

# Therapeutic potential of spirituality and mystical experiences in the treatment of substance use disorders

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## Abstract


**Objective.** This article aims to give an overview on the role of spirituality, faith and mystical experiences in the treatment of Substance Use Disorders (SUDs) by presenting the case of the therapeutic community Takiwasi, where psychoactive plants are used, and by considering other Complementary and Alternative Medicine (CAM) therapies that are derived from or have connection with religious or spiritual practices. **Methodology.** The research has been based on the review of scientific and grey literature and on an interview performed with the president and founder of Takiwasi. **Results and discussion.** Synergism between Christian and Amazonian spirituality appears relevant within the Takiwasi protocol. The use of CAM including Mindfulness, Holotropic Breathwork and Yoga emerge from the literature. **Conclusions.** Clinical experience show that spirituality is a key factor to be taken into account when considering addiction treatment and several CAM practices with spiritual connotations show promising potential for the treatment of SUDs.

**Key words:** substance use disorders (SUDs), spirituality, complementary and alternative medicine (CAM), mystical experience

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## Potencial terapéutico de la espiritualidad y las experiencias místicas en el tratamiento de trastornos por uso de sustancias

### Resumen

**Objetivo.** Este artículo tiene como objetivo ofrecer una descripción general del papel de la espiritualidad, de la fe y de las experiencias místicas en el tratamiento de los trastornos por uso de sustancias (TUS) presentando el caso de la comunidad terapéutica Takiwasi, donde se utilizan plantas psicoactivas, y considerando otras terapias pertenecientes a las medicinas complementarias y alternativas (MCA) que derivan de o tienen conexión con prácticas religiosas o espirituales. **Metodología.** La investigación se ha basado en la revisión de la literatura científica y gris y en una entrevista realizada con el presidente y fundador del Centro Takiwasi. **Resultados y discusión.** El sinergismo entre la espiritualidad cristiana y amazónica parece relevante dentro del protocolo Takiwasi. La literatura pone en evidencia el uso de MCA, incluyendo Mindfulness, Respiración Holotrópica y Yoga. **Conclusión.** La experiencia clínica muestra que la espiritualidad es un factor clave que se debe tener en cuenta en el tratamiento de la adicción y varias prácticas de MCA con connotaciones espirituales muestran un potencial prometedor para el tratamiento de los TUS.

**Palabras clave:** trastornos por uso de sustancias (TUS), espiritualidad, medicina complementaria y alternativa (MCA), experiencia mística

### Introduction

A common and long-lived definition of spirituality is “*our ability, through our attitudes and actions, to relate to others, to ourselves, and to God as we understand Him*” (Cook, 2004). Addiction has been instead oppositely defined as “*a setting apart from one’s self, others, and the world*” (Forcehimes & Tonigan, 2009). In other words, spirituality and addiction seem to be in conflict; one displaces the other. Despite the relevance of this consideration, it is unclear why the construct of spirituality should not be studied with the same rigor as any other intangible construct. The argument that spirituality is outside the realm of scientific integrity is inconsistent with new research developments, especially considering that new outcome measurement tools have been developed as for other dimensions of health (Dhar, Chaturvedi & Nandan, 2011).

The association between spirituality and Complementary and Alternative Medicines (CAM) is unfolding as a research theme that may have increasing practical implications in healthcare systems. Patients' perspectives regarding CAM and spirituality show that their needs are often addressed in an integrative medical program, and higher degree of spiritual and religious quest is associated with increased CAM use (Ben-Arye et al., 2012; Ellison, Bradshaw & Roberts, 2012). From the physicians' viewpoint, doctors spoke of CAM and its use as related to their own spiritual or religious perspectives. In a recent study of a Puerto Rican case, spiritual or spiritist doctors were more inclined than religious doctors to utilize CAM (Soto-Espinosa and Koss-Chioino, 2017). For the specific case of Substance Use Disorders (SUDs), it has been claimed that *"It would be difficult to work in addiction treatment for any length of time without considering the potential importance of spirituality to people in recovery"* (Treloar, Dubreuil & Miranda, 2014).

