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# PAPELES DEL PSICÓLOGO

## PSYCHOLOGIST PAPERS

### USO Y ABUSO DEL TÉRMINO “PSICOSOCIAL”

CONSTRUCTIVISMO E IDENTIDAD DE GÉNERO - DIVORCIO CONFLICTIVO Y TERAPIA FORENSE - GUÍA PARA SOBREVIVIR A LA PSICOLOGÍA CLÍNICA - REPERTORIO SEXUAL HUMANO - FUNDAMENTOS BIOLÓGICOS DE LA EMOCIÓN - INTEROCEPCIÓN Y EMOCIONES

**Ámbito**: Papeles del Psicólogo / Psychologist Papers es una revista científico-profesional, cuyo objetivo es publicar revisiones, meta-análisis, soluciones, descubrimientos, guías, experiencias y métodos de utilidad para abordar problemas y cuestiones que surgen en la práctica profesional de cualquier área de la psicología. Se ofrece también como foro para contrastar opiniones y fomentar el debate sobre enfoques o cuestiones que suscitan controversia. Los autores pueden ser académicos o profesionales, y se incluyen tanto trabajos por invitación o recibidos de manera tradicional. Todas las decisiones se toman mediante un proceso de revisión anónimo y riguroso, con el fin de asegurar que los trabajos reflejan los planteamientos y las aplicaciones prácticas más novedosas.

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# Sumario

# Contents

REVISTA DEL CONSEJO GENERAL DE LA PSICOLOGÍA DE ESPAÑA

JOURNAL OF THE SPANISH PSYCHOLOGICAL ASSOCIATION

## Artículos



## Revisión de libros



## Articles



## Books review



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Article

# Use and Abuse of the Term "Psychosocial" in the Field of Social Intervention

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**ABSTRACT**

Applied to theory, research, and intervention, the term "psychosocial" is defined as an approach characterized by the relationships of interdependence and mutual influence between the various levels of reality in which daily life takes place. This idea began to take its first steps with the events that gave rise to the social sciences, psychology among them. Applied to social intervention, the psychosocial perspective is based on a simple premise: psychology is legitimized as an instrument to serve human well-being, both in its personal and collective dimension. It recognizes the constructed nature of reality and the social order, with the purpose of trying to change it when it leaves psychological damage and social destruction in its wake, using the social scenarios (community, group) as the agent and objective of change.

## Uso y Abuso del Término "Psicosocial" en el Campo de la Intervención Social

***Palabras clave***
Interdependencia
Bienestar
Cambio
Compromiso social
Comunidad-grupo

**RESUMEN**

Aplicado a la teoría, a la investigación y a la intervención, el término psicosocial se define como un enfoque caracterizado por las relaciones de interdependencia y mutua influencia entre los diversos niveles de la realidad en la que discurre la vida cotidiana. Esta idea empezó a dar sus primeros pasos a partir de los acontecimientos que dieron lugar a las ciencias sociales, la psicología entre ellas. Aplicada a la intervención social, la perspectiva psicosocial parte de una sencilla premisa: la psicología se legitima como un instrumento al servicio del bienestar humano, tanto en su dimensión personal como colectiva y a continuación, asume la naturaleza construida de la realidad y del orden social con el propósito de intentar cambiarlo cuando vaya dejando a su paso daño psicológico y destrucción social sirviéndose para ello de los escenarios sociales (comunidad, grupo) como agente y objetivo del cambio.

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In a recent interview Santiago Boira and María Fuster (2022), technical secretary and member, respectively, of the Division of Psychology and Social Intervention (PISoc) of the General Council of the Spanish Psychological Association, expressed their concern about the "indiscriminate use" of the term "psychosocial". In a similar way (use that is equivocal, generalist, abusive, and inappropriate), the General Council of the Spanish Psychological Association—CGP in Spanish—(2018, p. 18) had already pronounced itself. The argumentative thread of the interview, for example, starts from a critical assumption: there are professional profiles outside psychology, in which actors who are unfamiliar with this terminology and its theoretical bases participate, producing recommendations and good practice guidelines that lack the necessary rigor in the use of the term "psychosocial", which can lead to malpractice with the consequent harm to highly vulnerable populations. The debate is therefore already underway, and these pages only intend to make a modest contribution, limited, of course, to the theoretical connotations of the term "psychosocial" regardless of the use that may be given to it by different actors in their professional work.

## A Brief Tour of the Genesis of the Psychosocial Approach

Let us start with the most obvious: "psychosocial" is much more than a simple word. It is a term supported by more than a hundred years of history and by an epistemology, which, in a first meaning, adopts a particular approach characterized by the interplay of mutual influences between the levels at which the actions carried out by individuals and groups in the scenarios of that supreme reality occur which, according to Peter Berger and Thomas Luckmann, is the reality in which everyday life takes place. It is the reality in which, incidentally, social intervention programs are usually developed: the family, the neighborhood, the educational or work environments, places of leisure and recreation, etc. All these contexts are presented to us, both authors add, as ordered, shared realities, frequently loaded with impositions and full of meanings (see Berger & Luckmann, 1968, pp. 36-46), derogatory and harmful on many occasions, and followed sometimes by actions of the same kind simply because of the group or category to which some persons belong. And for these same reasons, all these scenarios sometimes demand that we take part in the issues that occur in their midst (this is one of the meanings that the RAE dictionary attributes to the verb "intervene") to repair the damage they leave in their wake, to prevent it, or to detect the dynamics that have caused them.

Some of the most renowned theorists in this field of knowledge (Kurt Lewin, Serge Moscovici, Solomon Asch, for example) have defended this vision: the psychosocial "is not so much distinguished by its territory as by the approach that is unique to it" (Moscovici, 1985, p. 20). In his comparative epistemology, Lewin (1991) argued that there are different points of view from which the same object can be analyzed. In fact, he adds, in the course of their development all of the sciences expand their object of study, reserving their idiosyncrasy and singularity to the way of approaching issues that, in many cases, particularly in the social sciences, have accompanied us since the beginnings of group life: power, the raising and defense of offspring and territory, the distribution of tasks, relations within the group itself (relations between members of different ages and sexes) and with strangers, the establishing of rules and sanctions to order coexistence, etc. Following this logic, it is possible that none of the three authors cited (especially Lewin) would have been surprised by the use of community gardens as agents of intervention, for example, especially if they had known that through them, relationships and emotional well-being among local people improve, interest in identifying and addressing common problems is activated, and neighborhood networks are created that play an important role in reducing delinquency (Maya, 2021, p. 21).

This view of reality and the social order, of the actions, tasks, and activities of those who are its main protagonists (individuals, groups, organizations of all kinds, etc.) and of their consequences, took its first steps with the arrival on the scene of the social sciences as an alternative to the vision of earthly and heavenly affairs offered by theology and philosophy. The political events triggered by the French Revolution (1789) and the upheaval in all spheres of social life brought about by the Industrial Revolution created the conditions for a new way of looking at social life and the behavior of its actors, dispensing with the historical, natural, and supernatural determinisms that had been at work for centuries. Solomon Asch, one of the theorists endowed with particular psychosocial acumen, defined this climate succinctly: there came a time when it was "no longer possible to hold that poverty or war, any more than disease, are inscrutable acts of providence, to be bearn with resignation" (Asch, 1952, p. 3). Nor do we believe today that social exclusion, inequality, discrimination, racism, or gender violence, for example, have their origin in biological or psychic dysfunctions, or are the consequence of the perverse will of some superior being.

In this transition, says Robert Nisbet, two patterns of thought, very recognizable in the field of social intervention, played a decisive role: the reaction against individualism and the recovery of the concept of community (the response to the idea of a "contract" as the foundation of social order) as the articulating axis of social thought. It is worth recalling that for the "titans of social thought" (Comte, Marx, Durkheim, and Weber), the word community "encompasses all forms of relationship which are characterized by a high degree of personal intimacy, emotional depth, moral commitment, social cohesion, and continuity in time" (Nisbet, 1966, p. 47). Its archetype, they add, is the family. Its presence as an agent of intervention is nowadays considered indispensable in the prevention of delinquency, school failure, or the different forms of addiction in adolescents, for example. Not to mention programs such as foster care or those aimed at learning parenting skills.

