



# **SLEEP PROFILE IN PATIENTS WITH SCHIZOPHRENIA: A POLYSOMNOGRAPHIC EVALUATION IN AN EGYPTIAN SAMPLE**

## ***Thesis***

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**Psychiatry**

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## LIST OF ABBREVIATIONS

<b>#WK</b>	Number of awakenings
<b>AP</b>	Antipsychotics
<b>CPAP</b>	Continuous Positive Airway Pressure
<b>FGAs</b>	First Generation Antipsychotics
<b>HFA</b>	High-Frequency Activity
<b>ICSD</b>	The international Classification of Sleep Disorders
<b>N1</b>	Non-REM stage 1
<b>N2</b>	Non-REM stage 2
<b>OSA</b>	Obstructive Sleep Apnea
<b>OSAS</b>	Obstructive Sleep Apnea Syndrome
<b>PLMD</b>	Periodic Limb Movement Disorder
<b>PSG</b>	Polysomnography
<b>RDI</b>	Respiratory Disturbance Index
<b>REM</b>	Rapid Eye Movement
<b>RL</b>	REM latency
<b>RLS</b>	Restless Legs Syndrome
<b>SBD</b>	Sleep Related Breathing Disorder
<b>SE</b>	Sleep Efficiency
<b>SGAs</b>	Second Generation Antipsychotics
<b>SL</b>	Sleep Latency
<b>SWA</b>	Slow-Wave Activity
<b>SWS</b>	Slow-Wave Sleep
<b>TST</b>	Total Sleep Time
<b>WASO</b>	Waking minutes after sleep onset





## GLOSSARY

<b>Sleep latency</b>	Time from lights out until first occurrence of sleep
<b>Sleep efficiency</b>	Percentage of time in bed spent asleep
<b>REM onset latency</b>	Time between sleep onset and the first occurrence of REM
<b>REM density</b>	Measure of frequency of rapid eye movements during REM sleep
<b>Slow wave sleep</b>	Amount of non-REM sleep stages 3 and 4 (also known as delta sleep)
<b>Total Sleep Time (TST)</b>	Total time spent in any REM or NREM sleep stage
<b>Sleep Period Time (SPT)</b>	Time from sleep onset until final awakening, including intermittent waking periods



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## INTRODUCTION

The relationship between sleep and schizophrenia has been fascinating scientists, clinicians, philosophers and the patient themselves for immemorial times, most probably because of the perceived similarity between the positive symptoms of schizophrenia and dreaming. Psychosis has been considered as a state of waking dreams (**Freud, 1900**) More recently, this idea has been received both by neuro psycho-analysts such as **Carhart-Harris, 2007** and neuroscientists such as **Gottesmann, 2006** who found not only a physiological resemblance but also strong neurobiological similarities between the dreaming state and schizophrenia (**Kramer, 2000**).

Difficulties initiating or maintaining sleep are frequently encountered in patients with schizophrenia. Disturbed sleep can be found in 30-80% of schizophrenic patients, depending on the degree of psychotic symptomatology. Measured by polysomnography, reduced sleep efficiency and total sleep time, as well as increased sleep latency, are found in most patients with schizophrenia and appear to be an important part of the pathophysiology of this disorder. Some studies also reported alterations of stage 2 sleep, slow-wave sleep (SWS) and rapid eye movement (REM) sleep variables, i.e. reduced REM latency and REM density. A number of sleep parameters, such as the amount