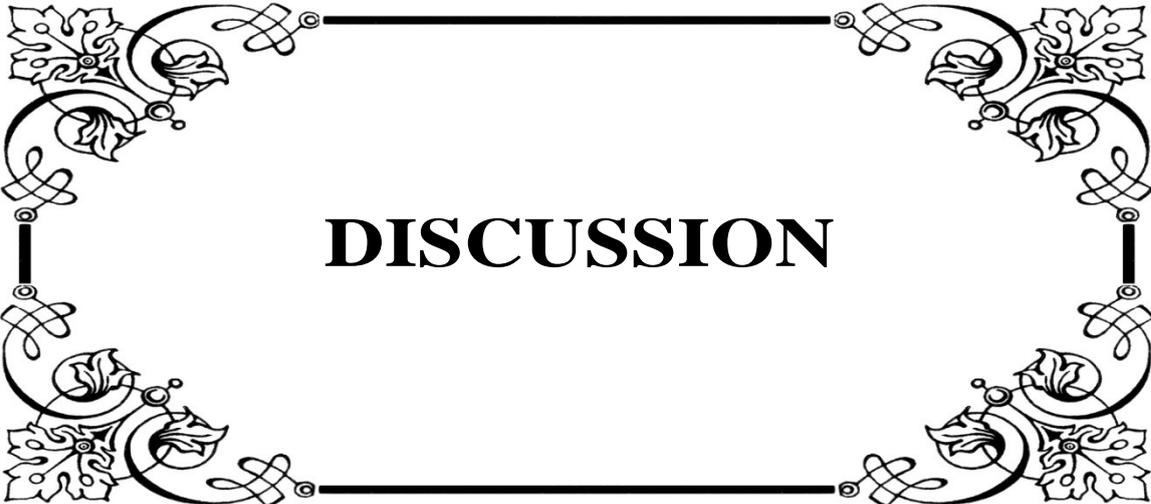
**Figure 53: Treatment modalities of MDD patients**

*h. Cognitive behavioral therapy*

Major depressive disorder patients in our case series who have benefited from Cognitive behavioral therapy 66,6% . (Figure 54)



**Figure 54: Presence or not of psychotherapy prior hospitalization**



**DISCUSSION**

## **I. Psychiatry in the late twentieth century:**

The 1960s were acknowledged as a period of steady but necessary change. Services were dominated institutionally and intellectually by psychiatrists, who began to establish a more distinct professional identity, partly because it allowed them, through the procedure of voluntary admission to mental facilities, to implement improvements in treatment which had been foreshadowed in the 1950s.

The 1970s also saw significant innovations in treatments and service delivery, led by clinicians responding to these challenges. There was increasing use of psychological treatments with an evidence base and widespread acceptance that the services needed to acknowledge and counteract the social devaluation of their users.

The 1980s was the best time. The standard of nursing care was going up. And there was enough to make the old accommodation tolerable. More significant changes followed. This recommended the introduction of regional managers into the health service and the devolution of decision-making to hospital level, thus for the last two decades of the twentieth century a consensus memory was superseded by multiple narratives. The disenchanted professional view held that the movement of patients out of psychiatric hospitals into the community – ‘decarceration’ – was a good idea spoiled by inadequate resources.

For the growing number of patients outside hospital, there was the problem with community care, misery, poverty and the style of mental health services that offers no real choice about the type of support available. The kind of service provided by mental health professionals is not the only issue that determines the quality of people’s lives in the community. There was growing awareness that service users’ experience was skewed by gender: women were over-represented among users presenting with mild to moderate illness. The growth of the service user movement provided a forum in which these concerns could be articulated.

The history of psychiatry is a fundamental part that offers insights into treatments and diagnoses, and also reflects an interpretation about personal experiences, records and social behavior. [11] [12] [13] [14]

## II. Mental health and stigma:

Women with mental disorders are subjected to high levels of stigma, which is one of the most frequently identified barriers to mental health care. These barriers can include lack of perceived need for treatment, doubt regarding its effectiveness, and not understanding the procedures for getting it. Mental health stigma has been conceptualized as a negative and erroneous attitude about a person, similar to a prejudice or negative stereotype, which leads to discrimination and exclusion due to widely held misconceptions about the causes and nature of mental health conditions.

Stigma provokes harmful consequences for mentally ill women and can lead to impoverishment, social marginalization, and low quality of life.

The negative association between stigma and social support and the protective effect of social support in mitigating the negative consequences of stressful events on physical and psychological well-being were confirmed. Stigmatization of women also lessens the responsiveness of the health services and may cause treatment delays or avoidance.

Stigma impacts upon women' self-image, making it difficult for them to have relationship experiences. They do not engage in sexual activity until later in life and do not acquire the knowledge required for the fulfillment and construction of pleasurable relations. Unsafe sexual behaviors are common among women with mental disorders, even though such individuals may report sexual disinterest. [15] [16] [17] [18] [19]

## III. Appearing “normal”:

Appearing “normal” was driven by a distress of losing self-determination, particularly in relation to hospitalization and heavy treatments. It allowed women to avoid hospitalization because “when you started saying the right things, you would be considered better”.

This strategy was also driven by dread of stigma. For women who lived in more threatening conditions or with multiple responsibilities, appearing “normal” was a survival strategy because they believed that showing any evidence of vulnerability would attract people who would abuse them. They frequently hide their disorders which contribute to isolation. Even women who viewed themselves as recovered engaged in suppressing normal emotions driven by insecurity that these would be viewed as pathological.

For women whose illness was of a less chronic nature, the need to appear “normal” and to separate themselves from others with mental illness declined as they recovered. This was replaced by a craving to be open about their experience with the aim of reducing stigma. It is possible that sharing experiences enabled women to develop a narrative which facilitated their understanding and hence their recovery. [20]

#### **IV. Diagnostic criteria: DSM-V**

The 1998 WHO report states that “women’s mental health is inextricably linked to their status in society. It benefits from equality and suffers from discrimination”. Many women with severe mental illness stay outside treatment settings, especially in low and middle-income countries with poor and inadequate mental health facilities. Those who do enter treatment settings have very varied experiences ranging from human care to stigmatization. One of the major disorders which impact the lives of women inpatients, and family members is schizophrenia. [21]

##### **1. Schizophrenia spectrum and other psychotic disorders:**

###### **1.1. Delusional disorder:**

Criterion A. The presence of one or more delusions with a duration of 1 month or longer.

Criterion B. Criterion A for schizophrenia has never been met.

Criterion C. Functioning is not markedly impaired, and behavior is not obviously bizarre or odd.

Criterion D. If manic or major depressive episodes have occurred, these have been brief relative to the duration of the delusional periods.

Criterion E. The disturbance is not attributable to the physiological effects of a substance or another medical condition and is not better explained by another mental disorder, such as body dysmorphic disorder or obsessive–compulsive disorder.

**1.2. Brief psychotic disorder:**

Criterion A. Presence of one or more of the following symptoms. At least one of these must be (1), (2), (3):

1. Delusions.
2. Hallucinations.
3. Disorganized speech.
4. Grossly disorganized or catatonic behavior.

Criterion B. Duration of an episode of the disturbance is at least 1 day but less than one month, Bwith eventually full return to premorbid level of functioning.

Criterion C. The disturbance is not better explained by major depressive disorder or bipolar disorder with psychotic features or another medical condition.

**1.3. Schizophreniform disorder:**

Criterion A. Two (or more) of the following, each present for a significant portion of time during a 1–month period (or less if successfully treated). At least one of these must be (1), (2) or (3):

1. Delusions.
2. Hallucinations.

3. Disorganized speech.
4. Grossly disorganized or catatonic behavior.
5. Negative symptoms.

Criterion B. An episode of the disorder lasts at least 1 month but less than 6 months.

Criterion C. Schizoaffective disorder and depressive or bipolar disorder with psychotic features have been ruled out.

Criterion D. The disturbance is not attributable to the physiological effects of a substance or another medical condition.

**1.4. Schizophrenia:**

Criterion A. Two (or more) of the following, each present for a significant portion of time during a 1-month period (or less if successfully treated). At least one of these must be (1), (2) or (3):

1. Delusions
2. Hallucinations.
3. Disorganized speech.
4. Grossly disorganized or catatonic behavior.
5. Negative symptoms.

Criterion B. For a significant portion of time since the onset of the disturbance, level of functioning in one or more major areas, such as work, self-care, is markedly below the level achieved prior to the onset.

Criterion C. Continuous signs of the disturbance persist for at least 6 months. This 6-month period must include at least 1 month of symptoms.

Criterion D. Schizoaffective disorder and depressive or bipolar disorder with psychotic features have been ruled out.

Criterion E. The disturbance is not attributable to the physiological effects of a substance or another medical condition.

Criterion F. If there is a history of autism spectrum disorder or a communication disorder of childhood onset, the additional diagnosis of schizophrenia is made only if prominent delusions or hallucinations, in addition to the other required symptoms of schizophrenia, are also present for at least 1 month (or less if successfully treated).

**1.5. Schizoaffective disorder:**

Criterion A. An uninterrupted period of illness during which there is a major mood episode concurrent with Criterion A of schizophrenia.

Criterion B. Delusions or hallucinations for 2 or more weeks in the absence of a major mood episode during the lifetime duration of the illness.

Criterion C. Symptoms that meet criteria for a major mood episode are present for the majority of the total duration of the active and residual portions of the illness.

Criterion D. The disturbance is not attributable to the effects of a substance or another medical condition.

**1.6. Substance/medication-induced psychotic disorder:**

Criterion A. Presence of one or both of the following symptoms: delusions, hallucinations.

Criterion B. There is evidence from the history, physical examination, or laboratory findings of both:

- 1- The symptoms in criterion A developed during or soon after substance intoxication or withdrawal or after exposure to a medication.
- 2- The involved substance/medication is capable of producing the symptoms in criterion A.

Criterion C. The disturbance is not better explained by a psychotic disorder that is not substance/medication-induced.

Criterion D. The disturbance does not occur exclusively during the course of a delirium.

Criterion E. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

## **2. Bipolar and related Disorders:**

### **2.1. Bipolar I disorder:**

Criterion A. For a diagnosis of bipolar I disorder, it is necessary to meet the following criteria for a manic episode.

The manic episode may have been preceded by and may be followed by hypomanic or major depressive episodes.

#### **a. Manic Episode**

Criterion A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased activity or energy, lasting at least 1 week and present most of the day, nearly every day.

Criterion B. During the period of mood disturbance and increased energy or activity, three (or more) of the following symptoms are present to a significant degree and represent a noticeable change from usual behavior:

1. Inflated self-esteem or grandiosity.
2. Decreased need for sleep.
3. More talkative than usual or pressure to keep talking.
4. Flight of ideas or subjective experience that thoughts are racing.
5. Distractibility, as reported or observed.
6. Increase in goal-directed activity or psychomotor agitation.
7. Excessive involvement in activities that have a high potential for painful consequences.

Criterion C. The mood disturbance is sufficiently severe to cause marked impairment in social or occupational functioning.

Criterion D. The episode is not attributable to the physiological effects of a substance or to another medical condition.

*b. Hypomanic Episode*

Criterion A. A distinct period of abnormally and persistently elevated, expansive, or irritable mood and abnormally and persistently increased activity or energy, lasting at least 4 consecutive days and present most of the day, nearly every day.

Criterion B. During the period of mood disturbance and increased energy or activity, three (or more) of the following symptoms have persisted, represent a noticeable change from usual behavior, and have been present to a significant degree.

1. Inflated self-esteem or grandiosity.
2. Decreased need for sleep.
3. More talkative than usual or pressure to keep talking.
4. Flight of ideas or subjective experience that thoughts are racing.
5. Distractibility, as reported or observed.
6. Increase in goal-directed activity or psychomotor agitation.
7. Excessive involvement in activities that have a high potential for painful consequences.

Criterion C. The episode is associated with an unequivocal change in functioning that is uncharacteristic of the individual when not symptomatic.

Criterion D. The disturbance in mood and the change in functioning are observable by others.

Criterion E. The episode is not severe enough to cause marked impairment in social or occupational functioning or to necessitate hospitalization. If there are psychotic features, the episode is, by definition, manic.

Criterion F. The episode is not attributable to the physiological effects of a substance.

**2.2. Major Depressive episode**

Criterion A. Five (or more) of the following symptoms have been present during the same 2week period and represent a change from previous functioning; at least one of the symptoms is either: depressed mood or loss of interest or pleasure.

1. Depressed mood.
2. Markedly diminished interest or pleasure in all, or almost all, activities.
3. Significant weight loss when not dieting or weight gain.
4. Insomnia or hypersomnia.
5. Psychomotor agitation or retardation.
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional).
8. Diminished ability to think or concentrate, or indecisiveness.
9. Recurrent thoughts of death, suicidal ideation without a specific plan, or a suicide attempt or a specific Plan.
10. For committing suicide.

Criterion B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Criterion C. The episode is not attributable to the physiological effects of a substance or to another medical condition.

**2.3. Bipolar II disorder:**

Criterion A. For a diagnosis of bipolar II disorder, it is necessary to meet the following criteria for a current or past hypomanic episode and the following criteria for a current or past major depressive episode.

Criterion B. There has never been a manic episode.

Criterion C. The occurrence of the hypomanic episode(s) and major depressive episode(s) is not better explained by schizoaffective disorder, schizophrenia or other psychotic disorder.

Criterion D. The symptoms of depression or the unpredictability caused by frequent alternation between periods of depression and hypomania cause clinically significant distress or impairment in social, occupational or other important areas of functioning.

**2.4. Substance/medication-induced bipolar and related disorder:**

Criterion A. Prominent and persistent period of abnormally elevated, expansive, or irritable mood and abnormally increased activity or energy that predominates in the clinical picture.

Criterion B. There is evidence from the history, physical examination, or laboratory findings of both (1) and (2):

- 1– The symptoms in criterion A developed during or soon after substance intoxication or withdrawal or after exposure to a medication.
- 2– The involved substance/medication is capable of producing the symptoms in criterion A.

Criterion C. The disturbance is not better explained by a bipolar or related disorder that is not Substance/medication–induced.

Criterion D. The disturbance does not occur exclusively during the course of a delirium.

Criterion E. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

**3. Depressive disorders.**

**3.1. Major depressive disorder:**

Criterion A. Five (or more) of the following symptoms have been present during the same 2week period and represent a change from previous functioning; at least one of the symptoms is either : (1) depressed mood or (2) loss of interest or pleasure.

