

# Nomophobia: The Mobile Phone in Panic Disorder With Agoraphobia

## *Reducing Phobias or Worsening of Dependence?*

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**Objective:** In this report, we present and discuss a hypothesis for the development, in individuals with panic disorder and agoraphobia, of dependence on his or her mobile phone (MP).

**Background:** This disorder, termed nomophobia, is a result of the development of new technologies. Nomophobia is considered a disorder of the modern world and refers to discomfort or anxiety caused by being out of contact with a MP or computer. It is the pathologic fear of remaining out of touch with technology.

**Method:** We present, the case report of a patient who has continuously kept his MP with him since 1995 because of his overwhelming need to feel safe and to be able to immediately call emergency services and people he trusts should he feel sick.

**Result:** The patient was treated with medication and cognitive-behavior psychotherapy. He has remained asymptomatic for 4 years. The patient showed significant medical improvement in his panic disorder and phobias, but there has been no change in his nomophobia.

**Conclusions:** The case presented here illustrates the dependence of an individual with panic disorder on his MP. A specific approach for this dependence should be used in some panic disorder patients.

**Key Words:** mobile phone, dependency, anxiety, cognitive-behavioral therapy, panic

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### INTRODUCTION

Nomophobia is a disorder of the 21st century and denotes discomfort or anxiety when out of mobile phone (MP) or computer contact.<sup>1</sup> It is the fear of becoming

technologically incommunicable, distant from the MP or not connected to the Web. The word nomophobia was coined in the United Kingdom from the expression “no mobile phobia,” denoting the phobia of being without a MP.<sup>1</sup>

Studies<sup>2</sup> on technological innovations revealed that computers and the Web become part of our lives, they begin to generate important psychologic transformations. Berger,<sup>3</sup> who is currently studying the relationship between new technologies and time, believes the MP is a “contribution” to people’s evolution in the 21st century. The psychologic impact of a person’s relationship with the MP, among other new technologies, demands a broad, continuous, and parallel study of human behavior, which is constantly changing, in an attempt to follow this evolution.

In the case of youth, the main changes associated to this technological progress are related to greater autonomy, freedom, and privacy, greater intimacy in many of their relationships, the rise of different forms of interpersonal control, and a greater feeling of safety and of never being alone. Thompson,<sup>4</sup> who has studied mass communication media for many years, observed that the MP has also generated confusion between the definition of public and private.

The French research company IPSOS published The Mobility Brazil 2008 Study (“Estudo Mobilidade Brasil 2008”)<sup>5</sup> on the Impact of Mobility on Daily Life. This study evaluated how MPs changed users lives, customs, activities, and behaviors. The company carried out 1000 interviews with people of both sexes, from all social classes and over 16 years of age, in 70 cities and 9 metropolitan regions. The results revealed that 18% of Brazilians stated that they depended on their MPs. This addiction refers to a defect that makes a thing or an action improper, inert, or inapt regarding its purpose or the effect it produces.

The MP and other new technologies make everyday life easier and can be crucial during emergencies, allowing the user to obtain help when needed and locate others immediately.<sup>5</sup> However, care must be taken to avoid becoming compulsive users or developing dependence on this device. Becoming mildly upset when one forgets their MP is common and does not bring about any emotional consequences. However, when the absence of the MP

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interferes with an individual's daily life and leads to symptoms of anxiety, discomfort, and panic attacks (PA), this development deserves special attention and professional assessment.

In accordance with the Daily Mail article,<sup>6</sup> the UK Post Office interviewed 2000 people. They found that 13 million British citizens, approximately 53% of MP users, suffer from nomophobia. About 58% of men and 48% of women are horrified when they have a problem with their MP. Nine percent of the population reported symptoms of anxiety when their MPs are turned off, due to the lack of credit or network coverage. This study also revealed that some people fear being without credit or battery power, losing their MP, or being outside the MP coverage area. In these individuals, to be left without the phone for 24 hours lead to anxiety and panic symptoms.