To this way of understanding the reality of social life around the forms of relationship that give rise to the community, the events that define it and the consequences that accompany them, the neo-Kantian approach led by prominent German thinkers of the second half of the 19th century, including one of the founders of psychology (Wilhelm Wundt), all of whom shared the belief in the existence of a collective psyche ("Volksgeist") from which the individual psyches are nourished, contributed decisively to this understanding of the reality of social life. The main argument of these first steps of the psychosocial approach can be defined in terms that are necessary to remember and easy to retain: among the sciences of the spirit ("Geisteswissenschaft") it is necessary that, together with an individual psychology, the foundations be laid for a psychology that deals with the ideas, representations, attitudes, and activities shared by the individuals who are part of the same community-

group, people, or nation and which are the outcome of "psychic exchange" among them, as are, for example, practically all the contents of what today we have come to call social cognition.

Back in 1834, John Friedrich Herbart took a decisive step forward on the basis of the following two premises: a) the person considered in isolation is pure abstraction, a mere entelechy; as a psychological entity, the person only acquires real existence within a community, a group, or a society in which he or she is in permanent interactive contact. Outside this framework, humanity is lacking, Herbart says; b) this makes necessary a psychology of the relations between individuals, of the principles and postulates that guide them, and of the products to which they give rise. In 1871, the Austrian Gustav Adolph Lindner went a step further: this way of approaching the set of facts arising from the interchange between people, which gives rise to the psychic life of society, should be called social psychology. There are collective phenomena resulting from contact, union, and association (see, for example, Durkheim, 1987, pp. 115 ff.) that leave a deep imprint on individual psyches: language, rituals, customs and cultural traditions, myths, and religion are, it was said then, manifestations of the collective soul. Today we say the same thing in other words: norms, social representations, group beliefs, intergroup biases and emotions, attitudes, categorical schemes, etc., are part of the contents of our mind. At the beginning of the 20th century, broad-spectrum collective psychic events (the collective soul) gave way to interest in group psychic phenomena ("group mind"). These defined the psychosocial work of the three leading theorists of that time (Charles Ellwood, Edward A. Ross, and William McDougall): the psychic life of groups stem from the interaction and joint action among their members, from the mental attitudes of some towards others. When these persist, they institute order and group structure and typify reciprocal action, turning it into habit, into uniformities resistant to change, those that today are at the center of many social intervention programs in order to curb or prevent hate crimes, for example.

### *Beyond Individuals in Interaction*

This very brief overview of what could be considered the founding steps and moments of psychosocial thinking provides some arguments for social intervention:

1. Rather than interaction, the psychosocial approach focuses on the interdependent relationships between the different levels of reality, the macro-social (the rules of the market, which push millions of people into poverty or create ever-widening inequality gaps), the micro-social (the family, the school, the peer group, etc.), the biological (it should be recalled that William McDougall laid the foundation of the psychosocial in the existence of instinctive drives and motives), and the psychological.
2. None of these realities was in its origin and is in its course inevitable, but rather they were the fruit of human action and, as such, open to change.
3. It is within these realities that shared ways of thinking, feeling, and acting originate, which are very often imposed on us without asking our opinion.
4. Some of them leave behind a psychologically devastating and sometimes imperishable trace that does not just affect certain individuals but whole groups at times.
5. There is no room for indifference or neutrality in the face of these realities.

The relationships of interdependence and mutual influence between these levels of reality constitute the framework of the psychosocial approach and, by the same token, of social intervention. And if we had to venture to point them out, we would not hesitate to note the following four:

1. Others as particular individuals and, above all, as belonging to groups and/or social categories with respect to which we have constructed imaginary, petty, and at times bizarre narratives which give rise to stereotypes.
2. The groups and social categories to which we belong in comparison, and sometimes in conflict, with other groups and other social categories.
3. The social structure that has placed millions of people in situations of extreme vulnerability through decisions taken, or not taken, in the political, social, and economic spheres.
4. Culture, the world of shared meanings and patterns of action that defines the relationships between groups and social categories based, on many occasions, on the belief in the biological, moral, or social superiority of some over others (ethnocentrism).

Between these levels there is no ontological rupture, but continuity, interdependence, currents of mutual influence that give rise to "the emergence in a system of a property not possessed by any of its parts" (Jiménez Burillo, 2022, p. 134). Working at different levels, sharing and distributing tasks among different professionals is a guarantee of effectiveness. Let us look at a couple of examples.

In the case of gender violence prevention, the systematic review by Levy et al. (2020) has shown that the most effective programs are those that have been able to involve adolescents and young people in group workshops that improve their skills and competencies in gender relations as part of the curriculum (involvement of the school context) with the active participation of teachers. Another example are the programs implemented in the United States under the seal and philosophy of "Community That Care" (CTC) focused on generating changes among the adolescent population in the face of the circumstances and conditions that expose them to risks of addictive and violent behaviors (see a detailed description in Hawkins et al., 2008). What defines this intervention philosophy are two conditions that are perfectly aligned with the psychosocial approach: the mobilization of community coalitions (formal or informal organizations, media, opinion leaders, etc.) and the participation, together with the adolescent collective, of the family and the school. The efficacy of these programs has also been tested in EU countries (European Monitoring Centre for Drugs and Drugs Addiction, 2017). It was already noted in the presentation of the monograph "Prevention That Works for Children and Youth": the efficacy of programs aimed at the adolescent population is directly proportional to the participation and coordination of efforts on the part of the family, school, community organizations, health and social services system, and policy makers (Weissberg et al., 2003).

In this task, the traditional protagonism of the subject (of the psychological-individual variables) gives way to the group-community as the main actor, either as a scenario, as an instrument, as an objective, or as a resource for intervention (McLeroy et al., 2003). It is here that the criticism of the individualistic

reductionism raised by many referents and supporters of the psychosocial approach acquires special relevance. Among them is Ignacio Martín-Baró, a psychologist and priest who was murdered by the Salvadoran army, together with five other Jesuit colleagues and two employees of the Central American University of El Salvador:

> The problem with individualism lies in its insistence on seeing in the individual what is often found only in the collective, or in referring to individuality what is only produced in the dialectic of interpersonal relationships. In this way, individualism ends up reinforcing the existing structures by ignoring the reality of the social structures and reducing structural problems to personal problems" (Martín-Baró, 1998, p. 291).

## The Theory-Practice Circularity

The central idea of the psychosocial was thus outlined more than a hundred years ago: the person and the actions he/she performs, both at the individual and collective level, and the consequences that this gives rise to, are the result of interdependent relationships between the different levels in which the reality of his/her daily life takes place. This is a reality that has been conceived and established, in some cases in a senseless way, by the hand of the human being for whom social intervention shows concern, sometimes incredulous and indignant, for its effects, not only to understand them, but to try to change them when they leave a recognizable trace of damage in their wake, particularly to those groups that have historically been denied fraternity (see, for instance, Domènech, 2019).

Kurt Lewin, an author of everlasting authority in the field of social theory and intervention, enriched this central idea on the basis of the following two premises: the first, already mentioned, refers to the broadening of the object of study that the sciences have been experiencing in the course of their development. The second establishes a line of continuity between the basic and the applied, between research and intervention. In fact, the first of the five phases that define the evolution of any scientific field has been aimed at responding to practical problems and needs. This is precisely the main objective of social intervention. Vygotski (1991) pointed in the same direction; it is practice that sets itself up as the supreme judge of theory.