1. Depressed mood.
2. Markedly diminished interest or pleasure in all, or almost all, activities.
3. Significant weight loss when not dieting or weight gain.
4. Insomnia or hypersomnia.
5. Psychomotor agitation or retardation.
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional).
8. Diminished ability to think or concentrate, or indecisiveness.
9. Recurrent thoughts of death, suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

Criterion B. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Criterion C. The episode is not attributable to the physiological effects of a substance or to another medical condition.

Criterion D. The occurrence of the major depressive episode is not better explained by schizoaffective disorder, schizophrenia, or other psychotic disorders.

Criterion E. There has never been a manic episode or a hypomanic episode.

**3.2. 3.2 Persistent depressive disorder (Dysthymia):**

This disorder represents a consolidation of DSM-IV-defined chronic major depressive disorder and dysthymic disorder.

Criterion A. Depressed mood for most of the day, for more days than not, by either subjective account or observation by others, for at least 2 years.

Criterion B. Presence, while depressed, of two (or more) of the following:

1. Poor appetite or overeating.
2. Insomnia or hypersomnia.
3. Low energy or fatigue.
4. Low self-esteem.
5. Poor concentration or difficulty making decisions.
6. Feelings of hopelessness.

Criterion C. During the 2-year period of the disturbance, the individual has never been without the symptoms in criteria A and B for more than 2 months at a time.

Criterion D. Criteria for a major depressive disorder may be continuously present for 2 years.

Criterion E. There has never been a manic episode or a hypomanic episode, and criteria have never been met for cyclothymic disorder.

Criterion F. the disturbance is not better explained by a persistent schizoaffective disorder, schizophrenia or other specified or unspecified schizophrenia spectrum and other psychotic disorder.

Criterion G. The episode is not attributable to the physiological effects of a substance or to another medical condition.

Criterion H. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

**3.3. Substance/medication-induced depressive disorder:**

Criterion A. A prominent and persistent disturbance in mood that predominates in the clinical picture and is characterized by depressed mood or markedly diminished interest or pleasure in all, or almost all, activities.

Criterion B. There is evidence from the history, physical examination, or laboratory findings of both (1) and (2):

- 1- The symptoms in criterion A developed during or soon after substance intoxication or withdrawal or after exposure to a medication.
- 2- The involved substance/medication is capable of producing the symptoms in criterion A.

Criterion C. The disturbance is not better explained by a depressive disorder that is not substance/medication-induced.

Criterion D. The disturbance does not occur exclusively during the course of a delirium.

Criterion E. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

**3.4. Depressive disorder due to another medical condition:**

Criterion A. A prominent and persistent period of depressed mood or markedly diminished interest or pleasure in all, or almost all, activities that predominates in the clinical picture.

Criterion B. There is evidence from the history, physical examination, or laboratory findings that the disturbance is the direct pathophysiological consequence of another medical condition.

Criterion C. The disturbance is not better explained by another mental disorder.

Criterion D. The disturbance does not occur exclusively during the course of a delirium.

Criterion E. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

#### 4. Anxiety disorders.

##### 4.1. Panic disorder:

Criterion A. An abrupt surge of intense fear or intense discomfort that reaches a peak within minutes and during which time 4 (or more) of the following symptoms occur:

1. Palpitations, pounding heart, or accelerated heart rate.
2. Sweating.
3. Trembling or shaking.
4. Sensations of shortness of breath or smothering.
5. Feelings of choking.
6. Chest pain or discomfort.
7. Nausea or abdominal distress.
8. Feeling dizzy, unsteady, light-headed, or faint.
9. Chills or heat sensations.
10. Paresthesia.
11. Derealization or depersonalization.
12. Fear of losing control or "going crazy."
13. Fear of dying.

Criterion B. At least one of the attacks has been followed by 1 month (or more) of one or both of the following:

1. Persistent concern or worry about additional panic attacks or their consequences.
2. A significant maladaptive change in behavior related to the attacks.

Criterion C. The disturbance is not attributable to the physiological effects of a substance or another medical condition.

Criterion D. The disturbance is not better explained by another mental disorder.

**4.2. Generalized Anxiety Disorder:**

Criterion A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months.

Criterion B. The individual finds it difficult to control the worry.

Criterion C. The anxiety and worry are associated with three (or more) of the followings 6 symptoms (with at least some symptoms having been present for more days than not for the past 6 months:

1. Restlessness or feeling keyed up or on edge.
2. Being easily fatigued.
3. Difficulty concentrating or mind going blank.
4. Irritability.
5. Muscle tension.
6. Sleep disturbance.

Criterion D. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Criterion E. The disturbance is not attributable to the physiological effects of a substance or another medical condition.

Criterion F. The disturbance is not better explained by another mental disorder.

**4.3. Substance/medication-induced anxiety disorder**

Criterion A. Panic attacks or anxiety is predominant in the clinical picture.

Criterion B. There is evidence from the history, physical examination, or laboratory findings of both (1) and (2):

- 1- The symptoms in criterion A developed during or soon after substance intoxication or withdrawal or after exposure to a medication.
- 2- The involved substance/medication is capable of producing the symptoms in criterion A.

Criterion C. the disturbance is not better explained by an anxiety disorder that is not substance/medication-induced.

Criterion D. the disturbance does not occur exclusively during the course of a delirium.

Criterion E. the disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

## **5. Feeding and Eating Disorders.**

### **5.1. Anorexia Nervosa:**

Criterion A. Restriction of energy intake relative to requirements, leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health.

Criterion B. Intense fear of gaining weight or of becoming fat, or persistent behavior that interferes with weight gain, even though at a significantly low weight.

Criterion C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.

### **5.2. Bulimia Nervosa**

Criterion A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:

1. Eating, in a discrete period of time, an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances.

2. A sense of lack of control over eating during the episode.

Criterion B. Recurrent inappropriate compensatory behaviors in order to prevent weight gain.

Criterion C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for 3 months.

Criterion D. Self-evaluation is unduly influenced by body shape and weight.

Criterion E. The disturbance does not occur exclusively during episodes of anorexia nervosa.

## **V. Women against gender differences:**

It is asserted that an attempt to reduce mental health risks cannot be gender neutral when the risks are known to be gender specific. Women are not only systematically denied experiences that are vital to positive mental health, their rights are also frequently violated by major stakeholders. The WHO (World Health Organization) report on gender inequality and health stated that lack of awareness and acknowledgement are important barriers. Once women surpass these barriers and seek help, health care systems perpetuate these inequalities instead of resolving them and this only strengthens and affirms the existing barriers. Douki, and al. (2007) in her paper on women's mental health in the Muslim world asserts that in Arab communities the subordinate position assigned to women impacts not only the prevalence and course of mental disorders but also help-seeking behaviors and outcomes. Gender disadvantage among women includes several important facets of life such as poverty, discrimination, powerlessness and limited access to resources and restricted choices, be it in the choice of marriage, work place issues or salaries. From around the world, it is indicated that each of these negatively impact mental health. These vulnerabilities enhance psychological distress in crisis situations, as compared to men. Coping with displacement, physical and sexual violence, widowhood, detention, challenges and day-to-day difficulties are faced by women during both

natural and man-made disasters. Women often have to cope with the loss of close relatives and find new ways to support themselves and their families. [1] [3]

Many of these factors co-exist and hence compound the impact of disadvantage. It is therefore a challenge to tease out which of these factors have a greater or lesser relevance in causing mental disorders.

## **VI. Discussion of our results:**

### **1. Descriptive analysis**

#### **1.1. Sociodemographic characteristics of hospitalized women**

##### **a. Age**

The average age in our case series is **37,6** years, with a minimum of 18 and a maximum age of 60 years. The age group between 41 and 49 years is the most represented in our sample (30%). Thus this demographic particularity is close to the one found in the Ibn Rochd study Moussaoui D et al. (2016) who found an average age of (33,4) years. Similarly to our most represented range group, Furegato F et Al (2010) found out that the 40 49 group of female inpatients is the most represented.

Sajatovic M et al. From Cleveland, Ohio divided the female inpatients into two categories, explained and compared to our results in the table below [22] [23] [24]

**Table III : Average age comparison among hospitalized women**

<b>Authors</b>	<b>Country</b>	<b>Year of study</b>	<b>Case series</b>	<b>&lt; 50 years</b>	<b>Average age</b>	<b>&gt;50 years</b>	<b>Average age</b>
Sajatovic M et al.	USA (Ohio)	2000	564	91,2%	35	8,8%	55,8
Our study	Morocco (Marrakech)	2019	70	91,5%	35,3	8,5%	54

***b. Mental disorder age-specific***

**Schizophrenia**

The discrepancy in these results is a product of the dispersion of schizophrenia in all age categories. Early onset of schizophrenia explains the young average age in our study, its late onset enhances the estrogen withdrawal theory supported by Montemagni et al (2015) findings.

**Table IV: Average age among hospitalized women with schizophrenia**

<b>Authors</b>	<b>Year of study</b>	<b>Country</b>	<b>Average age</b>
Xiang Y et al	2010	China	33,8
Montemagni et al	2015	Italy	44,2
Our study	2019	Morocco (Marrakech)	23

**\* Bipolar I disorder**

**Table V: Average age among hospitalized bipolar I women.**

<b>Authors</b>	<b>Year of study</b>	<b>Country</b>	<b>Average age</b>
Nivoli A et al	2011	Spain (Barcelona)	44,5
Bram N et al	2013	Tunisia (Tunis)	35,6
Our study	2019	Morocco (Marrakech)	23,3

**\* Major depressive disorder**

**Table VI: Average age among hospitalized women with major depressive disorder**

<b>Authors</b>	<b>Year of study</b>	<b>Country</b>	<b>Average age</b>
Pitali C et al	1995	USA (Chicago)	38,4
Gilbert M	2011	UK (London)	35,6
Our study	2019	Morocco (Marrakech)	37,5

*c. Marital status*

Globally, in our study, the majority of inpatients are single with a percentage of 44,2%, when married population didn't exceed 35,7% and only 18,7 were divorced. Similarly to our finding, Cloitre et al (1996) and Belghazi et al (2016) had single women as a majority in their case series. On the contrary, Cochrane R et al (1981), El Sayed et al (1986) and Ihezue U (2015) had married women predominating, followed by single women on the second line.

The high rate of celibacy in our study can be attributed to the early onset of mental disorders among the majority of hospitalized women, when patients with late onset have an overlapping proneness to marry and procreate. Calzerani A. et al (1990)

The poor prognosis of psychotic group of disorders and their great severity (high LOS, residual features, poor functioning) reduce chances of being in a relationship and starting a family.

Our study sample (n=70) is smaller comparing to USA and UK studies conducted on larger populations, and so distorted results. [25] [26]

According to Gove W.R from the oxford journals, marriage in modern industrial societies might produce unusually high rates of mental illness in women. First, the married woman's structural base is typically more fragile than is the man's. Women generally occupy only one major social role, that of housewife, whereas men generally occupy two major roles, household head and worker. Thus, a married man has two major sources of gratification, his family and his work, and a woman only one, her family. If a male finds one of these roles unsatisfactory, he can frequently focus his interest and concern on the other role. In contrast, if a woman finds her family role unsatisfactory, she typically has no major alternative source of gratification.

Second, it seems reasonable to assume that a large number of married women might find that their major instrumental role, keeping house, is frustrating. Being a housewife does not require a great deal of skill for virtually all women, whether educated or not, seem to be capable of being at least moderately competent housewives. Furthermore, it is a position of low prestige. (Friedan, 1963 and Harrison, 1964)

The occupancy of such a low-status, technically undemanding position is not consonant with the educational and intellectual attainment of a large number of married women in our society.

Third, the role of housewife is relatively unstructured and invisible. It is possible for the housewife to put things off, to let things slide, in sum, to perform poorly. The lack of structure and visibility allows her to brood over her troubles, and her distress may thus feed upon itself. In contrast, the jobholder must consistently and satisfactorily meet demands that constantly force him to be involved with his environment.

Fourth, even when a married woman works, she is typically in a less satisfactory position than the married male. Women are discriminated against in the job market and they frequently hold positions that are not Commensurate with their educational backgrounds. (Epstein, 1970; Harrison, 1964; Knudsen, 1969)

Furthermore, working wives are typically viewed by themselves and by others as supplementing the family income, and this orientation makes their career involvement fairly tenuous (Harrison 1964, Hartley1960) [27]

*d. Mental disorder Marital status-specific*

**\*Schizophrenia**

**Table VII : Predominant marital status among schizophrenia women** [28]

Authors	Year of study	Country	Dominated status
Larsen K et all	1996	USA	Being single
Xiang Y et al	2010	China	Being married
Montemagni et al	2015	Italy	Being single
Our study	2019	Morocco (Marrakech)	Being single

Discrepancies in the literature concerning predominant marital status among schizophrenia women were wide. Early-onset disorder, severity of symptoms and poor prognosis

interfere in the relationship making and stigmatize more women pushing them unwillingly into celibacy circle.

**\*Bipolar I disorder**

**Table VIII : Predominant marital status among bipolar I women**

<b>Authors</b>	<b>Year of study</b>	<b>Country</b>	<b>Dominated status</b>
Nivoli A et al	2011	Spain	Being married
Bram N et al	2013		Being single
Our study	2019	Morocco (Marrakech)	Being single

**\*Major depressive disorder**

**Table XI: Predominant marital status among women with major depressive disorder**

<b>Authors</b>	<b>Year of study</b>	<b>Country</b>	<b>Dominated status</b>
Pitali C et al	1995	USA (Chicago)	Being married
Our study	2019	Morocco (Marrakech)	Being married

MDD women admitted in our study constitute a very heterogeneous group. Going back to what caused the disorder in first place elucidate why this sample contains only married women.

Chronic comorbidities (in our case: lupus and heart failure), heavy trauma (losing a child), being forced into the marriage at the age of 17 and coming from disadvantageous low-life environments, these various causes trapped randomly married women only into major depressive disorder. Being it a very small group (n=8) makes it statistically not significant.

*e. Educational level*

In our study, the majority of our patients dropped out in primary school period 32,8%, followed by 24,8% dropped in middle school, and only 7,1% attended the university.

The table below elucidates our 2019 results, Moussaoui D et al (2016), and ancient findings of developed countries.

Prevalence of psychiatric disorders in illiterate women is high, while being educated could be a protective factor against mental disorders. This could be attributed to socio-cultural limitations among women with lower literacy status, which makes them unable to utilize more efficient coping styles in the face of stress. [29] [30]

The population admitted at Ibn Nafis hospital has a very lower economical level which explains the poor educational level of our small sample (non representative).