The inverse association of spirituality and substance dependence is one of the protective relationships most well-documented in the literature, on the same level as (lack of) family history and the availability of social support (Bonelli & Koenig, 2013). Berlowitz et al. (2018) have been observing that Traditional Amazonian Medicine (TAM) practitioners consider a pronounced spiritual dimension related to addiction. Some of the practitioners interviewed referred to addiction as a consequence of a search for spiritual meaning or filling an existential void. TAM practitioners also mentioned spirits or nonhuman entities as involved in SUDs: *"The addict is a person that has lost the connection to his soul, to his spirit, and he is inhabited by a spirit, an entity that leads him to destruction, towards death"* (Berlowitz et al., 2018). Both, spiritual and religious dimensions are present within the Takiwasi Center treatment protocol, and the impact of such activities on SUDs is currently under evaluation through standard questionnaires<sup>1</sup> that are being applied as part of the Ayahuasca Treatment Outcome Project – ATOP, an international research project that aims at validating the efficacy of Ayahuasca and TAM in the treatment of addiction and mental health.

The Takiwasi Center is a therapeutic community founded in 1992 in the Peruvian High-Amazon, and recognized by the Peruvian Ministry of Health as an integrative medicine center. Takiwasi has been working for over 27 years in the treatment of

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<sup>1</sup> The WHOQOL-SRPB field-test instrument, covering quality of life aspects related to spirituality, religiousness and personal beliefs (see: [http://www.who.int/mental\\_health/publications/whoqol/en/](http://www.who.int/mental_health/publications/whoqol/en/)).

people with SUDs and mental health problems through the use of TAM, combined with Western psychotherapy and classic biomedical monitoring (Politi, Friso & Mabit, 2018). Takiwasi is well-known for having been the first clinical institution in the world to apply TAM and the use of the Ayahuasca brew for the treatment of SUDs (Berlowitz et al., 2018). Nowadays, like most of the centers that use herbal medicine for the treatment of SUD, Takiwasi's treatment protocol offers a combination of alternative and complementary practices which are fully integrated with the herbal-based intake rituals. For example, Takiwasi offers activities such as family constellations, art-therapy workshops, and dance-therapy sessions (Giove 2002); all these activities fall into the general category of CAM.

The objective of this article is to present how spirituality and religion influence the SUD treatment protocol of Takiwasi according to the clinical and personal experience of its founder, Jacques Mabit. In addition, we want to present other CAM practices that are showing promising potential for the treatment of SUDs and that are derived from or have connection with religious or spiritual practices.

## **Materials and Methods**

The results of this article are partly based on a semi-structured interview with Jacques Mabit performed by researcher Alberto Dubbini during its field work research at Takiwasi in July 2018. The interview was conducted inside the Takiwasi Center using a qualitative method, recorded with an audio instrument and subsequently transferred on a written text, which was then elaborated and interpreted. An analysis was also carried out of the literature published around the activities of the Takiwasi Center, with a particular focus on the grey literature stored in the library of the institution, which is constituted by a large number of theses and research works from various fields and academic levels, some of them more focused on the spiritual and religious aspects of the treatment protocol. The results on the use of CAM practices in the treatment of SUDs are based on the review of scientific literature and internet searches. Standard scientific databases including Pubmed, ScienceDirect and Google Scholar were used to access peer-reviewed publications with the aim to acquire up-to-date information.

## Results and Discussion

### Christian faith and indigenous spirituality at Takiwasi

The whole project of the Takiwasi Center is the result of the direct experiences of Jacques Mabit, French doctor and founding president of the institution. After arriving in Peru to work in a small hospital in the Andean highlands, the encounter with the traditional Andean and Amazonian medicines, and with its expert practitioners such as healers, midwives, and bonesetters made him aware that their sources of knowledge and healing practices derived from “contacts” with the invisible world. The years of learning and direct practice of TAM, and in particular of the Ayahuasca ritual, allowed him to build a cartography of the invisible world, considered central in Takiwasi’s conception of health, illness, and patient care.