The MP can reduce anxiety levels and enhance feelings of safety. However, it does not encourage the individual to seek autonomous and independent behaviors. The purpose of this case study is to discuss nomophobia and generate some hypotheses for the dependency relationship that has developed in panic disorder patients related to new technologies. We will demonstrate this dependence through the case report of an individual with panic disorder and agoraphobia and his relationship with his MP.

### CASE REPORT

R.P.T., a 56-year-old man with a university degree, is married and works as a magazine publisher. He reported his first PA at the age of 26 during a trip abroad. At that time, he reportedly experienced nervousness, tachycardia, tremors, altered breathing, cognitive symptoms, and had great difficulty in returning to Brazil on his own. After this episode, he had frequent PAs, developed a phobic condition, and became dependent on his parents and people close to him.

At 33 years of age, his mother passed away, and subsequently his phobia and dependence behavior worsened. He then developed a fear of elevators, would not go out on his own because, he feared, he would be sick and there would not be anyone around to help him, and had to sleep in his father's room. He felt miserable, had low self-esteem, and developed marked insomnia and depressive symptoms. He reports contemplating suicide on more than one occasion; he could not stand living a life of incapacity, lack of autonomy, and full of limitations. He sought treatment from the onset of symptoms, but experienced no relief in symptoms. He underwent many medical tests that all showed normal results.

In 1984, he married a physician but the marriage lasted only 15 days. By that time, he did not feel capable of taking on a new home, living away from his father, and moving around on his own. He reported marrying his fiancée because she was a medical doctor, which made him feel safe. In 1992, he met another doctor and married her. In 1999, his wife filed for divorce due to her need for independence in normal situations—going out of the house, travel, etc. She reported that, in her marriage, she had to constantly be ready to help the patient with any emotional issues. At this time, he met a specialist in panic disorder and initiated treatment that, according to the patient, was necessary to salvage his quality of life and reduce his panic symptoms. The medical treatment consisted of clomipramine,

75 mg a day, and clonazepam, 1 mg per day. He was also referred for cognitive behavioral therapy (CBT). The patient kept his medication with him at all times and never left home without it. He went to CBT and exercised 3 times a week and recovered his independence and his marriage.

The patient's relationship with his MP is chronic and long lasting, similar to his PAs. He informed us that he was one of the first people in Brazil to own a MP. When this technology did not even exist, he owned a device called "tele-road"—a sort of amateur radio device that, despite having only one channel and being limited to certain areas, made him feel safer. From then on, he was never without a device and was always updating to more modern models. He uses his MP daily. He keeps it with him 24 hours a day and never leaves home without it. He feels extremely anxious whenever he forgets the MP and always goes back to pick it up. He usually makes and received more than 3 calls a day and feels rejected, with very low self-esteem, when no one calls him. He likes to be found at any time and does not turn the MP off in restaurants, in the company of others, or in formal settings, on which occasions he sets the MP to vibration mode. He reports that the MP is on even over night. He says his physician's; his psychologist's, and registered hospitals' telephone numbers are programed in a specific numerical order. If necessary, he can press one key for the help he needs and he is immediately assisted. He reports total dependence on the MP. He states "it is as if it was a wheelchair for a paraplegic" and, "it was the best thing that happened to our lives." The patient reports having PA symptoms when he does not have the MP nearby and needs to make a call. When the battery is low or out of range he feels anxious, distressed, agitated, fearful, disoriented, and completely insecure. The patient reported an occasion when he was alone in the street, some distance from home, when he began to suffer a PA. He says he was only able to control himself and calm down after he called his doctor on his MP.

With the MP at hand, he feels as if he has company, and thus feels more independent. He knows that if the MP did not exist he would not feel as free to go about independently as he does now with his MP. He states, "my life would be much harder if it were not for the MP."