**Table XII : Distribution of educational levels among hospitalized women**

Authors	Year of study	Country	Primary school percentage	Middle school percentage	University
Aro S et al	1995	Finland (Helsinki)	46,4%	42,2%	11,5%
Cloitre M et al	1996	USA (NYC)	33%		31%
Moussaoui D et al	2016	Morocco (Casablanca)	31%	36,3%	12,1%
Our study	2019	Morocco (Marrakech)	32,8%	24%	7,1%

*f. Profession*

In our study, half of our case series women are jobless (51,4%), (30%) are housewives and only (15,6%) are employed. These results are different than the findings of Comacchio C et al (2018) where (34, 7%) are employed, housewives represent (36,1%) and unemployed women only (29,2%).

The Mediterranean-arab culture in both countries explains the rising percentage of housewives, but as developing country as we are, women are still marginalized from the work market.

*g. f. Origin*

Kadri N. et al (2010) noted on a national study that mental disorders are more frequent among females, urban, divorced and unemployed subjects. Findings that correlate with our results with 64% of admitted women from the urban region of Marrakech. This consolidates

studies from Sweden, Germany and UK suggesting that social isolation in socially organized parts of the city could increase the risk of mental disorders, and their incidence is greater among those born or brought up in urban areas. [31] [32] [33]

**1.2. Family history of hospitalized women**

In our study, 11,6% of our inpatient women have positive history of mental illness, 70% of them have schizophrenia and other psychotic disorders.

Our results join the literature with percentages that vary between 5,5% and 12,5%. (Table XIII) [34] [35] [36] [37] [38] [39]

It is established that the genetic architecture of schizophrenia involves rare, common and novo risk alleles distributed across a large number of genes. Despite substantial genetic heterogeneity, different classes of mutation have been shown to converge onto common biological pathways, implicating neuronal calcium signaling, synaptic plasticity and the immune system in the disorder. It has also become clear that schizophrenia shares risk alleles with other neuropsychiatric disorders with evidence of a gradient of mutational severity with intellectual disability and schizophrenia at the most extreme and moderate ends of this spectrum. [40]

**Table XIII: Positive family history of schizophrenia spectrum and other psychotic disorders**

<b>Authors</b>	<b>Year of study</b>	<b>Country</b>	<b>Frequency of positive family history</b>
Albus and Maier	1995	Germany	7,8%
Alda et al	1996	Canada	6%
Konnecke et al	2000	Germany	12,5%
Arajarvi et al	2006	Finland	9,6%
Adachi et al	2008	Japan	5,5%
Our study	2019	Morocco	<b>8,12%</b>

**Table XIV: Positive family history of major depressive disorder**

Authors	Year of study	Country	Frequency of positive family history
Bromderger J et al	2016	USA	9,7
Our study	2019	Morocco	3,48

It was 1987, almost thirty years ago, when a breakthrough discovery was published in the high impact ‘nature’ journal. Janice Egeland published a paper reporting the discovery of a genetic marker located into the chromosome 11 linked to bipolar disorder. [41] This finding had a very wide resonance, but after only two years, a re-evaluation of the same sample where two subjects did change clinical status from healthy to affected by bipolar disorder changed the results that became completely insignificant. [42]

The disappointment in the search for genetic determinants of mental disorders and specifically of bipolar disorder, reached its maximum about 10 years ago, when the largest study so far on 3000 subjects could not find any signal anywhere in the genome separating bipolar patients from healthy individuals. Risk genes are in the range of 50 – 100 or more, each of them conferring a very mild and small risk.

The first findings came out when analyzing a sample of more than 7000 bipolar disorder subjects where it was possible to identify one of the first genes that now stand as definite risk factors for bipolar disorder. Similarity, for MDD, a sample of more than 70000 subjects allowed to detect strong signals from 15 genes. Therefore, at present there is substantial evidence suggesting that the samples in the order of 10000 are sufficient to detect all the genes that responsible for developing mood disorders. [43]

In fact, heritability of both bipolar disorder and major depressive disorder is in the range of 50%, which means that genes alone are not sufficient to explain all the cases of mood disorders but they confer a substantial risk which is combined with environmental stressors to determine the final illness, but which are these genes and why they confer the risk for more

disorders? It is very interesting to see that many of those genes are linked with the issue of neuroplasticity and inflammation, two mechanisms that when combined, decrease the possibility of the individual brain to react and be plastic to external stressors and influence. [44]

### **1.3. Juridical history**

In our study, 5,7% of women have a criminal record with charges of mostly assault, drug charges on the second line and a case of prostitution and homicide. Rossegger et al (2009) finding highlights homicide at first with 37,5%, arson 31,3% and assault 12,5%.

The high rate of homicide can be related to access to firearms, high rate of substance abuse, personality disorders or a severe state of mental disorder.

In the general population, most victims of physical violence are young men, whilst victims of violence in domestic settings and victims of sexual violence are more likely to be women.

Theories on why certain groups are vulnerable to violent victimization and related prevention policies are shaped by gender patterns are statistically inconclusive. Men and women with preexisting mental illness are at significantly higher risk of being victims of all forms of violence than the general population, with victimization prevalence in the order of 15–45% and 40–90% over a lifetime. (British crime survey 2010)

This is known to be associated with physical health problems, a worsening of the underlying mental illness, psychiatric co-morbidity and poorer functioning and quality of life.

The general victimization literature has been fairly gender-blind, despite the interesting and potentially informative gender-risk differences. [45]

Conversely, mentally ill patients are overrepresented in the criminal justice system, this over representation has become a growing concern internationally among mental health workers, corrections departments, lawyers, public policy makers, and human rights advocates. Although estimates vary widely, approximately 14 to 16% of people in the criminal justice system have a serious or persistent mental disorder.

When mentally ill patients make headlines for violence, it is often for irrational and unpredictable acts of mass violence that spark public fear, this is why the belief that mental illness causes unpredictable violence is pervasive, however, these acts account for a very small percentage of the criminal activity carried out by psychiatric patients who do engage in criminal activity, many of their crimes are “survival crimes” (e.g., urinating in public), or reactive crimes (e.g., responding to aggression).

According to the criminalization hypothesis, psychiatric patients become involved in the criminal justice system because of access lack to the mental health care needed, the criminalization is largely blamed on the deinstitutionalization of mental health hospitals in the 60s and 70s, and after new legislation passed that was designed to create community mental health centers.

In addition to this, another explanation emerges, that is difficulty navigating the criminal justice system. (Mentally ill offenders are likely to be poor, cannot afford to hire an attorney, having trouble understanding police interrogations and be more making false confessions).

Another theory that has gained support in recent years is based on the idea that mentally ill offenders are not very different from general-population-offenders when it comes to criminal risk factors. In general, the most salient risk factors often referred to as the “**central eight**” include the following: (1) a history of antisocial behavior, (2) antisocial personality pattern, (3) antisocial cognition, (4) antisocial associates, (5) troubled family and marital relationships, (6) problems with school and/or work, (7) leisure and/or recreation problems, and (8) substance abuse.

Evidence from recent analysis determined that offenders with a mental disorder demonstrated significantly more of these central eight general risk factors than similar offenders who did not have a mental illness, and according to UK national surveys, the likelihood of having a substance abuse disorder is nearly two times higher among psychiatric patients than in the general population, who often “self-medicate” with drugs or alcohol to dull the impact of precipitated symptoms, which can ultimately lead to criminal justice involvement. [46]

**1.4. Toxic history**

Skinner et al. noted that 30% of people with mental illness will have a problem with alcohol and drug use in their lifetime and 37% of people who have problems with alcohol use (53 % of those who have problems with drug use) will have a mental illness. This disparity is found in studies of the prevalence of drug use among patients with a first episode of psychosis. Thus, it reaches 74% in the study of Lambert et al. against 23% in that of Sevy et al.

Our study joins Sevy et al findings with 20%. 14,5% of women consume cigarettes, 12,5% consume cannabis, 8,6 alcohol abuse. [22] [47] [48] [49]

On an early edition of the journal of substance abuse treatment, Kate B. et al (2000) detailed the difficulties that mental illness patients pose for resolving substance abuse, explaining that the most common purpose of using is self-medication regardless of its dynamic that complicates disorder's remission. Patients may feel that illicit drugs have fewer side effects than medication, work better than their psychiatric medicine, are available and less stigmatizing. A loss of hope or demoralization given the chronicity of the mental disorder is included among secondary reasons. [45]

**Table XV: Frequency of cigarettes using among hospitalized women**

<b>Authors</b>	<b>Cigarettes</b>	<b>Cannabis</b>	<b>Alcohol</b>	<b>others</b>
Belghazi et al (2016)	18,6%	10,7%	8,9%	4%
Our study (2019)	14,5%	12,5%	8,6%	1,4%

**1.5. Psychiatric history**

***a. Distribution of mental disorders***

In a comparison of two cohorts, Healy D et al (2011) presenting the evolution of schizophrenia rates among inpatient women. Results highlight a slight increase of 2%. (Table XV) [50]

A specific distribution of mental disorders observed among hospitalized women underlines the predominance of schizophrenia with 55%, bipolar I disorder 17% and MDD 8%. These results vary in Belghazi et al (2016) in spite of close geography and being it a recent Moroccan study too. (Table XVI) [22] [51] [52]

**Table XVI: Rate of schizophrenia hospitalization among hospitalized women**

Period of studies	Schizophrenia rate
1875 – 1924	54%
1994 – 2010	56%
Our study (2019)	55%

**Table XVII: Frequency of mental disorders observed at IbnNafis hospital**

Authors	Year	Schizophrenia spectrum disorders	Bipolar I disorders	Major depressive disorder	Others
Cloitre et al	1996	18%	19%	41,1%	20%
Belghazi et al	2016	27%	35%	30,4%	7,3%
Camacchio et al	2018	74%		26%	-
Our study	2019	70%	19%	8%	4,5%

White et al. (1997) data just described aggressive and disruptive behavior as a common antecedent to acute admission in the current care environment. It is also a primary correlate of being difficult to discharge even during times of high pressure to reduce inpatient census.

Cognitive impairments and hostility also posed the greatest barriers to discharge, and residual negative symptoms despite being under antipsychotics kept being a repetitive hospitalization pattern, especially when designated persecutors are family members and physical aggression or threats are involved. [50]

***b. Length of stay indoors of psychiatric facilities***

Newman L et al (2017) point factors associated with lengthier stays: accommodation status (including living in supported accommodation, nursing/healthcare, and being homeless),

being male, being unemployed/housewives and having a higher number of different care coordinators. On the other hand, factors associated with shorter stays are being a council tenant, having a diagnosis of a disorder due to psychoactive substance abuse (it correlates with our finding LOS= 4 days), affective disorders (it matches our findings LOS= 9,7 days), stress-related and personality disorders. Marital status is not significant in this model.

It is interesting to note that an earlier study (from 2007 to 2009) Tulloch et al (2012) conducted on a similar sample found no effect of unemployment on LOS. Newman L et al (2017) sample (7653) was larger than theirs (4485) which may have increased the power necessary to detect an effect in a sample where the majority is unemployed.

The reason for this discrepancy needs to be explored further, and might underline the idea that these predictors of LOS are likely to be temporally, as well as locality, specific. [68] [209]

Tulloch et al. (2011) found that the effect of female gender regarding LOS is apparent in samples of over 3000, which explains our shortness of results (n=70). [55]

London has found a higher rate of admissions and LOS for schizophrenia and related psychoses, compared to the rest of the UK Thompson et al (2004), findings that go along with our results (schizophrenia spectrum and other psychosis LOS = 13,2 days). [56]

An honorable mention to Vyssoki et al (2011) Austrian study where LOS for affective disorders is up to 15,3 days, when ours are only 9,7. This gap can be explained by the enormous differences between the two countries, the modernity of psychiatric facilities and available well-trained staff, so that medical insurance can cover LOS. [57]

*c. Total hospitalizations number in psychiatric facilities*

Qin. P et al (2005) Denmark focused on LOS, diagnoses, number of admissions and prior hospitalizations. Their findings show a majority of women admitted 2 to 3 times, a similar result to ours 40%. Followed by inpatients admitted only once, same as our finding 37,1%. [58]

A comparison of the average number of hospitalizations between psychotic disorders and affective ones comes in favor of the first group with 2,5 days versus 2 days regarding affective disorders.

*d. Follow-up consultation after discharge*

Davidson et al (2017) Washington D.C define Follow-up as a visit with a psychiatrist, psychologist, psychiatric nurse, or social worker that aims to assess the patients functioning, level of hallucinations, symptoms and treatment adherence, it also checks if the patient is back to her previous life, activities and children care.

Inpatient women discharged from psychiatric facilities require timely follow-up care to maintain their functioning and avoid or delay future hospitalizations. Despite the importance of follow-up care, there is surprisingly little percentage that is adherent to outdoor appointments and psychotherapy\group therapy sessions (57,1%). These findings serve as a benchmark from which to measure progress. Given that our findings are based on a small sample (n=70), we cannot fully explain the small rate of positive follow-up.

Some variation could be attributable to cultural differences, religious superstitions across the region, or the availability of primary caregivers who accept to be in charge of the follow-up care.

Follow-up rates may reflect broader investments in community mental health services. It is notable that spending on community mental health services is lower than many other developing countries around. [59] [60]

*e. Substance abuse and weaning trials*

The high prevalence of co-occurring substance use disorders among women with severe mental illness is now widely recognized (Community Mental Health Journal koff & Drake, 1991).

As patients with dual-disorders have poor short-term outcomes in traditional mental health programs and do not readily fit into traditional substance abuse treatment programs

(Ridgely et al., 1990), models that integrate mental health and substance abuse treatments have been developed (Drake et al.1993).

Many women avoid self-help programs and rehabilitation because they fear large crowds and the overwhelming feeling of strong symptoms and stigma. A large proportion reports that other members encouraged them to discontinue psychiatric medications because all they needed were meetings.

Inpatients who attempted to use rehabilitation programs reported dropping out or finding it hard to make a regular commitment for several reasons:

- 1) Some stated that once at a meeting they had difficulty sitting still, but felt uncomfortable getting up and leaving. If they were able to listen.
- 2) Many found the stories increased their desire to use substances. They often were unable to relate to the negative outcomes of using, as they hadn't experienced the same losses (job, spouse, money, family relationships).
- 3) Other women had difficulties to reach a spiritual level of prayers, and apply the advice of "let go and let God decides". [61]

*f. Suicide attempt*

Suicide has a strong association with mental disorders and contributes to the excess mortality of the mentally ill (Of all individuals dying by suicide, about one-half have suffered from depressive disorders and nearly one-half have a history of psychiatric hospitalization Qin P. et al (2003)). This association has been assessed by psychological autopsy of consecutive series of suicides and by studying the suicide mortality of particular disorders.