In Takiwasi, the spiritual level is not only a metaphor, it literally exists and is a plane of reality populated with both good and evil spirits. As in TAM cosmology (Luna, 1986), it is considered that elements of the material world are presided over by a guardian entity, a spirit, that reside in the intermediary world, the world of invisible creation. This invisible world is populated by beings which have been created too, but have no physical or material existence, though are endowed with intelligence, freedom, will and preside over all elements of the physical world, as well as psychic functions and emotions. This intermediary world is located above the material world of creation and below the divinity. This world of spirits is dual, it is white or black, there are good or bad spirits, while the world of visible creation is “grey” and escapes dualism.

An essential part of the healing work requires discerning between this world of invisible creation and the individual and collective unconscious that, in its way, is invisible as long as it doesn’t surface to the patient’s consciousness. The psychic shadow indicated by Jung is neither equivalent nor superimposed to the spiritual shadow. The psychic shadow can and should be integrated into the conscious psyche through a psychotherapeutic process supported by symbolism, while the spiritual shadow (evil spirits) needs exorcist measures. The desire to integrate the spiritual shadow to the psychic dynamics of the subject leads him to dissociate and become “crazy or sorcerer” (Mabit, 2016).

In his *curanderismo* apprenticeship, Mabit quickly realized that there was inevitably an encounter with these spiritual beings in each ritual and healing practice. And it was clear that many people were sick because they were parasitized or contaminated in some way with evil entities. The work of cleansing and healing therefore had to consist partly in expelling these entities. This process first requires distinguishing between bad and good spirits, the latter being allies during the healing process and acting as protection entities. Therefore, they should not be rejected. This ambivalent relationship with the entities of the invisible world is central to the shamanism of the Amazonian peoples in Takiwasi's area. The shamanism of the neighboring group Quechua Lamista involves a "*combination of curanderismo practices, witchcraft and divination, characterized by the use of spirits*" that will be asked to do evil in "*the casting of spells and pathogens*" or to perform exorcisms with extraction by suction "*to remove these agents*" (Barbira-Scazzocchio, 1979). The discovery by the patient of personal protection entities (spirit of ancestors, saints, angels or good spirits) is extremely comforting and allows to fight the spiritual battles with greater courage and hope.

Through his clinical experience and empirical observation at Takiwasi, Mabit also discovered a strong accordance between TAM and catholic theology. This convergence has also been pointed out by Jaime Reagan (2011), priest and Amazonian anthropologist, who underlines the healing dimension of Christianity, which has been quite forgotten, despite being central since its origins: "*The relationship between healing and religion is undeniable in the case of Jesus Christ, who presented himself not only as Messiah and son of God, but also as a healer. He prayed to heal, to cast out evil spirits, and healing was a sign of his power to forgive sins. He had a prophetic mission to fulfill, that was covered with the cultural characteristics of prophet-healer of his people*".

The Ayahuasca ritual is thus considered a spiritual battlefield in which spiritual tools are needed. That is why healers pray and beg the spirits. They call for the spirit of medicinal plants and of their master healers. Ikaros (healing chants), prayers and invocations employed during Ayahuasca ceremonies and other ritual works seek the help of the Christian pantheon and in many chants we can find invocations to the Virgin Mary and Jesus Christ. This observation is not limited to Ayahuasca but is common to almost all traditional healing practices in Latin America, and can be found from the famous Mexican Mazatec healer Maria Sabina speaking about "holy children" when referring the hallucinogenic mushrooms (Gordon, 1983), to

the Peruvian healer Marcos Carbajal using the mescaline cactus San Pedro (Reyna, Carbajal y Carbajal, 2010).

Any opening to the invisible world is considered risky, potentially dangerous, since there is the possibility of opening not only to good spirits, but also to evil ones. Therefore, one needs to know how to open oneself to this world with the necessary care. The path to divinity inevitably crosses this angelic world, this space of mediation. But it cannot be dealt with in a casual way, it has to do with the mystical level and with spiritual rules that are different from psychological and material ones. And here lies the extreme importance of the ritual framework as a gateway between the two worlds to ensure a safe exploration of the invisible world and, most of all, return safely from it (Mabit, 1999). Drugs consumption, considered a desecrated induction of modified states of consciousness without effective ritualization, doesn't allow the consumers to "return" safely from their trip so they remain partly trapped in the world-other and are later dissociated in their ordinary consciousness.