Scholars of the historical path of psychology have not hesitated to highlight the applied value of psychological knowledge as its raison d'être as a science and as a profession (Carpintero, 2017). In the case of intervention, psychology "aims precisely at the introduction of some sort of change, improvement, readjustment, reorientation" (p. 24) in parameters that define the existence of the subject or his or her environment. This is a simple and elegant way of defining social intervention, very much in line with Lewin, with social change as the rudder of the ship. After an exhaustive analysis of a representative sample of the periodic reviews of the *Annual Review of Psychology* and the most representative manuals in the field, Maya et al. (2007) conclude that social intervention is understood "as the introduction of an external element into a social system to produce a change in a given direction" (pp. 18-19). First, "the facts" that we have endeavored to construct (see Berger & Luckmann, 1968), the reasons (ideology) that justify them and give them continuity, with studied indifference in many cases to the traces they leave in their wake, and then the "things to be done". Social intervention, it could be said, "cannot be content with reconstructing more or less faithfully what has happened, but must strive to build that which has not happened, but should happen; not the facts, but the *things to be done*" (Martín-Baró, 1998, p. 333).

On this path of going back and forth from the problems (the trigger and first link in the chain of any intervention) to the theory, and from the theory, analyzed and renewed on the basis of its response to the problem in question (praxis as a source of inspiration and theoretical renewal), is where the Research-Action process has its origin, one of whose main axes lies in participation, a process of which Lewin himself (1951) offered a seminal example in the 1940s. As is well known, the intervention was aimed at changing the attitudes of North American housewives, who were very reluctant to cook offal products. The procedure, as simple as could be, consisted of comparing two strategies, one individual (a lecture/speech by an expert) and another that encouraged debate and discussion within the group to reach a final decision. The results of this and other interventions developed with the help of the same strategy could not have been more encouraging:

> "It might be expected that individuals in isolation would be more amenable than groups of like-minded individuals. However, experience in leadership training, in changing of food habits,work production, criminality, alcoholism, prejudice, all seem to indicate that it is usually easier to change individuals formed into a group that to change any of them separately" (Lewin, 1951, p. 228).

Faced with the passivity of an auditorium, their uncertain commitment, and the limited capacity to provoke a decision based on an individual strategy of change, the group discussion (participation) introduces an additional force to "break the habit", breaks the normal resistance to change, with which we comfortably go about our daily lives, and makes it possible to make a decision in the proposed direction based on the implicit presence of a group norm. To put it simply: for better or worse, the group is the main arena of influence, i.e., the main driver of change, and participation becomes its main ally. Since the pioneering studies by Triplett (1898), one hundred and twenty-five years of group research support this assertion.

It was on these premises (the tendency towards the broadening of the object, the response to practical problems as the first step in the development of science, the group as an agent of change, and participation as its main axis) that the change of paradigm in the field of social intervention was based. Urie Brofenbrenner's well-known ecosystemic approach enriched them, but the author himself never forgot their origins: this work can be seen as an atempt to provide psychological and sociological substance to Lewin's brillantly conceived topological territories (Brofenbrenner, 1979, p. 9). His debt to the German master is also evident in the first four definitions of the ecological orientation and, above all, in Proposition A: "in ecological research, the properties of the person and those of the environment, the structure of environmental settings, and the processes takig place within and between them must be viewed as *interdependent*[1] and analyzed in systems terms" (Brofenbrenner, 1979, p. 41. Italics added).

1 In the Spanish edition (Paidós, 1987, p. 60), there is a serious error in the translation of this proposition, which affects the core of the Lewinian conception: "interdependent" has been translated as "independent" attributed to the processes that take place within environmental settings. This translation completely alters the original proposal of the author and his theory.

### *Participation as a Strategic Mediator*

Nowadays, participation is a commonly accepted and used strategy in social intervention, and it is present in practically all autonomous social services legislation. In addition to the reasons and examples pointed out by Lewin, we must add some others of equal importance. From different lines of research, it is suggested that the low level of citizen participation in community activities is related to low levels of life satisfaction and a decrease in life expectancy. The best known line of research is probably the one led by Robert Putnam on social capital and the consequences of its decline. It is also the most ambitious because it analyzes not only the beneficial effect of social networks and affective ties (family, community, friends), civic associations, and neighborhood groups on people's well-being, but also the effect on the democratic clime. For the purposes of this article, the following proof is worthwhile: "of all the domains I have traced the consequences of social capital,in none is the importance of social connectedness so well established as in the case of health and well-being" (Putnam, 2000, p. 326). Recently, Vega-Tinoco et al. (2022) have again tested this same relationship based on a complex analysis of data from the last nine applications of the "European Social Survey" with a similar result: civic participation in political or any other type of organization, requests to join issues of common interest, wearing a pin related to a campaign, etc. has a positive and robust impact on health, feelings of happiness, and satisfaction with life among the elderly. Thus, a path and a strategy for social intervention is open.

The other side of the coin is the Cambridge-Somerville Youth Study. This program was implemented in the late 1930s and early 1940s with a group of 253 adolescents (average age 10.5 years) living in these two areas near Boston, with an equivalent number in the control group. The design left nothing to chance: social workers visited each of the families twice a month for five years, half of the adolescents received homework help, were put in contact with the Boys Scouts, YMCA, and other youth groups, half of them attended summer camps, most participated, along with their guardians, in sports activities and attended athletic competitions, and, to top it off, about 100 received medical or psychiatric care. The program ended in 1945, and thirty years later the results could not have been more discouraging: there was no difference between the intervention and control groups in delinquent behaviors during youth; serious crimes were more frequent in the intervention group than in the control group; an almost identical number in both groups received treatment for alcoholism; the incidence of mental illness was higher in the intervention group than in the control group (see details in McCord, 1987; 1992).

Based on some of our previous arguments, the reasons for the failure should not surprise us. In the development of the program, the role of families was attempted to be replaced by "someone also who tries to take the role of parent". This was a critical error, says McCord (1992, p. 37), which was accompanied by a second, no lesser one in its consequences: attributing to these adolescents and their families deficiencies and deficits that could be compensated for through external help without taking into account and without relying on their own resources, those of their families, and those that could be provided by the community itself. An attempt was made to address a social problem from a purely individual perspective. The participation of the family, the community, and the interested parties themselves was practically nil; the latter were limited, at best, to following the advice and recommendations from the ones taking the role of parents. Finally, in the design of the intervention, no attention was paid to the subcultural idiosyncrasies of these communities.

Participation, relations of solidarity, coexistence, consensus, cohesion, trust, gratitude, and loyalty are the characteristics attributed to the community by those who established it as the articulating axis of social thought (see Nisbet, 1966, pp. 47-106). All of these characteristics are currently part of the dimensions that define the sense of community, with the necessary variations and innovations (see, for example, Hombrados, 2013). They are not many, but they are certainly relevant. Some have enriched the theoretical landscape through valuable reflections on the connotations of the sense of community and the development of two important conceptual tools: resilience and community strengthening. Others, probably the most novel, have given rise to an infinite variety of intervention strategies (personal and community empowerment, support groups, community coalitions, creation of healthy environments, learning communities, leadership training, peer mentoring, etc.) and methodologies to evaluate the effectiveness of the activities implemented.

## When I say Well-Being, I Mean Health

The criteria for the effectiveness of social intervention programs can be very varied, but it is conceivable that all of them should converge in the presence of some positive impact for the individuals, groups, or communities involved. Because if the intervention has no impact, if it does not achieve a beneficial change in models of interpersonal, intergroup, or intercategorial relationships, or prevent certain people from sliding down slopes that could endanger their well-being, it loses its raison d'être. The change pursued is always accompanied by a positive connotation, it follows a direction in which, sooner rather than later, we want to find ourselves with quality of life, well-being, health, and preferably, with mental health understood not as the absence of disorder, but as the presence of conditions that favor subjective well-being, psychological well-being, and social well-being, to recall the spirit and the words of the founding act of the World Health Organization (WHO, 1946). Therefore, beyond nominalist debates of little theoretical utility, the psychosocial ends up becoming the hallmark par excellence of the intervention, its true matrix.