These approaches have shown that 90% of suicides have one or more psychiatric disorders at the time they happened, and that certain mental illnesses have increased suicide risks. [62] [63]

Kjelsberg et al. (1994) determined an average age of suicide of 23 years (48,4% Aaltonen K et al (2014)), the majority of incriminated disorders swing between personality disorders (53%) and depressive disorders (28%). These findings correlate perfectly with ours. The majority of inpatient women attempting suicide at Ibn Nafis hospital were diagnosed with **major depressive disorder**, under a combination of antidepressants and anxiolytics for at least 3 months. Only one case of Bipolar I mania was registered, so as a schizophrenia case. It is important to highlight a similar pattern of methods between our study and Kjelsberg's, poisoning comes at first followed by drowning and hanging. [64]

Kjelsberg et al. (1994) also found no differences in the demographic data such as social class, level of schooling, marital status and number of siblings.

**1.6. Schizophrenia spectrum and other psychotic disorders**

**a. Onset of disorder**

Pignon B. et al (2017) admit that women are more likely than men to report a psychosocial stressor prior to onset of schizophrenia.

The mode of onset is similar for women and men, with two out of three experiencing gradual or insidious onset over a period of >6 months (69,3%) Vera A. et al (2008). A finding that matches our result 76,3%. However, women are more likely than men to have single or multiple episodes, with some recovery in between episodes, and less likely to experience a chronic course of illness. [65] [66]

In an attempt to explain the widely reported earlier age of onset among men, Hafner H. (1991) and Seeman M (1996) have hypothesized that, although the lifetime risks are equal for the sexes, young women are relatively protected against the disease by a factor that apparently reduces vulnerability to the manifestation of the psychosis during a limited period of time up to the menopause. Since the protective effect starts prior to puberty and apparently ceases after estrogen production declines in the menopause, They assumed that this protective factor consists of a structural (related to brain development) and a functional effect (related to estrogen

levels). Estrogen is known to have an effect resembling that of neuroleptic drugs on the sensitivity of dopamine receptors. This matter requires further investigation. [67] [68] [69]

**Table XVIII: Progressive-onset rates of schizophrenia spectrum and other psychotic disorders**

<b>Authors</b>	<b>Schizophrenia</b>	<b>Schizoaffective disorder</b>
Vera et al 2008	69,3%	66,1%
Our study 2019	76,3%	60%

***b. Positive psychotic symptoms***

The typical positive symptoms of schizophrenia, such as hallucinatory experiences, fixed delusional beliefs or disorganized speech tend to be very disruptive. These types of symptoms are referred to as "positive" because, compared to a normal mental state, schizophrenia women have more exaggerated mental experiences (thoughts, feelings, behaviors) than others. [70]

In our study so as in other similar studies, we found that the majority of admitted women with schizophrenia have **moderate** positive psychotic symptoms. Acuna M et al (2010) [71]

***c. Negative psychotic symptoms***

Negative symptoms refer to the weakening or lack of normal thoughts, emotions or behavior in schizophrenia patients. Their prevalence in first-episode psychosis is high, 50-90%.

20-40% of schizophrenia patients have persisting negative symptoms, severe negative symptoms during the early stages of treatment predict poor prognosis. Most of metanalysis studies proved the low level of negative symptoms of admitted women with schizophrenia, and its quick dissolving under medication. This joins our results. 50% of inpatients have **mild** negative symptoms when only 20% were admitted with severe negative symptoms. [72]

***d. Treatment patterns of schizophrenia spectrum and other psychotic disorders***

In the literature and referring to the study conducted by Olfson M. et al (2009). Patients with schizoaffective disorders are significantly more likely than patients with schizophrenia to receive antidepressants (61% versus 44%), mood stabilizers (55% versus 34,4%) and anxiolytics

(43,2% versus 35,1%). women with schizoaffective disorder are more likely than schizophrenia women to receive psychotherapy (23,4% versus 13%) and inpatient mental health care. (9,4% versus 6,2%).

During the six months prior being admitted into the psychiatric hospital, schizoaffective women were more under antipsychotics (60%) than women with schizophrenia (53%). 23% of these women were under monotherapy, 13% under bitherapy of antipsychotics and only 7,9% under LAN prior the hospitalization.[73]

The small sample of our study comparing to USA and Canada wide-sampled metanalysis explains the disparity of results.

### **1.7. Bipolar I disorder**

#### ***a. Psychotic features***

Clinicians have long noted the overlap of mood symptoms and psychotic symptoms. About 58% of manic patients have psychotic symptoms. 15% of depressed patients have psychotic symptoms Goodwin et jamison, (1990).

Conversely, a depressive syndrome occurs in about 25% of people with schizophrenia Siris (2000). [74] [75]

In our study, (83%) of bipolar women admitted at the psychiatric hospital have psychotic features (91,6%) of bipolar inpatients are admitted with manic episode versus 60,4% observed in the study of Fellingner et al (2018).

#### ***b. Toxic behavior***

41,7% of BID women in our case series have a comorbidity. (substance abuse in our case) Ayano G et al (2017) and Kawa et al (2005) have mentioned that the magnitude of comorbid substance use disorder is higher among women with a history of relapse and hospitalizations. Similarly, those patients who had a history of relapse had high comorbid substance use disorders than those who had no history of relapse and hospitalizations. [76] [77]

**Table XIX: the frequency of comorbid substance use among bipolar women**

Authors	Year	Country	Comorbid substance use %
Regien A et al	1990	USA	60,7%
Cagerberg T et al	2010	Norway	43%
Ayano G et al	2017	Ethiopia	64%
Our study	2019	Morocco	41,7%

The difference observed in Norway results and in ours comparing to the high level of comorbid use in USA or Ethiopia maybe due to the difference in data collection, type of studies, sociodemographics, methodology and sample size. [76] [78] [79]

Ortega M et al (2012) and Hendrick et al (2000) have conducted a 3-year study period of women diagnosed with BID. The finding consisted on high rate of hospitalization for mania and psychotic features. A result that is similar to ours as stated earlier. Several factors explain why women have higher hospitalization rate:

**First**, health care utilization is known to differ between women and men, as women are reported to seek professional help from mental health care providers not only more frequently, but also at earlier stages. Women appear to be better integrated socially, thereby profiting from more social support in time of crisis.

**Second**, there is some evidence that bipolar II, mixed episodes and rapid cycling dominantly affect women, hereby leading to more frequent episodes. [80]

**1.8. Major depressive disorder**

*a. Major depressive disorder subtypes and suicide attempt*

According to Hawton et al (2013) suicide deaths in major depressive disorders are associated with male gender, family history of psychiatric disorder, previous suicide attempt, depression severity, hopelessness, co-morbid anxiety and substance use disorders. Before that, Roose et al (1983) found out that the presence of psychotic features in major depressive disorders is predictive of increased risk of suicide. [81] [82]

Our study joins literature with 33,6% of MDD inpatients with positive psychotic features and attempted suicides and half of them with melancholic features (50%).

Similar results are detailed in the table below. [83] [84] [85]

**Table XX: the frequency of melancholic features among women with major depressive disorder**

Authors	Year	Country	Melancholic features	No melancholic features
Marques-Deak et al	2007	Brazil	61%	39%
Exner et al	2009	Germany	83%	17%
Quin R et al	2012	New Zealand	52,4%	47,5%
Our study	2019	Morocco	50%	50%

***b. Severity of major depressive disorder***

According to the severity rating scale of depression HAMILTON-D. (66,3%) of major depressive disorder inpatients are admitted for a **severe** major depressive episode. The rest of patients (33,7%) are admitted for a moderate major depressive episode. This finding is close to the findings of Fisher-Kern et al (2013) with 84,8% admitted for a severe episode while only 15,2% hospitalized for a moderate episode.

The high rate of hospitalized women with a severe major depressive episode is a witness of the high tolerance eastern women of the Arab\Muslim world have against daily distress, discrimination and multiple roles in our society. A factor that delays diagnosis, therefore early treatment and follow up.

***c. Major depressive disorder and presence of comorbidity***

➤ **Anxiety comorbidity**

According to Kessler R. et al (1995) and Judd LL et al (1998) who report that Depression and anxiety exist together more often than as separate syndromes, particularly true for general anxiety disorder (GAD) and major depressive disorder, as eight out of 10 subjects with lifetime GAD also had a comorbid mood disorder during their lifetime. This finding was observed in our

study with 66,7% of inpatient women admitted for MDD with anxious features (generalized anxiety disorder, panic attacks) assessed through HAM-A.

A number that is close to Kessler et al (2003) results (52,9%). [86] [87] [88] [89] [90] [91]

➤ **Smocking behavior**

Grant et al (2004) state that women smocking less than men is a fact. Kessler et al (2005) adds on that women also have higher rates of major depression compared to men. There are several noteworthy factors in the strong association of negative affect and smocking behavior.

McKee et al (2003) points strongly towards it. Later on, Husky et al (2008) in the Yale university school of medicine, conducted a study that highlighted that the association between smocking behavior and major depressive disorder is so enhanced among women, indicating that depression is more commonly comorbid with smokers. (Compared to men)

This is consistent with previous data showing that negative affect is more strongly associated with nicotine dependence in women McKee et al., (2003) and that depression is a risk factor for smoking relapse Murphy et al., (2003) and poor smoking cessation outcomes in women, at least in part, may be due to the higher likelihood of women experiencing the emergence of depressive symptoms during smoking cessation. [92] [93] [94]

In our study, only 16,7% of our women have smocking comorbidity. This may be due to the small sample of MDD patients admitted in this short period (5 months). Most of our women are married, with children and in stable relationships. This, in a conservative environment like ours isn't in favor with smocking behavior.

*d. Major depressive disorder and pharmacology treatment*

Treatment-resistant depression is usually seen as the failure to reach sufficient remission after an adequate treatment (Souery D. et al 1999). Despite the availability of an increasing number of new antidepressants, treatment-resistant depression occurs in up to 30% to 40% of depressive episodes adequately treated with first-line antidepressant therapy in a psychiatric setting. [95]

In literature, and according to Souery D. et al (2007), 74,4% of admitted women with MDD were already under a therapeutic combination of antidepressants and anxiolytics for months, but admitted later for a severe depression. A finding that is close to our result 83%. [96]

*e. Major depressive disorder and cognitive behavioral therapy*

In a study conducted by Miranda J. et al (2003) 33,7% of MDD inpatients have benefited from sessions of cognitive behavioral therapy. Their finding seems a small number comparing to our result (2019) 50%, but the small size of sample explains it.

The sixteen years gap between the two studies might partially explain the difference of results found.

## **VII. Limitations of our study.**

We have tried through this work to study the epidemiological characteristics of mental disorders among hospitalized women.

The lack of similar statistics and metanalysis in our country and in the Arab world globally, makes it hard for results comparison with international literature data.

Our study is cross-sectional based on information gathering through a psychiatric evaluation using an English written questionnaire that is explained to inpatient women at Ibn Nafis hospital in Arabic dialectal. A factor that is responsible of bias when collecting information.

Limits of this work also reside in the small sample of patients included in the study, thus the low rate of various psychiatric disorders.



**PRISE EN CHARGE**

## **I. Pharmacological treatments:**

Presently, medical schools and psychiatry residency programs use the biopsychosocial model to train and teach medical students and residents. Both the American Psychiatric Association and the American Board for Psychiatry and Neurology endorse this approach.

The genesis of the biopsychosocial model can be credited to George Engel who, in 1977, wrote “The Need for a New Medical Model: A Challenge for Biomedicine.”

The concept was originally intended to encourage non psychiatric physicians to see patients as a whole, a counterpoint to the increasing focus on molecular biology in medical school education.

It was to help conceptualize patients not just as organisms with diseases, but as individuals with complex behaviors and emotions that affect their physical ailments.

The biopsychosocial concept became increasingly popular and then the standard for teaching as evidenced by widely used basic textbooks in medical schools, such as Human Behavior and Clinical Psychiatry.

## **1. Schizophrenia spectrum and other psychotic disorders**

### **1.1 Schizophrenia**

Schizophrenia is a chronic remitting and relapsing disorder associated with shortened lifespan and significant impairments in functioning. Treatment entails a multimodal approach, including medication, psychosocial interventions, and assistance with housing and financial sustenance. The broad objectives of treatment are to reduce the mortality and morbidity of the disorder by decreasing the frequency and severity of episodes of psychotic exacerbation and improving the functional capacity and quality of lives of the individuals afflicted with the illness.

Until the introduction of antipsychotics into clinical practice 50years later, standard treatment consisted of providing patients with a safe environment in the form of a long-stay psychiatric hospital and hoping for the elusive spontaneous remission. The introduction of the

first antipsychotic chlorpromazine a half-century ago sparked the revolution in the pharmacotherapy. Antipsychotic medications became the cornerstone treatment of schizophrenia and three of these agents (chlorpromazine, fluphenazine, and haloperidol) are included in the WHO's list of Essential Medications. [97] [98]

Acute antipsychotic treatment should be initiated in all patients as soon as possible after the diagnosis and should follow several general principles:

- A therapeutic alliance should be established, treatment must be formulated and implemented with the patient's involvement.
- Antipsychotic dosages should be titrated at the lowest possible range with the best risk-benefit ratio. Early-episode patients usually need lower dosages than patients with a longer disease course.
- Attention needs to be paid to antipsychotic induced side effects. This applies particularly to motor and metabolic side effects. Other side effects which also require close monitoring are cardiovascular side effects.
- All antipsychotics principally have their place in the treatment of acute schizophrenia, but the decision for a specific one should follow a strict risk-benefit-evaluation. In first-episode patients, second-generation antipsychotics (SGAs) (e.g., olanzapine, quetiapine, risperidone) should be preferred to high-potency first-generation antipsychotics (FGAs) (e.g., haloperidol, perphenazine) as first-line treatment.
- All antipsychotics are effective for relapse prevention and no clinically relevant differences in the long-term. Efficacy and effectiveness of FGAs and SGAs (apart from clozapine) could be detected. However, SGAs seem to have advantages in terms of treatment discontinuation and the reduced risk to develop long-term motor side effects might favour certain SGAs. Metabolic side effects of certain SGAs may limit a long-term application.

### **1.2 Schizoaffective disorder**

Since its first description in the literature (Kasanin, 1933), schizoaffective disorder (SAD) has raised an amount of discussion about its definition, representing an association between schizophrenic and affective symptoms. However, many divergences regarding which symptoms should be considered and the type of temporal relationship between the two groups of symptoms should be considered and the type of temporal relationship between the two groups of symptoms define this mental disorder. [99]

The lack of specific data on the biology and course of SAD bears therapeutic consequences.