All the ancestral traditions in the world have a certain degree of liberation practices. When the healer sings, "*The sun gives us warmth, the water quenches our thirst, that plant gives us strength, that other plant dissolves us fear*", is performing a form of praise to life, to creation and pronounces or proclaims the Truth. And all truth has an exorcist function. Within an Ayahuasca ceremony, there may be malignant contamination if there is absence of correct ritual protection, negligence, poor preparation, perverse intention, toxic context, association with other inadequate substances, but the plant is innocent. It has not been used correctly.

Beyond the expulsion procedure applied to extract the evil entity, we must ask ourselves where it entered, why there is a contact with an evil entity? Which is the entrance door? It can come from personal life, from something wrong that has been done, from some transgression of spiritual laws, from some esoteric practice, from spiritualism, Satanism, abuses of all kinds, etc. It can also come from something external: *daño* (damage), witchcraft, spells. Or it can eventually come from an external contamination from proximity to places or objects, even animals, contaminated by an evil spirit. There is also the possibility of a transgenerational inheritance. According to clinical experience, spiritual parasites get caught in the energetic body of the patient and in the long term they can end up affecting the physical body. A spiritual infestation can thus become physical illness.

The plants and everything that goes with traditional medicine constitute a practical form of access or a gateway to the spiritual world, but not a goal in itself. There is a hierarchical order. The plants, and all related practices, are an introduction to the spiritual life, which is of a higher level. God is considered superior to all natural elements such as plants, animals, water, rivers, and mountains created by Him. In this way the specific power of the plants is invoked taking into account God's superiority (Horák, 2013).

According to clinical observation, patients come to Takiwasi after having gone through important experiences. They may have consumed and sold drugs, committed barbarities, robberies, serious crimes, but under all those debris, a light remains. The spirit, the soul, the divine consciousness, can still be seen under the rubble. That is why the work in Takiwasi is to help these people to have faith, to have hope, to know that it is not in vain and that they are going to try and remove all that rubbish, because deep down the light remains. As far as the ancestral knowledge of TAM is used, in association with Christian tools of healing and correct doctrinal context, the results are encouraging. It is not important that patients believe to start the treatment. Most of the patients who come to Takiwasi do not believe in the existence of spirits, nor in God. It is not necessary to believe in the spirits in the first instance, but it is inevitable to discover them and their mechanisms of action if patients want to continue safely and successfully on the spiritual path.

When Westerners get in contact with the invisible world, the question arises of how to integrate that experience into psychic, symbolic and everyday life. The appearance of a demon, an angel or a transcendental reality can exceed their capacity for integration. What to do with that experience? They may not do anything and classify it quickly as the power of suggestion, because they doesn't know how to place that experience in their usual worldview; they can have a symbolic or religious reference that allows them to process the experience; or they will have to change their thinking paradigm and to thoroughly revise their way of understanding the world and life.

During treatment at Takiwasi, most patients at a given moment have spontaneously expressed the need to practice their religious faith. The center respects all beliefs and provides facilities for its practice through accompaniment to attend religious rites and by providing a house of silence or chapel, space reserved for meditation and/or prayer, without any requirement or censorship of any kind. Patients with a



personal religious path before starting the treatment, might go to the root of their own faith during the treatment process and strengthening it: it can be said that Christians become better Christians, Jews becomes better Jews, Muslims become better Muslims, etc. (Apffel-Marglin, 2007).

A connection to the divine or to a spiritual dimension is also a way of satisfying the spiritual needs of the self, something that in Takiwasi is considered crucial for any kind of personal recovery, psychological well-being and good living. According to clinical experience (Giove, 2002) regardless of the patients' religious belief, the sensation of cosmic communion, of undifferentiated belonging to an immeasurable and ineffable All, -that is, pure religious experience, non-confessional- is an experience that occurs spontaneously at some stage of the treatment. This effect is common to many entheogenic substances like Ayahuasca. Along the treatment, the mystical experiences lived by the patients are deeply healing because they instill in them the assurance that the spiritual world exists, thus relativizing the importance given to everyday life, including drugs. In the work with plants, and especially Ayahuasca, anyone who is willing to surrender and open up, can experience that mystical dimension and this constitutes a foundation for their future life, for the development of a true spirituality lived in their own flesh.