Quality of life, well-being, and health are present in the code that guides professional activity in the field of psychology: "The practice of psychology is ordered to a human and social purpose, which can be expressed in objectives such as: well-being, health, quality of life, the fullness of the development of individuals and groups, in the different areas of individual and social life" (Article 5). And it is equally present in reports, guides, and institutional reflections coming from psychology (see, for example, Colegio Oficial de Psicólogos [Spanish Psychological Association], 1998; López-Cabanas et al., 2017; CGP, 2018), as well as in the numerous definitions proposed for this purpose. In fact, these objectives served to justify the existence of psychology itself by the person who, at a particularly convulsive moment, held the position of president of the American Psychological Association (APA),

invoking one of the founding postulates of social thought: the most urgent, the most psychologically harmful and socially destructive problems we face "are problems we have made for ourselves... whose solutions will require us to change our behavior and our social institutions" (Miller, 1969, p. 1063). It is up to psychology, as a science at the service of human well-being, he adds, to lead the search for new and better personal and social scenarios.

### *The Axes of Well-Being in the Field of Social Intervention*

In the field of social intervention, well-being would be defined as a priority around three axes. The first of these is framed within personal empowerment, an objective that is pursued through the promotion of active living habits to prevent isolation and loneliness in the elderly, training in social skills and assertiveness strategies in order to face the pressure to consume alcohol or other addictive substances or avoid risky sexual practices, job search counseling for mothers at risk of social exclusion, and many more. All these programs, carried out in social settings and usually through group activities, promote the development of autonomy, activate, and set in motion personal resources while making us aware of our own limitations, defining goals, and indicating the way to achieve them. They enable us to manage with solvency part of the environment (interpersonal or professional) in which our daily life develops and help us to achieve the feeling of personal growth. All these experiences are part of psychological well-being (Díaz et al., 2006).

However, regarding personal empowerment, we should avoid a frequent misunderstanding: the acquisition of skills and competencies for the achievement of the objectives sought in any social intervention does not depend only on the motivation, interest, or skills of the people concerned, but also, and sometimes to a large extent, on the opportunities provided to them in order to achieve them. The social, political, and economic conditions and the decisions taken, or not taken, in those environments play a decisive role in creating capabilities (Nussbaum, 2012), with the particularity that "to promote capabilities is to promote areas of freedom, and this is not the same as making people function in certain way" (p. 25). Amartya Sen understands that these areas are extraordinarily restricted due to poverty, unemployment, precarious employment, limitations in education or health, gender inequality, etc. All these circumstances undermine the capabilities and, therefore, the basic freedoms needed to achieve well-being: to lighten the burden of poverty, to escape group pressure, to avoid discrimination and social exclusion, or to overcome the walls that prevent us from seeing the horizon beyond the immediacy of everyday life. Here at this crossroads is where freedom meets liberation as the goal of intervention: psychology has to break the chains that keep us tied to fatalism, to free people from the alienations coming from social bonds, to break the asymmetrical relationships defined in terms of power-submission, to release the burden of resignation, starting from the assumption that "there is not, nor can there be, a personal disalienation that is not, at the same time, social, nor is it possible to conceive a true inner liberation that does not entail an outer liberation" (Martín-Baró, 1998, p. 339).

In terms of social intervention, it is not enough to analyze whether a person is capable of achieving well-being; it is necessary to be interested in the freedom (the opportunities) offered by the environmental conditions to achieve it (Sen, 1999). For example, without bothering to analyze the reasons for the failure of the Cambridge-Somerville Youth Study, conservative politicians were quick to draw on their recalcitrant individualism to call for a reduction in support programs for young people from economically disadvantaged backgrounds, arguing that it is personal values and dispositions that define whether someone will become a criminal or an honest citizen (Ross & Nisbett, 2011, p. 215).

The second axis occurs within the framework of community empowerment through, for example, community coalitions to prevent alcohol consumption among the adolescent population, learning communities to prevent school dropout, the implementation of community resources to deal with the damage caused by a natural catastrophe, the recovery of damaged social networks after prolonged events of political violence. Community empowerment facilitates social integration and a sense of belonging, generates trust in others and in institutions, and favors involvement in issues or problems that affect the common good. All of this is what defines social well-being (Blanco & Díaz, 2005).

The tird axes enters a powerful space from the psychological point of view, that of the socially rooted and socially shared emotional experiences arising from the events (some of them truly stressful) that mark the life of any person, frenquently stemming from interpersonal, intergroup, and inteecategorial relationships, and/or from the position inside the social structure. In an open criticism of the dominant taxonomies in the definition and diagnosis of mental disorders in DMS-III (American Psychiatric Association, 1983), Martín-Baró considered at the time (in the 1980s) that it was urgent to change the perspective and see mental health or disorder not from the inside out, but from the outside in; not so much as the consequence of an internal dysfunctional functioning, but as the materialization in a person of the humanizing or alienating character of a framework of social relations, which is where we build ourselves historically as individuals and as a human community (Martín-Baró, 2003, p. 343), not only as a personal attribute, but as a collective trait. It is probably long overdue to replace personality disorders with interpersonal disorders (Wright et al., 2022).

The mediating role of the emotions in health, both positive and negative, occupies today one of the most prominent chapters in research. To make a long story short: positive emotions are highly contagious, provide pleasant sensations, improve cognitive performance and interpersonal and intergroup or intercategorical relationships, make us more tolerant to frustration, set us in motion for action, including coping with stress, and strengthen the immune system (see Fernández-Abascal, 2015, pp. 23-51). These experiences are what Ed Diener called subjective well-being: experience of pleasant emotions, low level of negative emotions, and high satisfaction with life (Diener, 1994). In short, as opposed to a model of mental health defined by the absence of negative symptoms, the psychosocial approach focuses on two diagnostic criteria: hedonia (emotional experience) and positive functioning (Keyes, 2005). Although it is practically impossible to reach a consensus and exhaustive agreement on mental health, as the WHO warns, this organization itself has incorporated into its definition subjective well-being, autonomy, perception of efficacy, the possibility of working productively and profitably, putting intellectual and emotional capacities into practice, coping with the stressful events of daily life, and collaborating with the community. These are some

of the dimensions of positive psychosocial functioning. This concept of mental health, they add, is consistent with its broad and varied cross-cultural interpretation (WHO, 2001).

It is in this context that the boundaries of professional profiles begin to blur. Our professional association is in all probability obliged to do this as a protective strategy for professional practice, and it is equally convenient and necessary for training in specific competencies, but health cannot be considered a territory limited to an area of knowledge from the academic point of view, and much less, an exclusive field of a professional profile. A few years ago, Jorge Fernández del Valle—who has first-hand knowledge of the field of social intervention—analyzed the use of the term "psychosocial intervention" in the scientific literature with an unexpected result: the most common use of the term was in the medical field, closely followed by that of mental health. It is pleasing to see that the use of the term "psychosocial" within medicine could be subscribed to by Lewin, Moscovici, or Asch: a complementary treatment "aimed at the psychological aspects and the social context (especially the family) of the sick" (Fernández del Valle, 2010, p. 40). There are many examples from the field of social intervention where mental health comes into play. In addition to those already mentioned, we should add programs aimed at preventing gender violence, suicide in adolescents, social exclusion in people with disabilities, interventions for the community integration of people with mental disorders, not to mention the increasingly active line of intervention for the support of responsible and positive parenting during the first years of life, which, in addition to improving cognitive, linguistic, and socioemotional development, prevents future behavioral problems (see in this regard the meta-analytical review by Jeong et al., 2021).