Treatment guidelines which consider SAD subgroups mostly reflect the inclusion of SAD patients with schizophrenia, being a treatment with antipsychotic, alone or in combination with mood stabilizers or antidepressants, the most common treatment strategy, with (22% ) taking antipsychotic alone, followed closely by antipsychotic plus classic mood stabilizer (lithium and anticonvulsants) (20%), antipsychotic plus antidepressant (19%), and antipsychotic plus classic mood stabilizer plus antidepressant (18%). [100]

## **2. Bipolar and related Disorders**

### **2.1. Bipolar I disorder**

The first priority when dealing with a bipolar disorder (BD) patient is the assessment of risks to the patient or others, and whether there is a need for immediate hospitalization, even involuntarily. It is important to provide an environment with reduced stimuli for patients in an acute manic or hypomanic episode. On the other hand, during acute depressive or mixed episodes the patients are at a higher risk of committing suicide. So, every measure to protect the life of the patient should be taken.

The acute treatment should be tailored to the individual needs and clinical characteristics in terms of medication and dosage, according to recommendations made by the guidelines. The

dosage should be titrated according to clinical judgment and eventually be raised to the highest recommended and tolerated dose in order to maximize the chances for treatment response.

Acute mania\ hypomania treatment should be initiated according to clinical guidelines following several steps:

➤ **First step:**

1. Discontinue treatment with antidepressants.
2. Take into consideration any previous history of psychotic features.
3. Start with aripiprazole, quetiapine, risperidone or valproate monotherapy. (Asenapine,
4. Cariprazine, paliperidone are not marketed in morocco).
5. If the patient is already under one of the above first-step monotherapy or under combination therapy of any kind and response is unsatisfactory, switch to another first-step monotherapy.

➤ **Second step:**

If the interventions recommended during the first step fail or the response is unsatisfactory then apply:

1. Olanzapine, lithium, carbamazepine, haloperidol or ziprasidone monotherapy
2. Combinations of lithium or valproate plus aripiprazole, haloperidol, or olanzapine
3. Apply ECT on top of pharmacological treatment or switch to oxcarbazepine
4. Monotherapy with chlorpromazine, pimozide, tamoxifen Options are also combination treatments of lithium or valproate plus tamoxifen or the combination of risperidone plus lithium. In patients with residual manic/hypomanic symptoms, oxcarbazepine addition to lithium may be helpful.

**Assessment of suicidal risk:**

The assessment of suicidal risk has priority in bipolar disorder patients with an acute depressive episode, adhering to the treatment as well as to the social support network should be evaluated. Based on that, a decision of hospitalization is mandatory and should be made. The following treatment algorithm highlights global treatment steps.

**First step:**

1. Start with quetiapine.
2. Consider CBT as add-on to medication according to the patient preference and to availability. Never consider CBT as monotherapy.
3. Women with history of MDD should benefit from CBT sessions, evidence proved its efficiency.

**Second step**

4. Monotherapy with olanzapine or olanzapine-fluoxetine combination (OFC)
5. Combination of a mood stabilizer with lurasidone and modafinil.
6. Add escitalopram or fluoxetine to ongoing therapy
7. For the treatment of comorbid anxiety add paroxetine, quetiapine, valproate or lurasidone, and consider mindfulness-based interventions as add-on to ongoing therapy.

ECT comes late with various combinations of medication according to anecdotal knowledge or the personal experience of the therapists. The successful treatment should be perpetuated during the phase which is called 'continuation' and may differ from the 'maintenance' phase. Maintenance treatment should be kept indefinitely lifelong) after the diagnosis of BD has been confirmed. Exceptions may be patients after a single manic or mixed episode, and those with a history of a very infrequent relapses where physical health risks of medication may outweigh benefits. An issue to deal with during psycho educational interventions. [101] [102]

**2.2. Bipolar II disorder**

In general, treatment options for BP-II depression are closely aligned with those for BP-I depression. There is empirical support for quetiapine monotherapy for BP-II depression, weaker support exists for the use of lithium, adjunctive antidepressants and lamotrigine.

The use of antidepressants in patients with bipolar disorder is controversial. Antidepressants may be helpful for some patients when used as adjuncts to mood-stabilizing medications, however possible risks of using antidepressants in bipolar depressed patients include increased mood cycle frequency and the development of rapid cycling. Moreover, in terms of effectiveness, the results of antidepressants for bipolar depression are mixed. For most patients with BP-I or BP-II depression, antidepressant monotherapy should be avoided. On the other hand, prescribing antidepressants with antimanic drugs may reduce the risk of switching to mania/hypomania.

Antidepressants can be safely used in combination with antimanic medications by patients who have responded favorably to these drugs in the past without treatment-emergent mania/hypomania or mood instability.

Hypomanic episodes are not associated with either psychosis or significant dysfunction and are managed in ambulatory settings. Pharmacotherapeutic options for hypomania are similar to those for mania. Monotherapy with mood stabilizers with or without adjunctive benzodiazepines can be used for the initial treatment of hypomanic episodes. Pharmacotherapy with an antipsychotic drug, or combination therapy with 2 mood stabilizers or mood stabilizers combined with antipsychotic drugs, is generally reserved for cases of poor response to monotherapy.

### 3. Depressive disorders

#### 3.1. Major depressive disorder (MDD)

The process of selecting an antidepressant should involve both clinical expertise and patient perceptions and preferences. **The selective serotonin reuptake inhibitors (SSRIs)**, (agomelatine, bupropion, and mirtazapine are not marketed in morocco) remain first-line recommendations for pharmacotherapy for MDD. Vortioxetine is also a first-line recommendation. Second-line agents include **TCAs**, quetiapine and trazodone (higher side effect burden), moclobemide and selegiline (potential serious drug interactions), and evomilnacipran.

Third-line includes **MAO** inhibitors and reboxetine.

Many clinical features and medication characteristics influence the choice of a first-line antidepressant. There are no absolutes, and relative differences between medications are small.

Hence, selecting an antidepressant involves an individualized needs assessment for each patient.

**Table I. Factors to Consider in Selecting an Antidepressant.**

Patient Factors	Medication Factors
<ul style="list-style-type: none"><li>• Clinical features and dimensions</li><li>• Comorbid conditions</li><li>• Response and side effects during previous use of antidepressants</li><li>• Patient preference</li></ul>	<ul style="list-style-type: none"><li>• Comparative efficacy</li><li>• Comparative tolerability (potential side effects)</li><li>• Potential interactions with other medications</li><li>• Cost and availability</li></ul>

**Table II. Some Recommendations for Clinical Specifiers of Major Depressive Disorder**

Specifiers/ Dimensions	Recommendations
<ul style="list-style-type: none"><li>• With anxious distress</li><li>• With catatonic features</li><li>• With psychotic features</li><li>• With somatic symptoms</li></ul>	<ul style="list-style-type: none"><li>• Use an antidepressant with efficacy in generalized anxiety disorder</li><li>• CBT is a milestone of the treatment</li><li>• Benzodiazepines</li><li>• Use antipsychotic and antidepressant cotreatment</li><li>• Duloxetine (pain) Bupropion (fatigue) SSRIs (fatigue) Duloxetine (energy)</li></ul>

## II. Psychotherapies

### 1. Schizophrenia spectrum and other psychotic disorders

Despite the effectiveness of antipsychotic drugs in treating acute psychosis and in preventing relapse, many patients continue to experience psychotic symptoms. An estimation of 25 to 50% of patients with schizophrenia experience persistent psychotic symptoms even with optimal pharmacological treatment.

The search for complimentary interventions to decrease residual psychotic symptoms has led to cognitive behavioral therapy (CBT).

#### 1.1. Cognitive-behavioral therapy:

It focuses on altering the thoughts, emotions, and behaviors of patients by teaching them skills to challenge and modify beliefs about delusions and hallucinations, to engage in experimental reality testing, and to develop better coping strategies for the management of hallucinations. The goals of these interventions are to decrease the conviction of delusional

beliefs, and hence their severity, and to promote more effective coping and reductions in distress. [103]

**1.2. Personal therapy (PT):**

Developed at the Western Psychiatric Institute (1995), conceived as a multi-year treatment emphasizing psycho-education and behavior therapy, also designed to be distinct from traditional analytic therapy and case management. PT focuses on the recognition of current affect states on the patient's affective and behavioral responses to stress, independent of their origin. Patients in PT progress through three phases:

**Phase one:** emphasizes pro-social statements, appointment attendance, medication and housing stability, and minimization of hallucinations and delusions.

**Phase two:** emphasizes recognizing affective signs of decompensation, performing stress breathing techniques to attenuate affective arousal, and role-playing social and vocational scenarios to teach conflict resolution.

**Phase three:** focuses on cognitive techniques for dealing with criticism, whole-body relaxation exercises, education about the need for long-term medication adherence, and limited social and vocational exposure. [104]

**1.3. Cognitive therapies:**

The literature suggests a number of different names including cognitive rehabilitation and cognitive training. The term remediation suggests that it is the correction of a fault or deficiency whereas rehabilitation refers to restoring a function back to normal by training (Oxford Dictionary, 1999). These training initiatives involve either paper-and-pencil tests or individual computerized exercises that target specific cognitive skills (e.g., attention, memory, psychomotor speed) and require continuous training over a number of weeks and months. Whereas cognition-enhancing approaches train subjects with laboratory tasks in order to improve specific abilities in different cognitive domains.

3 strategies are involved:

**Restorative approaches:** in which efforts are made to reduce the underlying cognitive deficits.

**Compensatory strategies:** which aim to help patients work around or compensate for cognitive deficits. (e.g., learning, attention, memory)

**Environmental approaches:** which try to provide situational supports, such as external reminders, to decrease the impact of cognitive deficits.

**1.4. Family Interventions:**

Family interventions recognize that families are the primary caregivers and that they can consequently experience a burden from those demands. Regardless of whether the patient with schizophrenia is actually living with her family in the community, most families provide support and assistance to their ill relative. Families are often left in the position of assuming the role of caregiver, for which they are neither trained nor psychologically prepared. As well, professionals do not always accurately understand what factors caregivers find burden, some when coping with an ill relative.

The degree and nature of burden has been found to vary with the phases of the disorder. In the early phase, families are faced with feelings of uncertainty and emotional shock. In later phases, families face dealing with the everyday impact of negative symptoms, such as lack of interests and loss of initiative.

Treatment efficacy can be enhanced and relapses can be prevented when family members participate in a structured program of family psychoeducation, which has been shown to relieve caregiver distress. There are core curriculum components to psychoeducational family treatment, an approach that offers empathy, knowledge sharing, and problem-solving skills training.

Home visits are a part of some programs.

Family psychoeducational interventions should be introduced during the early phases of treatment when a patient is experiencing a first episode. Multiple-family groups may have more

enduring benefit than individual approaches during the first episode. However, many families will not attend groups and needs individualized treatment and outreach.

Educational interventions may subsequently need to be supplemented, depending on individual circumstances such as the needs of siblings and needs related to the illness phase. In working with family members, sensitivity to confidentiality issues is required, including the use of appropriate information-release forms, to maintain a trusting relationship with the patient. However, family members should not be underused: they provide a valuable consultation resource for mental health professionals, and they are allies in patient recovery efforts.

Working with families should include listening to family members' concerns, exploring family expectations about treatment and their understanding of the patients' illness, making adjustments that acknowledge and respect family culture and values, assessing family members' capacity to cope with and support their ill relative and developing a crisis plan.

**1.5. Psychoeducation:**

Psychoeducation is defined as the education of a person with psychiatric disorder in subject areas that serve the goals of treatment and rehabilitation. The terms "patient education", "patient teaching" and "patient instruction" have also been used for this process. All imply that there is a focus on knowledge. Education is a gradual process by which a person gains knowledge and understanding through learning. Learning, however, involves more than knowledge and, it can involve cognitive, affective and psychomotor processes. Learning implies changes in behavior, skill or attitude. Patient education can take a variety of forms depending upon the abilities and interest of the patient and family. For example, the education may take place in small groups or on a one-to-one basis, it may involve the use of videotapes or pamphlets or a combination of these.

The purpose of patient education is to enable the patient to engage in behavior change. The goal may be to try to prevent hospitalization or to manage the illness or condition to help

the patient attain her maximum degree of health. Compliance with treatment for seriously or persistently mentally ill people is of great concern and is often a focus of patient education.

Many women with severe mental illness are frequently and repeatedly hospitalized due to poor compliance with treatment. Many women feel stigmatized by their illness and may deny its existence, which ultimately increases non-compliance. This issue is even more of a problem when people are living in the community and is often related to adverse effects of medication as well as a lack of adequate knowledge about medication.

**1.6. Electroconvulsive therapy (ECT):**

Electroconvulsive therapy (ECT) involves the induction of a seizure (fit) for therapeutic purposes by the administration of a variable frequency electrical stimulus (shock) to the brain via electrodes applied to the scalp. The procedure is usually modified by the use of short acting anesthetics and muscle relaxants. The former reduces apprehension and the latter avoids unwanted adverse side events such as fractures of the spine or extremities due to the vigorous muscular convulsions that occur if a muscle relaxant is not used.

ECT is a treatment that has generated considerable controversy since its introduction in 1938. It predates the era of modern psychopharmacology (drug treatment) by more than a decade, and initially gained acceptance because of its perceived benefits in the context of few alternatives.

Both the introduction of antipsychotics and antidepressants in the 1950s, and public and professional concerns that ECT is invasive and causes brain damage, resulted in a decline in its use. It was in fact subject to legal restrictions in parts of the world.

**1.7. Transcranial Magnetic Stimulation (TMS)**

Schizophrenia is arguably the most debilitating of psychiatric illnesses, psychologically, socially, and financially, starting in late adolescence to early adulthood and with a lifelong course that is typically characterized by relapses, the impact of schizophrenia on the individual who suffers from it is both pervasive and prolonged.

Pharmacotherapy with antipsychotic medication remains the mainstay in the acute and maintenance treatment of schizophrenia. Antipsychotic agents (first, second, and third generations) have been shown to be most effective in reducing the positive symptoms of schizophrenia, but unsatisfactory in reducing negative symptoms and the propensity to relapse. Furthermore, almost one-third of patients with positive psychotic schizophrenia do not respond to antipsychotics. Medication non adherence is also a significant issue in the treatment of schizophrenia, with non adherence rates of over 70 percent during the course of one year.