Takiwasi can be compared to an initiatory space that recreates rites of passage adapted to modernity, and whose lack led young people to seek, through drugs, a kind of self-initiation process (Mabit, 1994). In a research carried out in Takiwasi (Denys, 2013), the data collected on the "*recognition of the sacred nature of life and nature*" by addict patients suggest that "*the relationship to the sacred, or rather its lack, is a possible factor in addictive behaviors*". The "initiatory death" experienced during an Ayahuasca session plays a predominant role here (Denys, 2013). The initiation experience as a response to addiction has been pointed out by other therapists in other contexts (Albrecht & Zermaten, 1989; Amar, 2011, 2012).

On the other hand, the excess of conceptualization and intellectualism of the contemporary clergy is criticized. Takiwasi hosts different religious representatives who participate in workshops, seminars and Ayahuasca ceremonies. They are experts, theologians, intellectuals of great caliber, who, after the plant intake sessions, show a great dissociation between their theoretical knowledge and their personal experience. And then they open up to a totally different perspective of

faith. Suddenly they become aware, as one of them said, that everything they had read in their life was finally true, a reality embodied, sensitive in their own body and personal life. Traditional medicines indicate this existing “gap” between the theological knowledge and the healing practice as taught by Christ, a fact that has also been pointed out by Catholic clergy members during the Meeting of Shamanism and Christianity among the Indigenous Peoples of East Asia and Oceania (Lardinois & Vermander, 2006).

In this process, traditional medicine psychoactive or sacred plants represent an extraordinary way of approaching the spiritual world, both the inner and the external invisible world. They play a role of facilitator, of mediation, but they cannot be considered as a final goal in itself. They are medicines that embrace the spiritual dimension, but do not constitute a religion. In addition, the spiritual dimension they offer is fully compatible and in synergy with the Christian faith, under the conditions outlined above. The initiative of Takiwasi tries to demonstrate that it is possible to carry out this spiritual combat, despite the limitations. What is proposed is to leave aside the theoretical debates to offer concrete facts represented by young people who overcome their addiction and make big life changes, and by the tangible reconciliation between the indigenous world and the western world, and between both spiritualities.

### **Complementary and Alternative Medicines for the treatment of SUDs**

In the following section we want to give a brief overview of the major types of CAM interventions that have received particular attention and recognition within the scientific community, and have connection with religious or spiritual practices. This could further stimulate the integration of unconventional practices into the mainstream medical approach for treating SUDs, therefore favoring the opening of certain rigid boundaries, in particular those where politics and regulations block the development and renovation of public healthcare systems even in the presence of scientific evidences that indicate potential benefits from such an integration.

#### *- Music-based interventions in the treatment of SUDs*

The power of music has been used since ancestral times for evoking the gods and acquiring spiritual insight, and music in its various modes is an omnipresent

companion to religious and spiritual practices (Foley, 2015). Although music has long been used in various ancient cultural traditions as a form of healing, its use in modern treatment modalities as music therapy has become of interest to medical professionals only in the last few decades. In particular, the use of music therapy within the framework of CAMs applied for the treatment of SUDs is thought to help patients tap into emotions and needs that may be difficult to express through more traditional forms of communication. Furthermore, this approach also provides a way to motivate patients to receive treatment. Studies on music therapy have found numerous benefits for SUD patients. For example, songwriting and lyric analysis are related to positive emotional change in patients (Aletraris et al., 2014), drumming is associated with relaxation and can be useful for patients who have experienced repeated relapses (Winkelman, 2003), and activities in music therapy (e.g. movement to music) are associated with a decrease in anxiety, depression, anger, and stress, although data suggests that no activity is more important than another (Cevasco, Kennedy & Generally, 2005). A systematic review on music therapy literature and programs evokes several implications for future implementation of music therapy as a primary or adjunct therapy for patients with addictions, and indicates potential use of this kind of treatment for SUD patients (Mays, Clark & Gordon, 2008). More recently, a clear increase in the number of randomized controlled trials to measure the efficacy of music therapy intervention in SUDs was observed (Hohmann, Bradt, Stegemann & Koelsch, 2017). However, despite beneficial effects of music therapy and music-based intervention in SUD treatment being reported on emotional and motivational outcomes, participation, locus of control, and perceived helpfulness, the overall efficacy still remains unclear due to the diversity of the quantitative studies.