On the other hand, there are countless professionals working with the therapeutic treatment of mental disorders who would recognize themselves in the experience of José María Ayerra, a long-time psychiatrist and former head of the mental health area in Getxo: "based on the realization of the involvement of the family in the emotional and psychic development of patients, my perspective changed, and my understanding went from an individual model to a family-centered thinking, indispensable in the understanding of small groups, large groups, and social functioning" (Ayerra, 2019, p. 208), which has been all too absent in research and treatment work in the field of health psychology in our country. This field has neglected "psychological interventions elaborated from a more social perspective implemented within non-clinical contexts such as, for example, the school, family, or work" aimed at health promotion and prevention (García-Vera, 2020, p. 19). In the latter setting—that of work—chronic work stress, task overload, lack of support, abuse of power, and psychological and sexual harassment have been shown to be powerful risk factors for health (Alcover, 2019). The results of a meta-review of reviews and a subsequent meta-analysis (Niedhammer et al., 2021) show a significant relationship between these working conditions and cardiovascular diseases (coronary heart disease, ischemic stroke), and particularly strongly, with mental disorders (depression). This is why, in a reciprocal and complementary way, many social intervention professionals see themselves reflected in the need for clinical psychology knowledge that Fernández del Valle (2018) calls for in foster care work.

It is surprising, then, that the fundamental etiological axis in the genesis of mental disorders continues to be based on behavior (Colegio Oficial de Psicólogos [Spanish Psychological Association, COP], 1998, p. 22), as if behavior, and the actor involved in it, were suspended in a social vacuum. No one is unaware that, in some cases, repairing the damage requires personalized therapeutic treatment, but from this reality it cannot be inferred that behaviors "relevant to health and illness" are the property of the profile of clinical and health psychology. They are the property of practically all psychological work, both in its basic and applied aspects, in both research and intervention. Health-related behaviors extend over a wide area that includes community gardens, addiction prevention, the aftermath of exclusion, rejection and discrimination (hate crimes), the damage caused by natural disasters or perpetrated intentionally at the hand of humans, the prevention of isolation and loneliness in the elderly, and many others. Not to mention the physical, emotional, and moral pain caused by poverty (Narayan, 2000).

It remains a mystery why this obsolete marriage between the clinic and health is still maintained when, from the epidemiological point of view, health-relevant behaviors are far removed from psychological anomalies or pathologies that require personalized clinical treatment. Reputed experts in this field, both in Spain (see, for example, González & Pérez, 2007) and elsewhere, have warned that emotionally painful experiences, in addition to being part of any person's life journey, do not necessarily lead to a disorder. One of them, George Bonnano, has been particularly insistent in this regard: the results of research in recent decades have shown irrefutably that most people exposed to events that endanger their health and even their lives do not develop post-traumatic stress disorder; most of them are able to cope with traumatic tress reasonably well (Bonanno, 2021, p. 14).

Finally, health, well-being, quality of life, freedom to achieve well-being, are not only a theoretical framework; they are also, and above all, an indispensable commitment for social science, which, like so many others, refers us back to the "emancipation principle" around which the pioneers of social thought developed their activity. Their moral aspirations (Nisbet, 1966, p. 18) are also ours. Among many others, Jiménez Burillo (1985) put it so succinctly and aptly: "it is necessary to involve values upon which to judge the benevolence or perversity of social systems" (p. 79) and of the products they create, it should be added. This is the basis of the critical vocation of social intervention: the denunciation of conditions that leave a trail of victims in their wake.

There is no longer any debate on the freedom of values in the work of social science, much less in the framework of social intervention. In each and every one of its programs there is a deliberate stance taken by those who design and implement them; a simple glance at the objectives of any of them would suffice as proof. This is a truism that no longer needs any justification. If anything, in conclusion, we might recall how, after collaborating for several years with various organizations in charge of alleviating the flood of suffering that swept through Europe after World War II, and after having himself spent time in a Nazi extermination camp, Henri Tajfel decided to devote himself to the study of intergroup behavior. Once he had embarked on this path, in which he became the main reference in European social psychology, he became convinced that he could not do so from a comfortable

asepsis: "social psychology can and must include among its theoretical and research preoccupations a direct concern with the relationship between human psychological functioning and the large-scale social processes and events which shape this functioning and are shaped by it [...] In view of all this, my belief in a 'value-free' social psychology rapidly grew shaky" (Tajfel, 1981, p. 7).

All this, in a very summarized way, to conclude that, more than a territory, an objective, or a particular content, the psychosocial is a perspective from which we analyze social events and problems, the actions that are at their origin, and the consequences that they entail at the personal and collective level, in the conviction that all this is the result of the conscious and intentional activity of the human being. If this is so, it could be concluded that everything that has been conceived and created in a certain way and in a certain direction can be changed, and should be changed when it leaves in its wake a trail of psychological, social, and moral damage for which there is no place for indifference or neutrality. The psychosocial approach to intervention bases itself, as a priority, on the group-community as the agent, scenario, and objective of change.

## Conflict of Interest

There is no conflict of interest.

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Article

# The Brain in Diapers. Can a Brain be in the Wrong Body?

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**ABSTRACT**

The aim of this paper is to critically analyze Antonio Guillamón Fernández's book *Gender identity. A psychobiological approach* (2021). In order to do so, the book is contextualized within the current "brain-centric" wave, and I also discuss the theoretical framework underlying the presentation of empirical material. From a constructivist point of view, I suggest that Guillamón assumes a monistic ontology and a reductionist approach that blocks the interpretation of this empirical material, which could be better understood by including psychosocial identification processes that, in turn, depend on specific historical and cultural phenomena.

## El Cerebro en Pañales. ¿Puede Estar un Cerebro en un Cuerpo Equivocado?

***Palabras clave***
Constructivismo
Identidad de género
Monismo
Psicobiología

**RESUMEN**

En este trabajo se intenta analizar críticamente el libro de Antonio Guillamón Fernández *Identidad de género. Una aproximación psicobiológica* (2021). Para ello se contextualiza su publicación dentro de la oleada "cerebrocentrista" contemporánea y se discute el marco teórico que subyace a la presentación del material empírico que se realiza en sus capítulos. Se sugiere, desde un punto de vista constructivista, que el libro asume una ontología monista y un enfoque reduccionista que lastran la interpretación de dicho material empírico, el cual podría interpretarse mejor incluyendo procesos psicosociales de identificación que, a su vez, dependen de fenómenos históricos y culturales concretos.

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The British documentary series *A Child's World*, broadcast in 2001, was translated into Spanish under the title *La mente en pañales* [The Mind in Diapers]. One of its excerpts shows, through a well-known experiment, how adults treat babies differently depending on whether they think they are boys or girls: boys are attributed physical strength and bravery, and are moved around more; girls are attributed tranquility and beauty, and are talked to more.[1] The purpose of the images is to convey that, assuming the hormonal processes that affect the sexual dimorphism of the fetus—including the brain—, upbringing and socialization affect this difference from the very moment of birth. The purpose of Antonio Guillamón's book is, in a way, the inverse: assuming the processes of upbringing and socialization, the aim is to search for the biological bases—especially the brain-based ones—of gender identity.

What gets us into the heart of the matter is what is meant by biological basis. To narrow it down, I will situate the book within the contemporary brain-centrist wave (Pérez, 2011; *cf.* also Vidal & Ortega, 2017; Rose & Abi-Rached, 2013; Ongay, 2011) and point out that the psychological part of the psychobiological approach announced by its subtitle entails theoretical and ontological assumptions that are neither the only ones possible nor indeed the best. My thesis could be summarized as follows: Guillamón's book jumps on the bandwagon of the trans phenomenon (Alarcón, 2022; Errasti & Pérez, 2022; Lora, 2021; Shrier, 2021; Vázquez, 2019), providing a neurobiological justification of transsexuality that is indebted to a conception of the psychological which, curiously but significantly, neglects the specific psychosocial processes that account for the formation of the gender identity, thus incurring in reductionism. Needless to say, this does not mean that the information it offers is irrelevant or uninteresting.

