

Pattern of Tobacco Smoking in Patients with Bipolar Disorder: an Egyptian Sample

Thesis

Submitted for partial fulfillment Of the Master Degree
in Neuropsychiatry

Presented by

Mohamed Wagdy Mohamed Elsayed

M.B. B.Ch.

Faculty of Medicine - Ain Shams University

Supervised by

Prof. Heba Hamed El-Shahawy

Professor of psychiatry

Faculty of Medicine-Ain Shams University

Ass.Prof. Menan Abdel Maksoud Rabea

Assistant Professor of psychiatry

Faculty of Medicine-Ain Shams University

Dr. Eman Mohamed Shorub

Lecturer of psychiatry

Faculty of Medicine-Ain Shams University

**Faculty of Medicine
Ain Shams University**

2015

أنماط تعاطي التبغ فى مرضى الاضطراب الوجدانى ثنائى القطب : عينة مصرية

رسالة

مقدمة للحصول على درجة الماجستير بطب المخ والأعصاب والطب النفسي

مقدمة من

الطبيب/ محمد وجدي محمد السيد

بكالوريوس الطب والجراحة (2010)
جامعة عين شمس

تحت إشراف

أ.د/ هبة حامد الشهاوي

أستاذ الطب النفسي
كلية الطب – جامعة عين شمس

أ.م.د/ منن عبدالمقصود ربيع

أستاذ مساعد الطب النفسي
كلية الطب – جامعة عين شمس

د/ إيمان محمد شوب

مدرس الطب النفسي
كلية الطب – جامعة عين شمس

كلية الطب
جامعة عين شمس

2015



Acknowledgement

*First, thanks are all due to **Allah** for Blessing this work until it has reached its end, as a part of his generous help throughout our life.*

*I wish to express my sincere and deepest gratitude to **Prof. Dr. Heba Hamed El-Shahawy** professor of psychiatry, Faculty of Medicine, Ain Shams University for choosing this interesting topic, meticulous revision of this work, constructive criticism, faithful guidance and tremendous support that enable me to accomplish this work.*

*I am profoundly grateful to **Ass. Prof. Dr. Menan Abdel Maksoud Rabea**, assistant professor of psychiatry, Faculty of Medicine, Ain Shams University for her continuous encouragement, valuable support and generous recommendation.*

*My sincere thanks and deep appreciation goes to **Dr. Eman Mohamed Shorab**, Lecturer of psychiatry, Faculty of Medicine, Ain Shams University for her sincere advice and kind cooperation in all steps of this work.*

*I also wish to express my sincere gratitude to **Ass. Prof. Dr Mahmoud Mamdouh El-Habeeby**, assistant professor of psychiatry, Faculty of Medicine, Ain Shams University for his continuous support, generous help and creative recommendations.*

*I wish to express my gratitude to **Prof David Shehan** Distinguished University Health Professor at University of south Florida, Morsani College of Medicine for his help during the research. I would also wish to express my gratitude to **Prof. Pascale Salameh**, Associate dean on academic affairs at Lebanese American University for her help and support during my research.*

I also wish to thank my patients for their participating and help to complete this work.

List of Contents

	Page
Acknowledgment	--
List of Abbreviations	i
List of Tables	ii
List of Figures	vi
Introduction	1
Aim of the Work.....	2
Review of Literature	
Chapter 1: Nicotine Dependence: Cultural issue or clinical dilemma?.....	3
Chapter 2: Morbidity of Bipolar disorder	35
Chapter 3: Management of nicotine Dependence in Patients with Bipolar Disorder.....	68
Subjects and Methods	84
Results	91
Discussion	150
Limitations	156
Summary.....	158
Conclusion	161
Recommendations	162
References	164
Appendix I: LWDS-11 Arabic version	182
Arabic Summary	--

List of Abbreviations

BD	Bipolar Disorder
BP-I	Bipolar I disorder
BP-II	Bipolar II disorder
DSM-IV TR	Diagnostic and statistical manual of mental disorders, fourth edition
DSM-V	Diagnostic and statistical manual of mental disorders, fifth edition
GABA	γ -aminobutyric acid
GATS	Global Adult Tobacco Survey
IQR	Inter-Quartile Range
LDT	laterodorsal tegmental nucleus
NAc	nucleus accumbens
nAChRs	Nicotinic Acetyl Choline Receptors
NRT	Nicotine Replacement Therapy
NS	Non- Statistically significant result
VM PFC	Ventromedial Prefrontal Cortex
TPP	tegmental pedunclopontine nucleus
VTA	Ventral Tegmental Area