There is also a significant side effect burden with antipsychotic medications, including extrapyramidal symptoms, weight gain, and metabolic abnormalities, which may make antipsychotic medications less acceptable to patients and their families.

Due to the limitations of antipsychotic pharmacological agents, we are in need of alternate modalities for treating schizophrenia or augmenting the antipsychotic medications currently employed. Neuromodulation is a new frontier in the investigation of effective treatment options for schizophrenia. Among the different methods of neuromodulation, transcranial magnetic stimulation (TMS) is one that has been investigated the most thoroughly in randomized, controlled trials over the past 15 years.

TMS is a noninvasive neurostimulation technique that uses alternating magnetic fields to induce electrical current in the cortex of the brain. In 2008, a TMS device from Neuronetics (Malvern, Pennsylvania) was the first to be approved by the United States Food and Drug Administration

(FDA) for its use in the treatment of patients who have had a major depressive episode and who failed to respond to a single adequate antidepressant trial. The device was approved using the following stimulation parameters: 120-percent motor threshold, 10Hz, 4 seconds on, 26 seconds off. In 2014, the FDA expanded its approval of this device to include treatment of adult patients with MDD who have failed to benefit from any number of antidepressant medications.

In 2013, a TMS device from Brainsway (Jerusalem, Israel) was approved by the FDA, also for its use in the treatment of adult patients with MDD who have failed to benefit from any number of antidepressant medications. TMS is considered safe and well tolerated.

If the frequency of the pulse is low TMS has an inhibitory effect on neural circuits, Conversely, if the pulse frequency is high (i.e., greater than 1Hz), an excitatory effect will be generated.

Pulses can be administered single, paired, or in a series, called a train. TMS delivered in a train is termed repetitive TMS (rTMS). While single and paired pulse TMS are used for neuro-diagnostic purposes, it is rTMS that has therapeutic benefit in psychiatric disorders.

Unlike electroconvulsive therapy, no anesthesia is required when administering TMS, patients are awake and alert during treatment and can leave immediately following their session. Adverse reactions can include post-treatment mild and self-limited headache, scalp pain at the site of stimulation, and potential transient adverse effects on hearing due to the clicking sound of the machine, which can be prevented with the use of earplugs. [105]

## **2. Bipolar and related Disorders**

### **2.1. Psychoeducation**

Psychoeducation as an adjunctive therapy for bipolar disorder that evolved from providing patients with information exclusively related to a biological understanding of the disorder and related pharmacological treatments to an integrative approach emphasizing illness and symptom awareness, treatment adherence, self-management, the importance of regular habits, avoiding drug misuse and promoting good physical health. Psychoeducation helps individuals recognize early signs and symptoms and adopt behavioral measures to prevent a full-blown episode. It is an opportunity to share personal experiences and insights in a supportive peer setting that confers additional benefit.

Psychoeducation increases adherence to medication and other elements of treatment and reduces time spent in manic, hypomanic, mixed and depressive episodes. Its efficacy diminishes as the number of episodes increase, highlighting the importance of delivering this treatment as early as possible. Ideally, psychoeducation should be delivered when patients are euthymic and are best able to comprehend and retain the information; however, patients with mild depressive episode can also benefit. Overall, psychoeducation is a clinically effective and cost-effective adjunctive therapy for bipolar disorder and is increasingly considered a standard component of care. [103]

## **2.2. Mindfulness**

Mindfulness is a form of cognitive awareness that focuses on stress reduction by improving concentration and encouraging relaxation. This approach promotes the conscious awareness of distressing thoughts and feelings, and aims to provide individuals with the ability to disengage from these thoughts and feelings rather than counter them. When used as a psychological therapy tool, mindfulness is often incorporated into cognitive therapy (i.e. **mindfulness-based cognitive therapy [MBCT]**). MBCT was first used as a psychological intervention for anxiety disorders, and has since been applied to a range of mental health conditions, including bipolar disorders.

Results of MBCT in bipolar disorder have been positive overall, ranging from significant improvements in executive functioning, memory, task completion, and attentional readiness, to significant decreases in depression scores, anxiety scores, and dysfunctional attitudes about achievement. [102]

## **2.3. Cognitive remediation**

An emerging theme in the bipolar disorder literature is the use of cognitive remediation therapy (CRT). It seeks to remediate cognitive dysfunction through lasting, generalizable improvements in neuropsychological and, subsequently, psychosocial ability. Given that cognitive processes are underpinned by structural and functional brain mechanisms known to be

dynamic in nature, cognitive remediation partially draws on the principle that the brain is plastic and capable of change. In practical terms, it is a behavioral intervention designed to improve attention, memory, executive functioning and other neuropsychological processes through the use of computer-based and face-to-face training programs which teach practice, adaptive and compensatory strategies, usually over a period of 10 sessions or more.

#### **2.4. E-Health approaches**

A number of internet-based programs for mental health have been developed based on successful face-to-face psychological therapy approaches. These online interventions are becoming increasingly common and have shown significant efficacy across a variety of mental health conditions. In bipolar disorder, online programs may help people to overcome a number of barriers commonly faced when attempting to access self-management programs.

Nearly all of the existing online programs for bipolar disorder have incorporated elements of psychoeducation and cognitive behavior therapy. More recently, a number of smartphone-based applications (apps) have been developed for use as self-management tools for bipolar disorder.

While many of these apps are available on the commercial market, research into the efficacy of this approach appears to be ongoing. Delivering psychotherapeutic material at a distance comes with a range of unique ethical considerations and safety concerns. Ensuring appropriate user safety monitoring, maintaining secure data privacy controls, and clearly communicating the adjunctive nature of an intervention are crucial.

### **3. Depressive Disorders**

The classical biological/psychosocial distinction, which separates psychotherapy from pharmacotherapy as treatment options for depression, is fading out. Neuroscientific literature supports changes in brain functioning with these approaches, concluding that both psychotherapy and pharmacotherapy are biological treatments, and that there is no legitimate ideological justification for the decline of the former. Understandably, current treatment

guidelines for depressive disorders are increasingly advocating psychotherapy as a treatment option, alone or in combination with antidepressant medications.

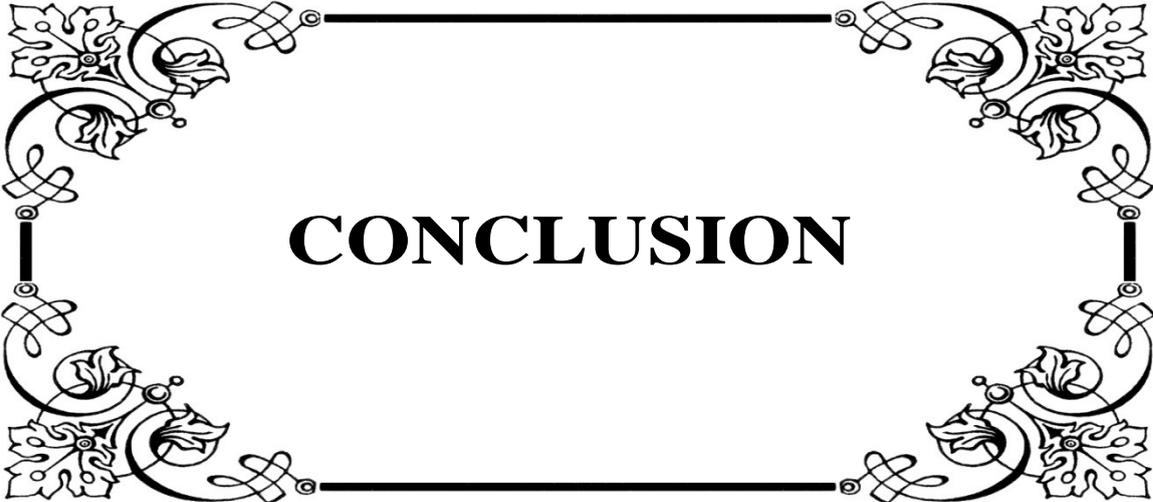
Cognitive behavioral treatment is effective in decreasing residual symptoms of depression, patients have been able to receive a less intensive course of therapy (10 sessions) than is customary (16–20 sessions) because psychotherapy could be concentrated only on the symptoms that did not abate after pharmacotherapy. The fact that most of the residual symptoms of depression are also prodromal, and that prodromal symptoms of relapse tend to mirror those of the initial episode, explains the protective effect of this targeted treatment.

Cognitive behavioral treatment may act on those residual symptoms of major depression that progress to become prodromal symptoms of relapse. This may particularly apply to anxiety and irritability, which are prominent in the prodromal phase of depression, maybe covered by mood disturbances but are still present in the acute phase, and are again a prominent feature of its residual phase.

Interventions that bring the person out of negative functioning are one big and valuable form of success. [100]

### III. Recommendations

- Fighting the general lack of awareness (mental health illiteracy) about mental illness, by suppressing the barriers to psychiatric treatments, reducing stigma and labelism via traineeship programs aiming to reinforce social skills and treatment adherence.
- Encourage women to address and speak up about positive family history of mental illness, the same as any other disease (ex: diabetes)
- Considering social/emotional support a millstone of therapy, by providing mentorship programs and support groups for family members of women living with mental disorders
- Promoting serious education efforts that target everyone in the community, especially family members, by explaining that mental disorders are not a weakness but only a chemical imbalance that requires family's management of residual symptoms, acute episodes and constant irritability, via simulation sessions and coping skills.
- Providing recreational outlets for women, such as community centers offering daily activities (culinary activities, knitting, gardening, preparing résumés for job searching, managing finances and learning to cope with common stressors). These activities improve their individual ability to cope and thereby improve the emotional wellness.
- Emotional, relational and sexual dimensions are important criteria to consider when prescribing treatments.
- Spirituality constitutes a huge milestone in the arab community, especially among women. The adherence to prayers and different forms of meditation helps diminishing anxiety symptoms and is considered a coping method against day to day distress.
- Maintain a solid, individual therapeutic alliance.
- Promoting a non pharmacological treatment, CBT, psychoeducation, insight and cognitive remediation.



**CONCLUSION**

Schizophrenia women represent half of hospitalized population, bipolar disorder and major depressive disorder inpatients get admitted mostly because of the psychotic features. And so negative symptoms are increased, aggressiveness and self-harm can reach alarming levels where voluntary\ non-voluntary admission is compulsory.

The stigma that labels women with psychiatric disorders gets in the way of treatment adherence, follow up with psychotherapies and belief that medication is the road to wellbeing.

Low economical level alongside with poor education are noticed to be factors that increase acute episodes, why not onset of disorder.

The high rate of ill admitted women under no treatment, but with a positive toxic habit complicates the course of disorder and its management.

It is important to instore a scientific-based culture of psychotherapies (individual or per group), that impacts not only one's thoughts and coping styles but also the global functioning and personal ways of dealing with acute phases, treatment side effects and various changes in ideas or behavior.

The biopsychosocial model adapted by psychiatric communities encourage the non-pharmacological treatment. on the other hand, the understanding of a disorder's chronicity and relapse\ remission cycles strengthens the medication role in full recovery.

To consider that a woman inpatient is a whole different identity than her male counterpart.



**ANNEXES**

(ANNEX I)

THE QUESTIONNAIRE

I/Identity:

1-1 Folder number: .....

1-2 Age: .....

1-3 Marital status:  Single  Married  Divorced  Widow

1-4 Children:  No

Number:.....

1-5 Educational level:  Uneducated  Primary school  Middle school   
High school  University

1-6 Profession:  Without  Housewife  Student  Office worker  Liberal  
work  farmer

1-7 Socio-economical level:  Low  Medium  High

1-8 Origin:  Urban  Rural

1-9 Lives with:  Alone  Parents  Family  Institution  
 Homeless

1-10 Patient addressed by:  Alone  Family  Psychiatrist  Police

II/Antecedents:

II-A Family antecedents:

2-1 Psychiatric:  Yes  No

Major depressive disorder.  Schizophrenia spectrum and psychotics disorders.  
 Bipolar disorders.  Unspecified

**Psychiatric disorders among hospitalized women at Ibn Nafis Hospital**

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2-2 Addictive conduct:  Yes  No

2-3 Treatment:  Yes  No

**II-B Personal antecedents:**

2-1 Medical:  No  
If yes precise: .....

2-2 Surgical:  No  
If yes precise: .....

2-3 Gyneco-obstetrical:  No  
If yes precise: .....

2-4 Juridical:  No  Yes Number: .....

2-4-1 Average period per days: .....

2-4-2 Period:  Summer  Autumn  Winter  
 Spring

2-4-3 Charged with:  Drug charges.  Robbery  Assault  Homicide   
Prostitution

2-5-Psychiatric: Known a mental patient since: ..... years/months  
Total hospitalizations' number: .....time(s)  
Average period of hospitalizations: .....days  
Follow up in consultation:  Yes  No

2-6- Suicide attempt:  Yes  No

2-7-Toxic abuse:  Yes  No

2-7-1 If yes:



1-3 Specify if:

- First episode, currently in acute episode
- First episode, currently in partial remission
- First episode, currently in full remission
- Multiple episodes, currently in acute episode
- Multiple episodes, currently in partial remission
- Multiple episodes, currently in full remission

1-4 Medication taken: (last 6months)

A- Antipsychotics

- Monotherapy
- Bitherapy
- Typical neuroleptics
- Atypical neuroleptics
- LAN (long-acting neuroleptics)

- |                      |                              |                             |
|----------------------|------------------------------|-----------------------------|
| B- Anxiolytics       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| C- Antidepressants   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| D- Antiparkinsonians | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| E- Mood stabilizers  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

**I/B-Brief psychotic disorder**

A-1 Medication taken: (last 6months)

A- Antipsychotics

- Monotherapy
- Bitherapy
- Typical neuroleptics
- Atypical neuroleptics
- LAN (long-acting neuroleptics)

- |                      |                              |                             |
|----------------------|------------------------------|-----------------------------|
| B- Anxiolytics       | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| C- Antidepressants   | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| D- Antiparkinsonians | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| E- Mood stabilizers  | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

**I/C-Schizophreniform Disorder**

1-1 Onset of disorder  Acute  Progressive

1-2 Specify if:

- With good prognostic features
- Without good prognostic features
- With catatonia

1-3 Medication taken: (last 6 months)

A- Antipsychotics

- Monotherapy
- Bitherapy
- Typical neuroleptics
- Atypical neuroleptics
- LAN (long-acting neuroleptics)

B- Anxiolytics  Yes  No

C- Antidepressants  Yes  No

D- Antiparkinsonians  Yes  No

E- Mood stabilizers  Yes  No

**I/D-Schizophrenia**

1-1 Onset of disorder  Acute  Progressive

1-2 Specify if:

- First episode, currently in acute episode
- First episode, currently in partial remission
- First episode, currently in full remission
- Multiple episodes, currently in acute episode
- Multiple episodes, currently in partial remission
- Multiple episodes, currently in full remission

1-3 Medication taken: (last 6 months)

A- Antipsychotics

- Monotherapy
- Bitherapy

- Typical neuroleptics
- Atypical neuroleptics
- LAN (long-acting neuroleptics)

- B- Anxiolytics  Yes  No
- C- Antidepressants  Yes  No
- D- Antiparkinsonians  Yes  No
- E- Mood stabilizers  Yes  No

**I/E-Schizoaffective Disorder**

- 1-1 Onset of disorder  Acute  Progressive

1-2 Specify whether:

- 1-Bipolar type:** Applies if a manic episode is part of the presentation. Major depressive episodes may also occur.
- 2-Depressive type:** Applies if only major depressive episodes are part of the presentation.