### Cerebrocentrism and Activism

As for the brain-centrist wave, suffice it to recall that in 1989 the President of the United States signed a resolution—promoted by the National Advisory Council of the Institute of Neurological Disorders—according to which the 1990s were declared the "decade of the brain", which would bring with it resources for research into the most diverse issues related to this organ (Goldstein, 1990). The wave soon crossed the Atlantic and in 1992 the European Commission launched the Decade of the Brain Plan (Rogers, 1992). Since then, the prefix "neuro" has been applied to virtually any discipline or practice: neuropsychiatry, neuroeconomics, neuroethology, neuroethics, neuroesthetics, neuroarchitecture, neuromarketing, neurotheology, neurofinance, neuroeducation, etc. There has even been talk of a *neural turn* in the human sciences.

The neurosciences have generated an enormous amount of scientific production that often assumes a unidirectional causality from the nervous system to behavior, as if the former were more real than the latter. Neuroscientists compete with psychiatrists and psychologists to manage human behavior, and citizens tend to consider themselves as a kind of brain with legs, which would allow them both to exempt themselves from responsibility ("it's not me, it's my brain") and to take responsibility for their own lives by self-constructing through *neurotraining* or neuroasceticism. Basically, this paradox—that serves for one thing and for the opposite—runs through the modern history of *psy* disciplines (psychiatry, psychology, pedagogy, psychoanalysis, criminology, etc.) and impacts on the waterline of the book in question. Since the shift that took place in the 19th century from theological-moral discourses to techno-scientific ones, issues related to subjectivity raise powerful tensions about responsibility, imputability, and personal identity (Jiménez, 2007; Rose, 1996), which in many cases are intertwined with activism and, of course, with political decisions and legislative measures. Two excellent examples are found in homosexuality (Cleminson & Vázquez, 2007; Greenberg, 1988; Vázquez & Moreno, 1997) and autism (Ortega, 2009; Vidal & Ortega, 2017). Allow me to make a few brief remarks in this regard, by way of an excursus that will immediately bring us back to the book.

Francisco Vázquez and Andrés Moreno (1997) point out that, since its constitution at the end of the 19th century, sexology often doubted the distinction between masculine and feminine understood as a primary distinction, with a biological basis. Rather, it conceived it as a differentiation based on a sort of more basic undifferentiated desire, androgynous in nature. And androgyny or hermaphroditism were psychologized: they were no longer so much a deformation or a degeneration as a character, a condition that, moreover, provided the key to homosexuality, with which it had ambiguity in common.

Until the 19th century, the sexual deviant was sinful or wicked, but not sick. In the 19th century it was a matter of deciding whether he was a madman or a criminal. According to Cleminson and Vázquez (2007), the legal tradition of Protestant countries persecuted homosexual practices more vigorously, but the psychiatrization of homosexuality naturalized them as something that was abnormal although not necessarily punishable, while in Catholic countries the legislation tended to be more liberal in this respect, although psychiatrization was more complex there. In Spain, homosexuality was included in the penal code in 1928 after intense discussions between jurists, doctors, psychiatrists, hygienists, criminologists, etc. A typical tension, which crossed these specialties, was between the moral approach, usually linked to religion, and the scientific approach, which naturalized homosexuality. However, the scientific approach also pathologized it. In fact, it was generally considered a disease, although precisely for this reason it was believed that it should not be punished.

At the beginning of the 20th century, urban homosexual subcultures flourished in Europe, usually clandestine, with origins dating back to the middle of the previous century. In these subcultures, many activists rejected or *redefined* the medical terms referring to homosexuality, although they sometimes resisted pigeonholing and identity essentialization (the writer Álvaro Retana, for example, referred to "those who understand" and seemed to advocate a somewhat undefined form of bisexuality). In understanding the emergence of these subcultures, Greenberg (1988) stresses the importance of new forms of production and labor insertion in the Western world. The decline of family farms and apprenticeships, together with the rise of factory and office jobs, generated a distancing of male youth cultures from the adult world, weakening the sexual connection between generations. Homosexuality was thus cultivated among peers and became detached from practices such as pederasty. On the other hand, male homosexual subcultures found in medicine a kind of substitute for religion. Members of these subcultures often sought something that

1 Available on YouTube: https://www.youtube.com/watch?v=w2lvAR5VGRE (accessed on 11/17/2022). The excerpt to which I refer begins at minute 4:30.

was not historically new either: the biological justification of homosexuality, which became an innate or inevitable personal condition, and therefore no longer a vice or perversion. Thus, at the crossroads between science and activism, (male) homosexuality ceased to be a practice linked to sodomy, as in the Middle Ages, and became a biomedically endorsed and internalized identity for those who cultivated it. Within activism, the pioneer was the German sexual liberation movement. At the end of the 19th century, drawing on the ideas of the jurist Karl-Heinrich Ulrichs—himself a uranist and activist—, many members of this movement argued that homosexuality should no longer be persecuted as it was a congenital condition. Incidentally, this defense was opposed by some of the movement's anti-feminists, for whom homosexuality was an expression of male superiority.

Jumping to the end of the last century, we come across another interesting cross between science and activism that also raises complicated psychological, neurological, medical, and political issues: the neurodiversity movement, which has similarities with the gay liberation movement. It has its roots in the Anglo-Saxon *disability studies* of the late 1970s, with Marxist roots and immediately influenced by post-structuralism. According to Francisco Ortega (2009), its classic version distinguishes between *impairment* and *disability,* the former being natural and the latter sociocultural—an obvious parallelism with the concepts of sex and gender—, so that people with *disabilities* would constitute oppressed groups. Disability is not a personal problem, but a political one. It is the sociopolitically imposed normalization that makes the disabled abnormal.

One of the first phenomena to join this trend was that of deafness, which had historical antecedents (at the end of the 19th century, the creation of states for the deaf in North America was even considered). There has been talk of a "deaf culture" as opposed to a "hearing culture", as well as "deaf pride". Today the deaf are often considered a linguistic minority. Once the identity is established, the act of identifying as disabled is equivalent to “coming out of the closet”. It is a personal transformation that is often experienced with pride and often involves a rejection of medical intervention, which would be tantamount to a repression of diversity.

Autism joined this wave at the turn of the millennium. As Ortega (2009) reminds us, until the 1960s, the psychodynamic interpretation of autism predominated, which indirectly blamed families—with the famous theory of refrigerator mothers—although at the same time it enabled us to think about better parenting methods. The displacement of this interpretation in favor of neurocognitive and genetic interpretations favored the spread of groups of parents and professionals who demanded that therapeutic strategies not be forgotten, while highlighting the inevitable nature—not attributable to cold parenting styles—of the disorder. Judy Signer—herself diagnosed with Asperger's—radicalized the argument by coining in 1999 the term "neurodiversity" and arguing that autism is a personal characteristic like any other (race, sex, etc.), an atypical neurological condition and not a disorder, an identity rather than a disease. Curing an autistic person would be like curing a left-handed person or a homosexual.

Thus, as in the case of homosexuality, in the case of autism we find that what first appeared as an anomaly ends up becoming an identity, even an identity to be claimed (June 18 is autistic pride day, as June 28 is gay pride day). It is easy to see the convergences between these historical and social phenomena and the phenomenon of transsexuality. If one of the effects of naturalizing a stigmatizing condition is to neutralize the stigma, how can we not look for the biological basis of this condition? If, in addition, there are already movements that *make it visible* and, on top of that, have a growing socio-political force, how can we not provide them with scientific arguments, from the "hard sciences" if possible. This is basically what Guillamón's book does, presenting transsexuality—or, to put it more correctly, gender identity—as a matter of the brain.

Nowadays, gender identity is often given a psychological justification, in the sense that it is assumed to emanate from the most authentic depths of the self. This is what underlies the famous Spanish "trans law". The truth about oneself is truly known only to oneself, and one would not even need, according to activists, the help of a professional to discover it. Performing the historically well-known procedure of referring the psychological to the neurological in order to make it more scientific, Guillamón looks for the psychological truth in the cerebral truth. In both cases, the psychological and the neurological, a behavior—or an identity—is naturalized, one that, if it were not natural, would fall under the suspicion of being pathological.