List of Tables

Table	Title	Page
1	Sociodemographic data of the sample	93
2	Education Status of both groups	95
3	Cigarette smoking in bipolar and non-bipolar participants	97
4	Waterpipe smoking in Bipolar and non-bipolar participants	98
5	Sociodemographic data in bipolar patients in relation to cigarette smoking	100
6	Sociodemographic data in bipolar patients in relation to waterpipe smoking	102
7	Cigarette smoking within different educational levels	105
8	Waterpipe smoking within different educational levels	107
9	Differential count of bipolar disorder	109
10	Cigarette smoking in current bipolar patients in comparison to non-bipolar participants	110
11	Waterpipe smoking in patients with current bipolar disorder in comparison to non-bipolar participants	111
12	Cigarette smoking in bipolar patients in remission in comparison to non-bipolar participants	113
13	Waterpipe smoking in patients with bipolar disorder in remission in comparison to non-	114

Table	Title	Page
	bipolar participants	
14	Cigarette smoking in different types of current bipolar in comparison to non-bipolar participants	116
15	Waterpipe smoking in different types of current bipolar in comparison to non-bipolar participants	117
16	Cigarette smoking in different types of bipolar disorder in remission in comparison to non-bipolar participants	119
17	Waterpipe smoking in different types of bipolar disorder in remission in comparison to non-bipolar participants	120
18	Prevalence of nicotine dependence in patients with current bipolar disorder and those with bipolar in remission	122
19	Prevalence of waterpipe dependence in patients with current bipolar disorder and those with bipolar disorder in remission	123
20	Patterns of smoking in bipolar patients	124
21	Current bipolar disorder effect on Cigarette and waterpipe smoking status	126
22	Cigarette and Waterpipe Smoking in cases with Bipolar disorder in remission	127
23	Cigarette smoking in Bipolar with comorbid Anxiety disorders	128
24	Waterpipe smoking in Bipolar with comorbid Anxiety disorders	129
25	Cigarette or Waterpipe in Bipolar with	130

Table	Title	Page
	comorbid Anxiety disorders	
26	Cigarette and Waterpipe in Bipolar with comorbid Anxiety disorders	131
27	The relation of cigarette or waterpipe smoking in bipolar to mood stabilizers, antipsychotics and sleep aid	133
28	Current Obsessive compulsive disorder in cases with current bipolar disorder	134
29	Current social phobia in cases of current bipolar disorder	136
30	Current agoraphobia in cases of current bipolar disorder	137
31	Current panic disorder in cases of current bipolar disorder	138
32	Current generalized anxiety disorder in cases of current bipolar disorder	139
33	The relation between number of depressive episodes and cigarette smoking	140
34	The relation between number of depressive episodes and cigarette smoking	141
35	The relation between cigarette smoking and current mood disorder with psychotic features	141
36	The relation between waterpipe smoking and current mood disorder with psychotic features	143
37	The relation between cigarette smoking and Suicidality risk in patients with bipolar disorder	144

Table	Title	Page
38	The relation between cigarette smoking and Suicidality risk in patients with bipolar disorder	145
39	The relation between cigarette smoking and generalized anxiety disorder in the past 3 months in patients with bipolar disorder	147
40	The relation between waterpipe smoking and generalized anxiety disorder in the past 3 months in patients with bipolar disorder	148

List of Figures

Fig.	Title	Page
1	Percentage of tobacco use among adults	4
2	Hookah/Shisha	11
3	Functional brain changes in bipolar disorder	42
4	The Mesocorticolimbic system	72
5	Sociodemographic data	94
6	Education status of both groups	96
7	Cigarette smoking in bipolar and non-bipolar participants	97
8	Waterpipe smoking in bipolar and non-bipolar participants	98
9	sociodemographic data in bipolar patients in relation to cigarette smoking	101
10	sociodemographic data in bipolar patients in relation to waterpipe smoking	103
11	Cigarette smoking within different educational levels	106
12	Waterpipe smoking within different educational levels	108
13	Differential count of bipolar disorder	109
14	Cigarette smoking in current bipolar	110