1-3 Medication taken: (last 6 months)

- A- Antipsychotics
  - Monotherapy
  - Bitherapy
  - Typical neuroleptics
  - Atypical neuroleptics
  - LAN (long-acting neuroleptics)
- B- Anxiolytics  Yes  No
- C- Antidepressants  Yes  No
- D- Antiparkinsonians  Yes  No
- E- Mood stabilizers  Yes  No

1-4 Specify if:

- First episode, currently in acute episode
- First episode, currently in partial remission
- First episode, currently in full remission

- Multiple episodes, currently in acute episode
- Multiple episodes, currently in partial remission
- Multiple episodes, currently in full remission
- Unspecified

**I/F- Substance/medication-induced psychotic disorder**

- Alcohol
- Cannabis
- Hallucinogens
- Inhalants
- Sedative, hypnotic, anxiolytics
- Cocaine
- Other: .....

1-1 Specify if:

- With onset during intoxication
- With onset during withdrawal

**II/Bipolar and related Disorders**

**II/A-Bipolar I disorder**

- 1-Manic Episode
- 2- Hypomanic episode
- 3-Major Depressive episode

2-1 Specify:

- With anxious distress
- With mixed features
- With rapid cycling
- With melancholic features
- With psychotic features
- With peripartum onset
- With seasonal pattern

**Psychiatric disorders among hospitalized women at Ibn Nafis Hospital**

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2-2 Risk and prognostic factors: No Temperamental Environmental  
Genetic and physiological

2-3 Presence of a comorbidity:  Yes  No  
If yes: .....

2-4 Medication taken: (last 6months)

- A- Lithium  Yes  No
- B- Atypical antipsychotics Yes No
- C- Anticonvulsants Yes No
- D- Antidepressants Yes No

**II/B-Bipolar II disorder**

2-1 Specify current or most recent episode:

- Hypomanic
- Depressed

2-2 Specify:

- With anxious distress
- With mixed features
- With rapid cycling
- With melancholic features
- With psychotic features
- With peripartum onset
- With seasonal pattern

2-3 Risk and prognostic factors:  No  Temperamental   
Environmental  Genetic and physiological

2-4 Presence of a comorbidity:  Yes  No  
If yes: .....

2-5 Medication taken: (last 6months)

**Psychiatric disorders among hospitalized women at Ibn Nafis Hospital**

---

- A- Lithium Yes No  
B- Atypical antipsychotics Yes No  
C- Anticonvulsants Yes No  
D- Antidepressants Yes No

**II/C- Substance/medication-induced bipolar and related disorder**

- Alcohol  
Hallucinogens  
Sedative, hypnotic, anxiolytic  
Amphetamine  
Other:.....

1-1 Specify if:

- With onset during intoxication  
With onset during withdrawal

**III/Depressive Disorders**

**III/A-Major Depressive Disorder**

3-1 With psychotic features: Yes No

3-2 Specify:

- With anxious distress  
With mixed features  
With rapid cycling  
With melancholic features  
With psychotic features  
With peripartum onset  
With seasonal pattern

3-3 Risk and prognostic factors: No Temperamental Environmental  
Genetic and physiological

3-4 Presence of a comorbidity: Yes No

If yes: .....

3-5 Medication taken: (last 6months)

A- Antidepressants Yes No

B- Benzodiazepines Yes No

C- Antipsychotics Yes No

3-6 Other:

A- Cognitive-behavioral therapy Yes No

B- Electroconvulsive therapy Yes No

**III/B-Persistent Depressive Disorder (Dysthymia)**

3-1 With psychotic features: Yes No

3-2 Specify:

With anxious distress

With mixed features

With rapid cycling

With melancholic features

With psychotic features

With peripartum onset

With seasonal pattern

3-3 Risk and prognostic factors: No Temperamental Environmental

Genetic and physiological

3-4 Presence of a comorbidity: Yes No

If yes: .....

3-5 Medication taken: (last 6months)

- A- Antidepressants Yes No  
B- Benzodiazepines Yes No  
C- Neuroleptics Yes No

3-6 Other:

- A- Cognitive-behavioral therapy Yes No  
B- Electroconvulsive therapy Yes No

**III/C- Substance/medication-induced depressive disorder**

- Alcohol  
Cannabis  
Hallucinogens  
Inhalants  
Opioids  
Sedative, hypnotic, anxiolytics

3-1 Specify if:

- With onset during intoxication  
With onset during withdrawal

3-2 Presence of a comorbidity: Yes No

If yes: .....

**III/D- Depressive Disorder Due to another Medical Condition**

3-1 Presence of a comorbidity: Yes No

If yes: .....

3-2 Medication taken: (last 6months)

- A- Antidepressants Yes No  
B- Benzodiazepines Yes No  
C- Neuroleptics Yes No

3-3 Other:

A- Cognito-behavioral therapy Yes No

B- Electroconvulsive therapy Yes No

**IV/ Anxiety Disorders**

**IV/A-Panic Disorder**

4-1 Risk and prognostic factors: No Temperamental Environmental  
Genetic and physiological

4-2 Presence of a comorbidity: Yes No  
If yes: .....

4-3 Medication taken: (last 6months)

A- Antidepressants Yes No

B- Benzodiazepines Yes No

4-4 Other:

A- Cognito-behavioral therapy Yes No

**IV/B-Generalized Anxiety Disorder**

4-1 Risk and prognostic factors: No Temperamental   
Environmental Genetic and physiological

4-2 Presence of a comorbidity:n Yes No  
If yes: .....

4-3 Medication taken: (last 6months)

A- Antidepressants Yes No

B- Benzodiazepines Yes No



Mild: BMI > 17kg/m<sup>2</sup>

Moderate: BMI 16–16.99kg/m<sup>2</sup>

Severe: BMI 15–15.99kg/m<sup>2</sup>

Extreme: BMI < 15kg/m<sup>2</sup>

5-4 Risk and prognostic factors:  No  Temperamental  Environmental

Genetic and physiological

5-5 Presence of a comorbidity:  Yes  No

If yes: .....

**V/B–Bulimia Nervosa**

5-1 Specify if:  In partial remission  In full remission

5-2 Risk and prognostic factors:  No  Temperamental  Environmental

Genetic and physiological

5-3 Presence of a comorbidity:  Yes  No

If yes: .....

5-4 Specify current severity:

The minimum level of severity is based on the frequency of inappropriate compensatory behaviors.

Mild: 1–3 episodes of inappropriate compensatory behaviors per week.

Moderate: 4–7 episodes of inappropriate compensatory behaviors per week.

Severe: 8–13 episodes of inappropriate compensatory behaviors per week.

Extreme: 14 episodes of inappropriate compensatory behaviors per week

**Severity Scales Results:**

**Score PANSS**

- 1- Positive scale: .....
- 2- Negative scale: .....
- 3-General psychopathology scale: .....

**Hamilton anxiety rating scale:**

- Mild:<18
- Mild to moderate: 18-24
- Moderate to severe: 25-30

**Hamilton depression rating scale:**

- Normal:0-7
- Mild depression: 8-13
- Moderate depression: 14-18
- Severe depression: 19-22
- Very severe depression:> 22

**Fagerstrom test for nicotine dependence:**

- Low dependence: 1-2
- Low to moderate dependence: 3-4
- Moderate dependence: 5-7
- High dependence: >8

**Panss rating form (Annex 2)**

		<u>absent</u>	<u>minimal</u>	<u>mild</u>	<u>moderate</u>	<u>moderate/severe</u>	<u>severe</u>	<u>extreme</u>
P1	Delusions	1	2	3	4	5	6	7
P2	Conceptual disorganization	1	2	3	4	5	6	7
P3	Hallucinatory behaviour	1	2	3	4	5	6	7
P4	Excitement	1	2	3	4	5	6	7
P5	Grandiosity	1	2	3	4	5	6	7
P6	Suspiciousness/persecution	1	2	3	4	5	6	7
P7	xx .....	1	2	3	4	5	6	7
N1	Blunted affect	1	2	3	4	5	6	7
N2	Emotional withdrawal	1	2	3	4	5	6	7
N3	Poor rapport	1	2	3	4	5	6	7
N4	Passive/apathetic social withdrawal	1	2	3	4	5	6	7
N5	Difficulty in abstract thinking	1	2	3	4	5	6	7
N6	Lack of spontaneity & flow of conversation	1	2	3	4	5	6	7
N7	Stereotyped thinking	1	2	3	4	5	6	7
G1	Somatic concern	1	2	3	4	5	6	7
G2	Anxiety	1	2	3	4	5	6	7
G3	Guilt feelings	1	2	3	4	5	6	7
G4	Tension	1	2	3	4	5	6	7
G5	Mannerisms & posturing	1	2	3	4	5	6	7
G6	Depression	1	2	3	4	5	6	7
G7	Motor retardation	1	2	3	4	5	6	7
G8	Uncooperativeness	1	2	3	4	5	6	7
G9	Unusual thought content	1	2	3	4	5	6	7
G10	Disorientation	1	2	3	4	5	6	7
G11	Poor attention	1	2	3	4	5	6	7
G12	Lack of judgement&insight	1	2	3	4	5	6	7
G13	Disturbance of volition	1	2	3	4	5	6	7
G14	Poor impulse control	1	2	3	4	5	6	7
G15	Preoccupation	1	2	3	4	5	6	7
G16	Active social avoidance	1	2	3	4	5	6	7

### Hamilton anxiety scale (HAM-A)(Annex 3)

- 1. **ANXIOUS MOOD**
  - Worries
  - Anticipates worst
- 2. **TENSION**
  - Startles
  - Cries easily
  - Restless
  - Trembling
- 3. **FEARS**
  - Fear of the dark
  - Fear of strangers
  - Fear of being alone
  - Fear of animal
- 4. **INSOMNIA**
  - Difficulty falling asleep or staying asleep
  - Difficulty with Nightmares
- 5. **INTELLECTUAL**
  - Poor concentration
  - Memory Impairment
- 6. **DEPRESSED MOOD**
  - Decreased interest in activities
  - Anhedonia
  - Insomnia
- 7. **SOMATIC COMPLAINTS: MUSCULAR**
  - Muscle aches or pains
  - Bruxism
- 8. **SOMATIC COMPLAINTS: SENSORY**
  - Tinnitus
  - Blurred vision
- 9. **CARDIOVASCULAR SYMPTOMS**
  - Tachycardia
  - Palpitations

- Chest Pain
- Sensation of feeling faint
- **10. RESPIRATORY SYMPTOMS**
  - Chest pressure
  - Choking sensation
  - Shortness of Breath
- **11. GASTROINTESTINAL SYMPTOMS**
  - Dysphagia
  - Nausea or Vomiting
  - Constipation
  - Weightloss
  - Abdominal fullness
- **12. GENITOURINARY SYMPTOMS**
  - Urinary frequency or urgency
  - Dysmenorrhea
  - Impotence
- **13. AUTONOMIC SYMPTOMS**
  - Dry Mouth
  - Flushing
  - Pallor
  - Sweating
- **14. BEHAVIOR AT INTERVIEW**
  - Fidgets
  - Tremor
  - Paces

## Hamilton Depression Scale (Ham-D) (Annex 4)

### ■ 1. DEPRESSED MOOD

(Gloomy attitude, pessimism about the future, feeling of sadness, tendency to weep)

0 = Absent

1 = Sadness, etc.

2 = Occasional weeping

3 = Frequent weeping

4 = Extreme symptoms

### ■ 2. FEELINGS OF GUILT

0= Absent

1= Self-reproach, feels he/she has let people down

2= Ideas of guilt

3= Present illness is a punishment; delusions of guilt

4= Hallucinations of guilt

### ■ 3. SUICIDE

0= Absent

1= Feels life is not worth living

2= Wishes he/she were dead

3= Suicidal ideas or gestures

4= Attempts at suicide

### ■ 4. INSOMNIA - Initial

0 = Absent

1 = Occasional

2 = Frequent

### ■ 5. INSOMNIA - Middle

(Complains of being restless and disturbed during the night. Waking during the night.)

0 = Absent

1 = Occasional

2 = Frequent

■ **6. INSOMNIA – Delayed**

(Waking in early hours of the morning and unable to fall asleep again)

0 = Absent

1 = Occasional

2 = Frequent

■ **7. WORK AND INTERESTS**

0 = No difficulty

1 = Feelings of incapacity, listlessness, indecision and vacillation

2 = Loss of interest in hobbies, decreased social activities

3 = Productivity decreased

4 = Unable to work. Stopped working because of present illness only. (Absence from work after treatment or recovery may rate a lower score).

■ **8. RETARDATION**

(Slowness of thought, speech, and activity; apathy; stupor.)

0 = Absent

1 = Slight retardation at interview

2 = Obvious retardation at interview

3 = Interview difficult

4 = Complete stupor

■ **9. AGITATION**

(Restlessness associated with anxiety.)