Beyond the modern concept of music therapy, as previously mentioned music itself has historically been, and continues to be, an essential component of the practices of traditional healers in most of the tribal and other indigenous cultures throughout the world that are not primarily oriented toward the Western medical model (Moreno, 1995). In this case, the role of music in shamanic practice, for example, is integral to the encouragement of trance induction in many world cultures. Music facilitates the shaman's travels to the spirit world to establish connections that will be of benefit to the patient. The use of rhythmically repetitive melody, supportive of an altered state of consciousness, is a typical characteristic of many shamanic music. Within the Amazonian medicine, the use of specific sacred healing songs known as *ikaros* is well documented (Beyer, 2009; Callicott, 2013; Luna, 1984); such traditional tool

is constantly used within the treatment protocol of the Takiwasi Center and specific researches are performed on this topic (Black, 2014; Bustos, 2008; Demange, 2002). However, to date it seems that ethnomusicologists and music therapists have not yet collaborated extensively (Phan, 2016), and ethnomusic therapy, by crossing the frontiers of traditions and modernity, can become the emergent discipline of reference bridging together the ancient wisdom of using sounds for healing and the modern way to use music as a therapeutic tool within the framework of CAMs.

- *Holotropic Breathwork for SUDs treatment*

Another spiritually oriented approach to self-exploration and healing by attaining non-ordinary states of consciousness is Holotropic Breathwork (HB). HB is a technique created in the 1970's by psychiatrist Stanislav Grof, MD and his wife Christina Grof, that integrates insights from modern consciousness research, anthropology, transpersonal psychology, depth psychologies, Eastern spiritual practices, and other mystical traditions (Grof & Grof, 2010). In this method, rapid deep breathing is combined with evocative music, focused body work, artistic expression and group sharing in a supportive environment. Grof is widely known for his early studies on the effects on the psyche of the famous hallucinogenic compound LSD, the semi-synthetic derivative obtained by Albert Hofmann in 1943 from the fungus *Claviceps purpurea* (Hofmann, 1980). Building on his observations while conducting LSD research, Grof constructed a theoretical framework for prenatal and perinatal psychology and transpersonal psychology which later led him to develop HB.

A self-report, structured survey assessed on a population of 20 adults indicates that HB can be an effective therapeutic tool for treating alcoholism and drug addiction (Metcalf, 1995). A more recent study reports the successful use of HB in 4 cases in which complete abstinence was obtained and maintained for extended periods of time in addition to alleviating depression and anxiety symptoms which are often linked to drug consumption (Brewerton, Eyerman, Cappetta & Mithoefer., 2011). As reported by Taylor (2007), HB offers to addicts numerous opportunities for enhancing their addiction treatment, including: entering non-ordinary states of consciousness to seek healing and wisdom via a natural, non-addictive method; a direct experience of one's Higher Power; physical and emotional catharsis of stress associated to prior trauma; insight, understanding, and acceptance of accountability for one's life and actions; to experience a retreat period of inner reflection; to get