Fig.	Title	Page
	patients in comparison to non-bipolar participants	
15	waterpipe smoking in current bipolar cases in comparison to non-bipolar participants	112
16	Cigarette smoking in bipolar patients in remission in comparison to non-bipolar participants	113
17	Waterpipe smoking in patients with bipolar disorder in remission in comparison to non-bipolar participants	115
18	Cigarette smoking in different types of current bipolar in comparison to non-bipolar participants	116
19	waterpipe smoking in different types of current bipolar in comparison to non-bipolar participants	118
20	Cigarette smoking in different types of bipolar disorder in remission in comparison to non-bipolar participants	119
21	Waterpipe smoking in different types of bipolar disorder in remission in comparison to non-bipolar participants	121
22	Prevalence of waterpipe dependence	123
23	Patterns of smoking in bipolar patients	125
24	Cigarette and Waterpipe Smoking in	126

Fig.	Title	Page
	Current Bipolar Disorder	
25	Cigarette and Waterpipe smoking in bipolar disorder in remission	127
26	Cigarette smoking in Bipolar Vs Anxiety disorders	128
27	Waterpipe smoking in Bipolar Vs Anxiety disorders	129
28	Cigarette or Waterpipe in Bipolar with comorbid Anxiety disorders	130
29	Cigarette and Waterpipe in Bipolar with comorbid Anxiety disorders	132
30	The relation of cigarette or waterpipe smoking in bipolar to mood stabilizers, antipsychotics and sleep aid	133
31	Current Obsessive compulsive disorder in cases of current bipolar disorder	135
32	Current social phobia in cases of current bipolar disorder	136
33	Current agoraphobia in cases with current bipolar disorder	137
34	Current panic disorder in cases of current bipolar disorder	138
35	Current generalized anxiety disorder in cases of current bipolar disorder	140

Fig.	Title	Page
36	The relation between cigarette smoking and current mood disorder with psychotic features	142
37	The relation between waterpipe smoking and current mood disorder with psychotic features	143
38	The relation between cigarette smoking and Suicidality risk in patients with bipolar disorder	144
39	The relation between cigarette smoking and Suicidality risk in patients with bipolar disorder	146
40	The relation between cigarette smoking and generalized anxiety disorder in the past 3 months in patients with bipolar disorder	147
41	The relation between waterpipe smoking and generalized anxiety disorder in the past 3 months in patients with bipolar disorder	149

Introduction

Bipolar disorder is a major affective disorder marked by severe mood swings. Yet, the traditional defining feature of bipolar disorder is the occurrence of episodes of mania or hypomania alternating, or occurring currently with, depressive episodes. Episodes in bipolar disorder are usually separated by periods of recovery, with return to normal function, but recurrence rates are high. However, the course of bipolar disease is not entirely clear and recent research is suggesting that patients with bipolar disorder experience symptoms over much longer periods than previously thought. The disease is considered one of the most debilitating mental illnesses accounting for high rate of inpatient hospital admission (39.1%) with also higher annual insurance payments compared to other behavioral health care diagnoses. (Peele, Xu et al. 2003)

Bipolar disorder has been linked to tobacco smoking in many previous studies. One study has shown that the prevalence of cigarette smoking is 44% in bipolar patients among the sample group. (Dickerson, Stallings et al. 2013) The 2007 National Health Interview Survey showed a prevalence rate of 46% of cigarette smoking among bipolar patients.(McClave, McKnight-Eily et al. 2010) The effect of smoking cigarettes on bipolar disorder has been evaluated in a study that has shown that a relationship exists between cigarette smoking and psychotic symptoms in bipolar affective disorder.(Corvin et al. 2001)

Aim of the work

1. To study the comorbidity of nicotine use in patients with bipolar disorder.
2. To detect the pattern of nicotine use in Egyptian patients with bipolar disorder.
3. To study the comorbidity of anxiety disorders in patients with bipolar disorder and its effect on nicotine and waterpipe smoking pattern