

New Psychoactive Drugs

Nuevas Drogas Psicoactivas

HELEN DOLENGEVICH-SEGAL*, BEATRIZ RODRÍGUEZ SALGADO**, JORGE GÓMEZ-ARNAU RAMÍREZ*, DANIEL SÁNCHEZ-MATEOS

*Servicio de Psiquiatría. Hospital Universitario del Henares. Coslada (Madrid). **Hospital Ramón y Cajal. Centro de Salud Mental de San Blas, Madrid. ***Hospital La Fe, Valencia.

Drugs that are not regulated by the Convention on Psychotropic Drugs of the United Nations of 1971 are called New Psychoactive Drugs (NPD) (United Nations Office on Drugs and Crime, 2013). These are uncontrolled molecules that emulate the effects of illegal psychoactive drugs. Not only new synthetic substances but also other already known substances that are consumed outside of the traditional contexts are included in the concept, as well as new distribution pathways for them. In this sense, the internet plays a key role, as it is relatively easy to obtain drugs known as *legal highs*, or *research chemicals*, through the network. They are sold as “mystical incense”, “water pipe cleaners”, “dietary supplements”, “bath salts”, “collector’s items” or “fertilizer for plants”, with the warning that they are not suitable for human consumption. However, it is possible to find numerous websites in which are listed dose, forms of consumption, combinations, possible complications, and expected effects. The nature of these substances is varied: from herbal products—in which the false idea is exploited that because they natural, they are harmless—to chemical, synthetic and semi-synthetic, and pharmaceutical substances (chemical intermediates used to prepare other substances), or mixtures of the above. The exact composition of the products, where adulteration is also common, is often not detailed. The psychoactive activity is also diverse: stimulants, sedatives, empathsogens, hallucinogens, and analgesics. In fact, with the modern

composition of substances, there are some that in themselves can be considered a “poly-drug consumption”, as they are able to influence different neuronal receptors and present different effects. Such is the case of synthetic cannabinoid STS-35, which acts as a ligand of cannabinoid receptors, as a glutamate antagonist of type NMDA receptors (the same action performed by MK-801, a molecule used to induce experimental psychosis in animals), and as a serotonin agonist; or synthetic opioid MT-45, which has a piperazine structure, from which a stimulating effect is expected, while at the same time, it acts on μ opioid receptors (Siddiqi, Verney, Dargan, & Wood, 2015). Outside the usual commercial networks, there is a *Deep web*, in which the encrypted information evades the authorities’ surveillance, which allows the traffic of illegal products. In recent years, several portals that sold classic illicit drugs such as cocaine, heroin, MDMA, or amphetamines have been closed down.

The latest report of the European Observatory for Drugs and Drug Addictions, based on the data collected through the Early Warning System of the European Union points out that in 2014, 101 new psychoactive substances were detected out of a total of 450 identified by the system since its initiation in 1997. Among them, synthetic cannabinoids and synthetic cathinones (European Monitoring Centre for Drugs and Drug Addiction, 2015) stand out because of their frequency. Recent scientific literature also echoes the arrival of new drugs in Europe, both through the toxicological

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Send correspondence to:

Helen Dolengevich Segal Servicio de Psiquiatría. Hospital Universitario del Henares. Avda. de Marie Curie s/n, 28822, Coslada (Madrid).
E-mail: e.dolengevich@gmail.com

analysis and through case reports of clinical complications linked to consumption (Wood, Sedefov, Cunningham, & Dargan, 2015).

The emergence of psychopathological disorders among the population that consumes NPD invites us to reflect about the possible presence of a dual pathology, which refers not only to the comorbidity between a psychiatric diagnosis and a substance use disorder, but also to the existence of a common vulnerability. The term dual pathology refers to psychopathological phenotypes in which an association of genetic and environmental factors is postulated. At the confluence of the two pathologies, the possible existence of a common neuronal substrate containing responses to different types of stress has been pointed out, as well as the hypothesis of self-medication and self-regulation or the influence of environmental factors and lifestyle (Szerman et al., 2013; Volkow, 2001).

In this sense, the definition of psychonaut, coined by Jünger (1952) when referring to people who use entheogens to explore their psyche, has been updated. The term *e-psychonaut* has been proposed in reference to the importance of the Network to obtain both psychoactive material and information about the effects, pharmacology, risks or possible combinations (Davey, Schifano, Corazza, Deluca, & Psychonaut Web Mapping Group, 2012). Epidemiologically, psychonauts tend to be male, between the third and fourth decade of life, with a high educational level and a marked inclination to polydrug use. In recent years, late adolescents and young adults of both sexes have also been added, all of them with scarce experience (Government Delegation for the National Plan on Drugs, 2015). In the case of consumption of NPD and the presence of psychopathology, the term *dual psychonaut* refers to subjects with a possible mental illness looking for the specific management of these substances, as well as those in whom perseverant psychopathological symptoms emerge after consumption, highlighting an underlying vulnerability (Dolengevich-Segal, Rodríguez-Salgado, Gómez-Arnau, Rabito-Alcón, & Correas-Lauffer, 2014).

The data warn us of the importance of the phenomenon, as it implies a change both in the substances themselves and in their consumption patterns and even in the epidemiological profile of the consumers, all of which entails the need to update our knowledge of the approach to the possible medical and psychopathological complications (Kersten & McLaughlin, 2014).

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