in touch with the body and re-associate what has been dissociated. The last two experiences are also common during an Amazonian plants diet (Politi, 2018). As observed by Sanz-Biset & Cañigüeral (2011) part of the healing potential of this practice can be linked to the effect of inducing holotropic states of consciousness, i.e. states that are “oriented toward wholeness”, in accordance to the same definition of holotropic derived from the Greek *holos* = whole, and *trepein* = moving toward. In addition, the content of holotropic experiences is often spiritual or mystical which is another common trait with the plant diet experience. As stated by Grof & Grof (1990): “*One of the most important implications of the research of holotropic states is the realization that many of the conditions, which are currently diagnosed as psychotic and indiscriminately treated by suppressive medication, are actually difficult stages of a radical personality transformation and of spiritual opening*”. The term “spiritual emergency” (psychospiritual crisis), was also coined by Grof & Grof to define critical stages of a profound psychological transformation that involves one’s entire being. These usually involve intense emotions, visions and other sensory changes and can take the form of non-ordinary states of consciousness. If correctly understood and supported, these psychospiritual crises can result in important emotional and psychosomatic healing, remarkable psychological transformation, and consciousness evolution (Grof, 2010).

- *Mindfulness; meditation as therapy for addiction*

Contemporary advances in addiction neuroscience have parallel increasing interest in the ancient mental training practice of Mindfulness meditation as a potential therapy for addiction; studies indicate that this technique reduces substance misuse and craving by modulating cognitive, affective and psychophysiological processes integral to self-regulation and reward processing (Garland & Howard, 2018). Modern Mindfulness derives from ancient Indo-Sino-Tibetan contemplative practices and philosophies concerning the cultivation of awareness. Mindfulness interventions for addiction tend to be multi-week protocols (approximately 8 weeks) usually delivered in a group therapy format (Bowen, Chawla & Marlatt, 2010). In Spain, the Oxigeme process created and directed by clinical psychologist Manuel Almendro uses a combination of meditation-mindfulness processes, psychotherapy and TAM to treat psychoneurotic diseases, somatic discomforts and addictions (Almendro & López, 2016). Oxigeme’s clinical framework lies in complex and open systems and nonlinear dynamical systems (NLDS). Meditation offers the chance for some

exceptional states of consciousness to appear, when opening up to the emergence provided by silence. Resolving the divorce from the inner world and facing the challenge of meditation is considered necessary to be able to understand and face the disorder (Almendro & López, 2016).

A recent meta-analytic review of randomized and nonrandomized controlled trials (Cavicchioli, Movalli & Maffei, 2018) suggests that the most noteworthy therapeutic effect of Mindfulness interventions in SUDs refers to the decrease of post-traumatic symptoms. Mindfulness interventions also improve several aspects related to the emotional well-being of patients, providing benefits compared to other clinical approaches when considering specific relapse factors, especially when SUDs co-occur with other psychiatric disorders (Cavicchioli et al., 2018). Despite recent promising results (Bowen et al., 2014; Spears et al., 2017), research on Mindfulness interventions for addiction has only proliferated in the past 10 years. This is therefore a young scientific field, and more research is needed to elucidate the clinical outcomes and mechanisms of this promising new treatment approach for addictive disorders.

- *Yoga and Acupuncture for SUDs treatment*

Yoga and Acupuncture are Eastern traditions coming from India and China respectively, that have largely crossed the frontiers entering the western culture in many ways, including in some cases their use in medical contexts. Recent reviews on the use of Yoga (Sarkar & Varshney, 2017) and Acupuncture (Grant et al., 2016) for SUDs treatments have been released.

Yoga is a spiritual practice derived from one of the orthodox schools of Hindu philosophy. In the Indian tradition it has been considered as a pathway for attaining a spiritual goal, by achieving perfect physical and mental balance. Yoga has proven to be effective as a sole or additional therapeutic intervention in several psychiatric disorders, such as depression, anxiety and even schizophrenia (Varambally & Gangadhar, 2012). The same study suggests that this could be equally true for other spiritual practices from different faiths. Psychiatric patients interviewed in a separated survey confirmed the need to include spiritual and religious dimensions in their psychiatric care (D'souza & George, 2006) and this could be extended also to SUDs, which fall into the category of mental health disorders (Robinson & Adinoff, 2016). Encouraging evidences have been accumulated for the role of

Yoga in the treatment of SUDs over the last couple of decades (Posadzki, Choi, Lee & Ernst, 2014; Devi, Singh & Subramanya, 2014). Dhawan, Chopra, Jain and Yadav (2015) studied the effect of Yoga among patients who were already receiving buprenorphine for treatment of opiate dependence, showing good outcomes in the physical, psychological and environmental quality of life. Yoga is typically used as an adjunctive treatment, supplementing other medically oriented approaches.