0 = Absent

1 = Occasional

2 = Frequent

■ **10. ANXIETY – PSYCHIC**

0 = No difficulty

1 = Tension and irritability

2 = Worrying about minor matters

3 = Apprehensive attitude

4 = Fears

- **11. ANXIETY – SOMATIC** Gastrointestinal, indigestion Cardiovascular, palpitation, Headaches Respiratory, Genito–urinary, etc.
  - 0 = Absent
  - 1 = Mild
  - 2 = Moderate
  - 3 = Severe
  - 4 = Incapacitating
  
- **12. SOMATIC SYMPTOMS –GASTROINTESTINAL**  
(Loss of appetite, heavy feeling in abdomen; constipation)
  - 0 = Absent
  - 1 = Mild
  - 2 = Severe
  
- **13. GENERAL– SOMATIC SYMPTOMS** (Heaviness in limbs, back or head; diffuse backache; loss of energy and fatigability)
  - 0 = Absent
  - 1 = Mild
  - 2 = Severe
  
- **14. GENITAL SYMPTOMS**
  - 0 = Absent
  - 1 = Mild
  - 2 = Severe
  
- **15. HYPOCHONDRIASIS**
  - 0 = Not present
  - 1 = Self-absorption (bodily)
  - 2 = Preoccupation with health
  - 3 = Querulous attitude
  - 4 = Hypochondriacal delusions
  
- **16. WEIGHT LOSS**
  - 0 = No weight loss
  - 1 = Slight
  - 2 = Obvious or severe

■ **17. INSIGHT**

(Insight must be interpreted in terms of patient's understanding and background.)

0 = No loss

1 = Partial or doubtful loss

2 = Loss of insight

**18. DIURNAL VARIATION**

- (Symptoms worse in morning or evening.)

Note which it is.

0 = No variation

2 = Moderate  
variation

3 = Severe  
variation

■ **19. DEPERSONALIZATION AND DEREALIZATION**

(Feelings of unreality, nihilistic ideas) 0 = absent

1 = Mild

2 = Moderate

3 = Severe

4 = Incapacitating

■ **20. PARANOID SYMPTOMS**

0 = None

1 = Suspicious

2 = Ideas of reference

3 = Delusions of reference and persecution

4 = Hallucinations, persecutory

■ **21. OBSESSIVE SYMPTOMS**

(Obsessive thoughts and compulsions against  
which the patient struggles)

0 = Absent

1 = Mild

2 = Severe

## Fagerstrom Test for Nicotine Dependence (ANNEX 5)

PLEASE TICK (☐) ONE BOX FOR EACH QUESTION		
How soon after waking do you smoke your first cigarette?	Within 5minutes	3
	5–30minutes	2
	31–60minutes	1
Do you find it difficult to refrain from smoking in places where it is forbidden? e.g. Church, Library, etc.	Yes	1
	No	0
Which cigarette would you hate to give up?	The first in the morning	1
	Any other	0
How many cigarettes a day do you smoke?	10 or less	0
	11 –20	1
	21 –30	2
	31 or more	3
Do you smoke more frequently in the morning?	Yes	1
	No	0
Do you smoke even if you are sick in bed most of the day?	Yes	1
	No	0
<b>Total Score</b>		
<b>SCORE</b>	1 – 2 = low dependence                      5 – 7 = moderate dependence 3 – 4 = low to moderate dependence      8 + = high dependence dependence	



**ABSTRACT**

## **Abstract**

Women get hospitalized for various serious mental disorders that are gender specific, half of them married with children, the other half single\divorced women stigmatized and marginalized in our society.

The aim of this study is to describe mentally ill women admitted into the psychiatric hospital, socio demographically and clinically, highlighting differences, specificities and multiple roles distress deviate with the course of disorder.

It's a cross-sectional prospective study about 70 patients admitted at the psychiatry hospital Ibn Nafis and reports the following:

The average age is 37,4 years, 44% of them are single, with a low educational level (primary school) 32,8%.

64% of our women are from the urban region, 51,4% are jobless and 59% brought to the hospital by their families.

11,6% of patients in our study have positive family history, 70% of them suffered from paranoid schizophrenia.

55% of patients are admitted for schizophrenia, followed by bipolar I disorder 18%, MDD is only represented by 8%.

Fortunately, only 20% of inpatients deal with a toxic habit, 14,5% abuse nicotine (74% low dependence FTND) and only one woman have tried quitting.

The criminal record didn't exceed 5,7% including different psychiatric disorders involved, assault is the most representable charge.

Suicide attempts are closely linked to major depressive episodes of MDD and BID, in patients were already under a combination of antidepressants and anxiolytics for at least 3 months.

Psychotic features are observed in most of admitted disorders, 83% in BIP and 67% in MDD.

According to HAMILTON-DEPRESSION 66.3% of women are admitted for a severe depressive episode, 50% present anxiety comorbidity and a history of CBT sessions months prior hospitalization.

Shading the light into admitted women in psychiatry and deciphering specific demographic, clinical and therapeutic features may improve the global care system and women's adherence to treatment and follow up.

## Résumé

Les femmes sont hospitalisées pour divers troubles mentaux graves qui doivent être pris en charge selon le sexe, la moitié d'entre elles sont mariées avec des enfants, l'autre moitié, célibataires / divorcées stigmatisées et marginalisées dans notre société.

Le but de cette étude est d'étudier le profil démographique, clinique et thérapeutique des femmes malades admises à l'hôpital psychiatrique, en soulignant les différences, les spécificités et le rôle du stress quotidien d'impacter l'évolution de la maladie.

Il s'agit d'une étude transversale prospective portant sur 70 patientes admises à l'hôpital psychiatrique Ibn Nafis et qui rapporte ce qui suit:

La moyenne d'âge est de 37,4 ans, dont 44% sont célibataires et ont un faible niveau d'instruction (primaire) 32,8%.

64% de nos femmes viennent de la région urbaine, 51,4% sont sans emploi et 59% ont été amenées à l'hôpital par leurs familles.

11,6% des patientes de notre étude ont des antécédents familiaux positifs, 70% d'entre eux étaient atteints de schizophrénie paranoïde.

55% des patientes admises pour schizophrénie, suivis du trouble bipolaire I, 18%, le trouble dépressif majeur n'est représenté que par 8%.

Heureusement, seulement 20% des patientes hospitalisées ont une habitude toxique, 14,5% consomment de la nicotine (74% ont une faible dépendance selon FTND), une seule femme a essayé d'arrêter de fumer.

Le casier judiciaire n'excède pas 5,7%, avec les différents troubles psychiatriques impliqués, l'agression est l'accusation la plus représentative.

Les tentatives de suicide sont étroitement liées aux épisodes dépressifs majeurs du trouble dépressif majeur et du trouble bipolaire I, chez des patientes qui étaient déjà sous antidépresseurs et anxiolytiques depuis au moins 3 mois.

Selon HAMILTON-DEPRESSION, 66,3% des femmes sont admises pour un épisode dépressif sévère, 50% présentent une comorbidité liée à l'anxiété et des antécédents de profit de séances de TCC quelques mois avant leur hospitalisation.

Se concentrer sur les femmes admises en psychiatrie et décrypter leurs caractéristiques démographiques, cliniques et thérapeutiques peuvent améliorer le système de soins à l'hôpital, ainsi que l'adhésion des femmes au traitement pharmacologique, aux thérapies comportementales et au suivi.

## ملخص

يتم إدخال النساء إلى المستشفى بسبب العديد من الاضطرابات النفسية التي يجب الاهتمام بها أخذاً بعين الاعتبار طبيعة المرأة وخصائصها داخل المجتمع ، نصفهن متزوجات بـ ١٥ أطفال، والنصف الآخر عازبات، مطلقات، ومهملات داخل مجتمعنا.

الغرض من هذا العمل هو دراسة الصورة الديموغرافية ، السريرية والعلاجية للنساء النزيلات بمستشفى الأمراض النفسية، مع إبراز الاختلافات، الخصائص ودور الإجهاد، الإدمان والمستوى المعيشي و غيرهم في التأثير على تطور المرض.

يتعلق الأمر بدراسة أفقية لـ 70 مريضة تم قبوله ن في مستشفى ابن النفيس للأمراض النفسية حيث تم الحصول على النتائج التالية :

يبلغ متوسط العمر 37.4 عامًا، 44% منهن عازبات ولديه ن مستوى تعليمي منخفض (أساسي) 32.8%.

64% من نساءنا يأتين من المناطق الحضرية، 51.4% منهن عاطلات عن العمل و 59% تم نقلهن إلى المستشفى من قبل عائلاتهن.

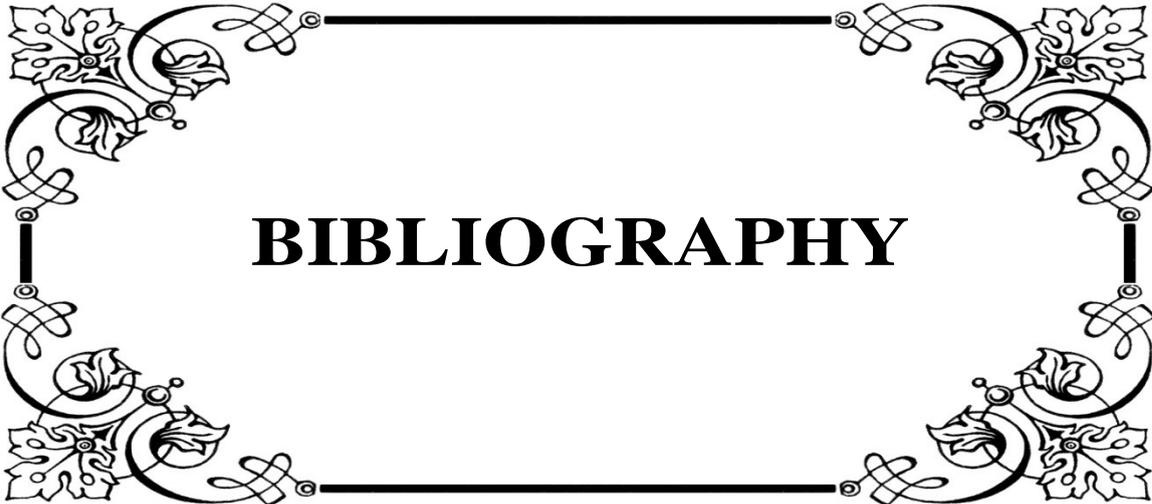
11.6% من المرضى في دراستنا لديه ن تاريخ إيجابي للمرض النفسي في العائلة ، 70% منهم مصابون بالفصام.

55% من المرضى ال لواتي تم قبولهن تم تشخيصهن بمرض انفصام الشخصية، يليه الاضطراب الثنائي القطب I، 18%، ويمثل اضطراب الاكتئاب الشديد نسبة 8% فقط.

السجل الجنائي لا يتجاوز 5.7% ، من الاضطرابات النفسية المختلفة المعنية، والعذوانية هي التهمة الأكثر تمثيلاً.

ترتبط محاولات الانتحار ارتباطاً وثيقاً بالحلقات الاكتئابية لاضطراب الاكتئاب الشديد واضطراب الثنائي القطب I، خصوصاً المرضى ال لواتي تناولن عقاقير مضادة للاكتئاب ومضادة للقلق لمدة 3 أشهر على الأقل.

وتلاحظ الصفات الذهانية في معظم الاضطرابات المشخصة بالمستشفى ، 83 % الاضطراب الثنائي القطب I و 67 % في اضطراب الاكتئاب الشديد. وبقال HAMILTON-DEPRESSION، تم قبول 66.3 % من النساء ببالة اكناب حادة، 50% لديهن اعتلال القلق المصاحب وتاريخ استفادة من جلسات العلاج المعرفي السلوكي قبل بضعة أشهر من دخولهن المستشفى. يمكن أن يؤدي التركيز على النساء اللواتي يتم إيداعهن في الطب النفسي وفك تشفير خصائصهم الديموغرافية والسريرية والعلاجية إلى تحسين نظام الرعاية في المستشفى، بالإضافة إلى تمسك المرأة بالعلاج الدوائي والعلاج السلوكي والمتابعة.



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# قسم الطبيب

أُقْسِمُ بِاللَّهِ الْعَظِيمِ

أَنْ أَرَأَيْتَ اللَّهَ فِي مِهْنَتِي.

وَأَنْ أَصُونَ حَيَاةَ الْإِنْسَانِ فِي كَأْفَةِ أَطْوَارِهَا فِي كُلِّ الظُّرُوفِ وَالْأَحْوَالِ

بِإِذْنِ اللَّهِ وَسَعْيِي فِي إِنْقَادِهَا مِنَ الْهَلَاكِ وَالْمَرَضِ وَالْأَلَمِ وَالْقَلْقِ.

وَأَنْ أَحْفَظَ لِلنَّاسِ كِرَامَتَهُمْ، وَأَسْتُرَ عَوْرَتَهُمْ، وَأَكْتُمَ سِرَّهُمْ.

وَأَنْ أَكُونَ عَلَى الدَّوَامِ مِنْ وَسَائِلِ رَحْمَةِ اللَّهِ، مَسْخَرَةً كُلِّ رِعَايَتِي الطَّبِيبَةِ لِلْقَرِيبِ وَالْبَعِيدِ،

لِلصَّالِحِ وَالطَّالِحِ، وَالصَّدِيقِ وَالْعَدُوِّ.

وَأَنْ أَثَابِرَ عَلَى طَلَبِ الْعِلْمِ الْمُسَخَّرِ لِنَفْعِ الْإِنْسَانِ .. لَا لِأَذَاهِ.

وَأَنْ أُوقِرَ مَنْ عَلَّمَنِي، وَأُعَلِّمَ مَنْ يَصْغُرُنِي، وَأَكُونَ أَخْبَثَ لِكُلِّ زَمِيلٍ

فِي الْمِهْنَةِ الطَّبِيبِيَّةِ مُتَعَاوِنِينَ عَلَى الْبِرِّ وَالتَّقْوَى.

وَأَنْ تَكُونَ حَيَاتِي مِصْدَاقَ إِيمَانِي فِي سِرِّي وَعَلَانِيَتِي،

نَفِيَّةً مِمَّا يَشِينُهَا تُجَاهَ اللَّهِ وَرَسُولِهِ وَالْمُؤْمِنِينَ.

وَاللَّهُ عَلَى مَا أَقُولُ شَهِيدٌ.

أطروحة رقم 039

سنة 2019

## الأمراض النفسية لدى النساء النزيلات بمستشفى ابن النفيس

### الأطروحة

قدمت ونوقشت علانية يوم 2019/07/03

من طرف

الآنسة سارة الفلاح

المزداة في 29 يونيو 1993 بطانطان

لنيل شهادة الدكتوراه في الطب

### الكلمات الأساسية:

نساء نزيلات - اكتئاب - مرض ثنائي القطب - سكيذوفرينيا

### اللجنة

الرئيسة

المشرفة

الحكام

السيدة

م. خوشاني  
أستاذة في الطب الإشعاعي

السيدة

ف. عصري  
أستاذة في الطب النفسي

السيدة

ف. منودي  
أستاذة في الطب النفسي

السيد

ا. بنعلي  
أستاذ مبرز في الطب النفسي

السيدة

ن. إدريسي السليطين  
أستاذة مبرزة في طب الأطفال