The problem is that, as happened with homosexuality at the beginning of the last century, naturalization does not necessarily imply depathologization. The same phenomenon, reduced to the scale of a given concept, and the same concept—which aims to account for a given phenomenon—can serve both to exonerate oneself from responsibility ("it is neither a vice nor a sin") and to empower oneself ("being X is a source of pride, or at least requires visibility") or even to victimize oneself ("I am sick, it is not my fault"). Guillamón expressly warns that trans brain endophenotypes[2] are not pathological: "Trans variants are not disorders or diseases but different forms of differentiation of brain structure" (p. 144). Accordingly:

> "It is sometimes said that a trans man has a man's brain trapped in a woman's body or, conversely, that a trans woman has a woman's brain trapped in a man's body. This widespread perception is not scientifically true and facilitates a pathological view of transgenderism. [...] Trans women have a brain with its own endophenotype, characterized by a mixture of masculine, feminine, and demasculinized morphological features. Conversely, the endophenotype of the brain of trans men consists of a mixture of masculine, feminine, and defeminized traits. The endophenotypes of cis men and cis women are dominated by masculine and feminine traits, respectively" (p. 144).

The point is that these claims probably do not go beyond their own assertion. There are as many reasons to consider trans endophenotypes pathological as there are not. From a strictly biological point of view, nothing is pathological; it simply exists and, if anything, may be statistically abnormal (gender identity does not correspond to genitalia in between 0.002% and 0.014% of cases). Things are pathological from the medical point of view, which necessarily incorporates a valuation, an axiology, and a norm regarding what is a healthy body (Bueno, 1999).

2 As we will see in the next section, brain endophenotypes are a set of morphological and physiological characteristics that define the brain and that, although unobservable in themselves, are postulated to account for the relationship among genes, nervous system, behavior, and environment.

## Brain Endophenotypes

Antonio Guillamón is a (medically-trained) professor of psychobiology at the National University of Distance Education in Spain, where he has developed his career researching sexual dimorphism of the nervous system. For several years he has been directing this research towards gender identity in cisgender and binary transgender men and women. The book—whose shortcomings, we must note, are poor binding and insufficient orthotypographic revision—gathers the results of these studies and structures them in five chapters among which are interspersed autobiographical extracts about Carla, a transgender woman that the author met and whose testimony fulfills the function of reinforcing the conception of transsexuality as a natural personal condition that is discovered.

Brain centrism and reductionism are detected from the very first line. The book begins like this: "Brain activity produces a subjective experience of identity, the conscious process of unity, of being oneself in time and space. This experience, which we might also call the self, is gendered" (p. 17). Further on: "it is the brain that organizes behavior" (p. 65). As we can see, the brain is identified with the self, to which gender is also presupposed, and the sociocultural mediations abundantly studied by psychology, sociology, and anthropology are left in the shadows, especially those that have to do with processes of upbringing, with the construction of the self, and with acts of identification (see, e.g., Wertsch, 1993), three central areas in the construction of sexual gender. Neurobiological categories are given priority because:

> "It is highly improbable that the formation of gender identity, of the gendered self, is a function without a strong biological foundation, because it is the cornerstone of the survival of our species, which [...] reproduces sexually and requires the interaction of two sexes. This fact leads us unfailingly to the sexual differentiation of the organism, including the brain" (p. 17).

The ontological priority of physical matter is taken for granted. What is not strictly physical-neural enters into the "global theory of gender identity" (p. 18) that is presented, but it does so through the biological or biochemical reality: "It is not that the genesis of gender identity is alien to the influence of the environment. [...] Gender identity is the consequence of a process in which genetic, epigenetic, and hormonal mechanisms are involved in brain differentiation" (p. 17). These mechanisms are activated at critical prenatal, neonatal, and pubescent moments.

The first chapter is devoted to defining gender identity ("a stable cognitive-emotional conviction of being male or female, or the awareness of being male or female", p. 7) and other concepts of the same constellation, such as gender assignment, gender role, or sexual orientation. It includes a brief historical overview of modern ideas about transgender people and provides data on the prevalence of the phenomenon, referring to its emergence in children, adolescents, and adults, and how to address it. It also includes some considerations on stigmatization and cases of detransition. Finally, Guillamón explains the methodology of his own research, based on "comparing genotypes, endophenotypes, and phenotypes of cisgender and transgender people from the perspective of the sexual differentiation of the brain" (p. 25). The hypothesis is that this differentiation predisposes the brain to be male or female even if the genitalia are not. The causal arrow is assumed to go from genotype to behavior, the latter being considered as part of the phenotype. It is not a strict causal arrow, in that the existence of mediations in the passage from genotype to phenotype is admitted. The gonads, hormones, and the brain act as intermediaries. And this type of intermediary makes it possible to resort to a concept that comes from psychiatry: the endophenotype, which incidentally calls to mind the intermediate variables of methodological behaviorism. Endophenotypes are the phenotypes of the elements that, like the gonads or the brain, intervene in the process that goes from the genotype to the behavioral phenotype. They are not directly observable; their action is inferred through histological, biochemical, neuroimaging, etc. techniques. And they are postulated to give input to environmental factors in "the genes > gonads > hormones > brain > behavior process" (p. 27), assuming that behavioral variability may be due to that produced by the environment acting on the gonads, hormones, or brain.

The theoretical framework of the book excludes not only the inversion of the causal arrow—i.e,, that behavior, and therefore the sociocultural mediators linked to it, influences the process in some specific way, instead of acting in terms of just another physical component—but the possibility that the very categories of classification that are used to speak of gender identity (male, female, non-binary, fluid, etc.) function as cultural artifacts that allow the subjects to identify themselves ("I am a man", "I am a woman", "I am non-binary", etc.). If we forget this possibility, the reasoning ends up being circular: differences in the brain endophenotypes of cis and trans men and women are detected because they are based on the categories of men and women.

The second chapter is devoted to explaining the sexual dimorphism of the brain. It describes the genetic and hormonal mechanisms that act in certain critical periods inducing structural differences in this organ. It also considers epigenetic mechanisms, considered as those that account for gene expression that is not due to the DNA sequence, but to chemical compounds adjacent to the genes. This introduces environmental factors, but—once again—such factors are considered physical realities, realities produced at the scale of what Gustavo Bueno (1972) has called the first genre of materiality.[3] References are made to "external variables", understood as "the chemical, physical, and social environment in which one lives" (p. 59). These variables influence epigenetic processes such as gene methylation and demethylation.

Be that as it may, it is from an initial sexual indifferentiation—remember that late 19th century sexology also tended to assume the original indistinguishability—that the behavioral and morphological phenotype can be inclined towards the masculine or the feminine. Significantly, Guillamón does not refer to this indifferentiation in terms of asexuality or polysexuality, but of bisexuality: "Behavior, both in the male and in the female, has masculine and feminine bipotentiality. It is potentially bisexual" (p. 59). Whether morphological and behavioral expression is ultimately male or female depends on inhibitory genetic and epigenetic processes. In Aristotelian terms: starting from the original bipotentiality, if the

3 This is neither the time nor the space to develop this, but suffice it to say that Bueno's ontology distinguishes among the first genre of materiality, which relates to organoleptic and physical realities such as trees or molecules, the second genre of materiality, which relates to psychological realities, and the third genre of materiality, which relates to abstract realities such as scientific laws or cultural structures. A use of this ontology to criticize brain-centric reductionism is found in Pérez (2011); cf. also Ongay (2022).

masculine potency is deactivated, the organism is actualized as a female, and if the feminine potency is deactivated, the organism is actualized as a male.