Acupuncture for treating SUDs has increased in popularity in recent decades (Lu et al. 2009), although this approach first emerged in the field in 1972 with reports that it relieved symptoms of opioid withdrawal (Cui, Wu & Luo, 2008). As a treatment for SUDs, acupuncture primarily involves inserting and stimulating needles at meridian points that are thought to be associated with regulating dopamine and decreasing cortisol, thereby aiming to bring balance to dopamine levels affected by substance use and ultimately producing a decrease in craving and withdrawal symptoms (Lua & Talib, 2012; Grant et al., 2016). Preliminary findings suggest as well that acupuncture and a spirituality-focused psychotherapy accompaniment may be a synergistic combination for the treatment of drug users, showing the greater improvements in abstinence, anxiety and depression ratings (Margolin et al., 2005).

## **Conclusion**

In many studies on physical and mental health, spirituality shows positive correlation, especially in relation with addiction problems (Besson, 2008). Despite the resistance in integrating a scientific approach to spirituality, drug addiction specialists put continuously this item on their agenda and discuss it in different meetings (Colbeaux, 2008). Addiction thus seem to be essentially related to a loss of the meaning of life and the sacredness of existence.

With the progressive appearance of modernity, institutionalized religions have been criticized for the tendency to confiscate mystical experience, especially when related to the use of psychoactive substances that induce modified states of consciousness. The non-addictive sacred plants of the indigenous people have been desecrated in the Western world thus leading to addiction. Rosenzweig (1998) explained this with a parallel between the passage “*from natural religion to monotheistic religions*” and the evolution “*from trance to addiction*”, while Brisson (2005) considered that psychoactive substances went from being “*vehicle of the religious to substitutes to religions*”.

In the twentieth century, as the addiction phenomena developed, the spiritual function of the psychoactive plants used in a ritual context has been rediscovered and encyclopedias of these “plants of the gods” were established (Schultes and Hofmann, 1979). The consumption of this “meat of God” (Teonanácatl or hallucinogenic mushrooms) has been reconsidered and even recommended (Ott and Bigwood, 1978), and the term “entheogen” (the God within) was coined in 1979 to designate all visionary substances, referring to the possibility of getting inspired by a god, as well as the “birth” that this implies (Ruck et al., 1979; Hofmann, Gordon & Ruck, 2013).

Other traditional and alternative medicines that propose the introduction of a spiritual dimension in the approach of SUDs are being also explored, such as music-based intervention, Mindfulness meditation, Holotropic Breathwork, Yoga, as well as spiritually-focused psychotherapies. The convergence between the need of innovative treatments that include the use of induced and controlled modified states of consciousness, and the potential of ancestral wisdom with their sacred plants, led to consider more seriously the use of hallucinogenic substances for the treatment of the SUDs (Winkelman & Roberts, 2007). Takiwasi has been a pioneer in moving from theory (anthropology, phytochemistry, etc.) to systematic and organized clinical practice, taking into account the ritual and spiritual contributions of indigenous peoples. This kind of initiatives is still limited in numbers.

Latin American traditional medicines, with their inclusive tendency, have been infused by contributions from Christianity. A more open view of Catholicism towards shamanism seems to favor a rediscovery of its own mystical and healing dimensions, those of the Jesus prophet-healer. A similar cartography of the invisible world is being discovered, with the dimensions of a spiritual combat for which both Catholicism and shamanism have developed tools to fight the entities of the intermediary world, good or evil, as well as ritual systems of regulation and protection.

Takiwasi represents a rare space for experimentation in the articulation of indigenous Amazonian spirituality with Christian spirituality, which takes the form of a therapeutic device oriented towards the treatment of addiction. The encouraging preliminary results, although requiring more validation studies, offer data that allow to confirm the importance of spirituality in the process of creation of addiction, and the need to take it into account for its resolution.



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