For the last 4 years, the patient has been symptom free—he reports no anxiety, tachycardia, or dyspnea, among other symptoms. He shows marked improvement in his phobia and no PA has occurred during follow-up. The combination of psychiatric treatment, medication, and psychologic therapy with CBT, together with physical activity, has led to improved emotional stability. The panic disorder with agoraphobia has improved and the patient is almost asymptomatic. Although the nomophobia was also addressed during the CBT, he still cannot be separated from his MP.

### DISCUSSION

Nomophobia can be included in the specific situational phobias group,<sup>7</sup> directly related to agoraphobia, which in accordance to the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision)<sup>8</sup> is characterized by the individual's fear of being sick and not obtaining immediate assistance. Range<sup>9</sup> believes that panic disorder with agoraphobia is the most frequent disabling problem among anxiety disorders. It can often be associated to behaviors of escape and avoidance that drastically limit patients' mobility and autonomy.

Healthcare professionals should discuss MP dependence with this patient population, because it is healthcare providers who assist agoraphobic individuals to promptly communicate and reduce their anxiety, but at the same time may prevent development of patient autonomy by this open communication.

According to King et al,<sup>10</sup> instead of learning how to deal with their difficulties, which would be ideal, the individual with panic disorder reinforces the dependence on the MP and develops static dependent behavior. In similar situations, this relationship is analogous to encouraging an individual to need someone's company as psychologic support, or always having anxiety medication at hand. Treatment through CBT techniques<sup>11</sup> reinforces behavior of autonomy and encourages the patient to be independent and deal with his or her own issues.

Information and telecommunication technologies generated a new social organization<sup>12</sup>—a networked society. In a world where everything can be connected to everything and everyone, the use of social indicators must be complemented by expert opinions. We need to refer to reality analyses undertaken by intellectuals who try to capture the unique characteristics of the contemporary social fabric, and of subjective changes. In 2003, Castells<sup>13</sup> tried to analyze the psychologic impacts of MPs within the context of social and psychologic consequences generated with the advent of new technologies. The study of economic and social changes associated with the so-called information and communication technologies revolution is definitely necessary, to avoid the risk of short sighted, out-of-context analysis of emerging events.

There is no specific pathophysiologic basis for the development of nomophobia in panic disorder patients. The PA is speculated to originate in an abnormally sensitive fear network, centered in the central nucleus of the amygdala.<sup>14</sup> The sensory input for the conditioned fear stimulus runs through the anterior thalamus to the lateral nucleus of the amygdala, subsequently to the central nucleus of the amygdala, where the information is gathered and the autonomic and behavioral responses are coordinated. A projection from the central nucleus of the amygdala to the periaqueductal gray region is responsible for additional behavioral responses, including defensive behaviors and postural freezing. Various phobic defensive behaviors can develop in the agoraphobic spectrum. New technologies, including the continuous use of MP and dependence upon it, may be one of these defensive behaviors.<sup>15</sup>

In his research with young people, Nicolaci-da-Costa<sup>16</sup> observed that the changes introduced by MPs in the lives of the interviewees were not related to mobile, immediate and constant sociability. Instead, changes associated with MPs have more to do with greater autonomy and freedom of action.

Another important bias to be discussed is the effect that MPs have had on the feeling of false safety, as opposed to real safety. Individuals feel secure with the possibility of using something that can bring about

tranquility. Thus, they are able to have greater freedom of action and autonomy. It is common to see that individuals do not feel lonely when they have a MP, which is indispensable for them. They know they can promptly count on an extensive solidarity network with different types of emergency assistance, including doctors, psychologists, and hospitals, and direct access to family and friends. Our patient reported that he used his MP to access all of the resources mentioned above so as to feel more confident and safe.

Along with this newfound freedom, new rules of coexistence are influenced and dictated by the communication and interaction among individuals. This mobility leads to a feeling of freedom and a perception that we hold the world in our hands. This power that the MP stimulates can generate ambiguous behavior of power and fear, or safety when it is at hand or insecurity when it is used as a psychologic support. One must be prepared for all its potential and multiple capabilities.

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