The title of the third chapter is "The genetic basis of gender identity". This chapter reviews family studies (investigating the frequency of cases of transsexuality in a family, without it being clear, it seems to me, how the effect of recurrent parenting patterns is neutralized), twin studies (many of which, it must be warned, include such fragile methods as questionnaires or parent interviews) and molecular genetic research (based on the analysis of the genome and genetic polymorphisms or that of genome expression and the epigenome). Overall, the picture is one of enormous complexity in terms of the processes directly involved in the relationship between genes and gender identity; a complexity expressly recognized by Guillamón himself:

> "The molecular studies we have reviewed [...] open up an immense world of possible mechanisms that may be involved in the genesis of a person's gender identity within the framework of sexual differentiation of the brain. [...] To complicate matters further, not only do some genes regulate, through methylation, the gene expression of other genes, but so do the physical environment and the behavior that a child receives. All these experiments, studies, and data that we have provided point to an immense complexity in the process of sexual differentiation of the brain, which [...] we can intuit in turn presents degrees and differences that will affect gender variants" (p. 97).

In the fifth and last chapter, which is where the author adds his own two cents' worth, a model for organizing this complexity is presented. But before that, in chapter four, even more data are reviewed, this time about gender identity in intersex subjects, that is, those with ambiguous genitalia. More precisely, the topic is that of what are known as the disorders of sexual development, which are "congenital conditions in which the chromosomal, gonadal, or anatomical sex shows variations" (p. 93); variations from the statistical norm, it is understood (they have a prevalence of between 0.1% and 2% of the population). Examples are androgen insensitivity syndrome and congenital adrenal hyperplasia. At the end of the chapter, the relevance of sex hormones in brain *genderization* is highlighted, even counter to socialization, at least in some of the disorders.

The last chapter, as I have just indicated, offers Guillamón's theory on the relationship between neurobiology and gender identity. Against the background of the previous chapters, the author reviews the studies on sexual dimorphism concerning two variables directly related to the brain: volume (both total intracranial volume and that of the gray matter, white matter, and cerebrospinal fluid) and connectivity patterns (structural, functional, and dynamic). To conclude the book, he presents some reflections on—and this is the title of the epigraph—the effects of hormone affirming treatment on brain tissue.

What, then, is the author's theory of gender identity? According to his hypothesis, there are at least four brain endophenotypes: cis woman, cis man, trans woman, and trans man. Here are his words:

> "It is legitimate to hypothesize that the differences in the cerebral cortex and in the fascicles connecting different brain regions may be due to the different functioning of these genes [those related to estrogen and androgen receptors] causing different sexual development of the brain for each genotype, and this produces four brain endophenotypes that are associated with each of the four binary variants of gender identity [cis woman, cis man, trans woman, and trans man]" (p. 142)."

**Reductionism, Psychobiology and Identity**

It seems obvious that the book opts for a reductionist conception of psychobiology which, although perfectly legitimate insofar as it constitutes one more theoretical tradition among those available, is not the only one that exists nor the most powerful when it comes to coordinating brain and behavior. This, of course, does not undermine the technical rigor of its research and the interest of its empirical results. There are other conceptions whose constructivist, or at least non-reductionist, theoretical background allows for a better coordination. Instead of understanding the brain as the repository of the biological bases of behavior, these conceptions understand it as an organ in its strictest sense (*organum*, tool, instrument), inseparable from its functions; functions that occur on a scale that is no longer actually physical, but psychological.

There is nothing new or strange in this approach: classics such as Lev Vygotsky or Alexander Luria considered that individual assimilation of cultural practices enables the integration of different brain functions and, ultimately, the cortical control of behavior, always inseparable from the effects that the behavior itself produces in the environment in which the subject develops. In the contemporary neurosciences there are neuroconstructivist approaches from which it is possible to propose that behavior and brain are shaped reciprocally from initial constrictions of a phylogenetic root (Baltes, Rösler, & Reuter-Lorenz, 2006; Deacon, 1997; Doidge, 2008; Edelman, 1987; Wexler, 2006; Wilson, 1999; *cf.* also Sánchez, 1998).

There is a whole ontology involved in these questions, as I noted in passing above. The reductionist point of view resorts to an architectural or stratigraphic scheme according to which the foundations of behavior are to be sought in the physical place from which, so to speak, this behavior is supposed to emanate: the brain, a tangible, corporeal, physical organ. From a constructivist point of view, on the other hand, it makes as much sense to speak of biological bases as to speak of psychological bases. When it comes to understanding behavior, the brain is as basic as the biography of the subject in question, the patterns of upbringing and education that have surrounded him or her, or the institutions and practices typical of his or her cultural environment, although not all of these are tangible, corporeal, or physical—I refer again to Pérez (2011) and Ongay (2022).

Here is the reductionist explanation of gender identity as summarized by Guillamón:

> "When an individual is born, depending on the male or female appearance of his or her genitalia, he or she is assigned a sex that predicts a future gender identity of male or female. The absence or presence of certain concentrations of testosterone during gestation and in the first months after birth *prepare* a male or female brain endophenotype respectively. This child in interaction with the environment is *coupled* to a male or female model for which his or her brain is prepared. The coupling makes the gender identity

> emerge in him or her. In the vast majority of cases, the coupling takes place in congruence with the genitalia. This is what happens in cisgender men and women.
>
> "What happens in binary transgender people? They have a brain that is prepared to "couple" as a boy or a girl, but with incongruence with respect to the genitalia. The biological influence is so strong that the brain's *preparation* overwhelms attempts at correction by family and society" (p. 154).

A constructivist, non-reductionist explanation would begin by taking into account that male and female identity patterns themselves possess phylogenetic, ontogenetic, and historiogenetic dimensions; dimensions that are dependent—albeit indirectly—on behavior, by virtue of the Baldwin Effect,[4] and are therefore dependent on enculturation frameworks and patterns of upbringing and socialization. These dimensions have had to do with the organic—morphological—stabilization of the individuals of each species, including in this stabilization the gonads and other anatomical elements and physiological functions that are directly related to sex and reproduction.

As far as transsexuality is concerned, from the reductionist point of view it is no longer that the soul or the mind is born in the wrong body, but rather that—following the tradition of identifying the brain with the self (Vidal & Ortega, 2017)—the brain is born in the wrong body. Or better: a part of the body—to which we grant the privilege of being the seat of the self, of personal identity, which we in turn consider linked to gender identity—is uncoordinated with other parts of the body, as if an assembly error had been made. The concept of error, however, does suggest pathologization.

From a constructivist point of view, it is evident that transsexuality occurs. The phenomenon is there, it is objective. But it does not occur in nature understood as something given; it does not occur in the psychic or cerebral interior—except from an *emic* perspective, which is what Guillamón's book comes to validate by converting it into *etic*—, but through acts of identification that require a certain cultural framework. Therefore, rather than an objective phenomenon in the sense of pre-existing or natural, it must be considered objectified, made objective, using the term "made"[5] here in the same sense in which it has been used, referring to psychic disorders in general, by Héctor González & Marino Pérez (2007). Transsexuality has become objective because it has been constructed as such, it has been categorized. Especially in the USA and its area of influence—which is virtually the whole planet—, a whole clinical, educational, media, political, legal, etc., apparatus has been institutionalized that allows acts of identification with categories that accumulate indefinitely: bigender, demigender, two-spirit, fluid, neutral, pangender, etc. José Errasti & Marino Pérez (2022) list, depending on the source, between two hundred and fifty-one and more than four thousand possible sexual genders for the human species, mixing orientations and identities. Will there be as many brain endophenotypes?

The logic of these acts of personal identification is similar to that of a performative effect that is well known in the social sciences and philosophy, which Ian Hacking (1995) called the "looping effect", according to which the behavior of subjects is substantially and not accidentally affected by the categories used to describe it, which can thus function as a sort of self-fulfilling prophecy (see also Pérez, 2021; the effect had already been described in other terms since the 1960s within social reaction or labeling theory). The description of processes that take place on a neurobiological scale is essential, but the explanation of transsexuality—or, if you will, gender identity—is not exhausted in that description, which is unspecific. The explanation of transsexuality requires a coordination of scientific categories—biological, psychological, sociological, anthropological, etc.—that shows how the subcultures of gender identities and "non-normative" sexualities, the institutionalization of sexology, and identity *carnivalization* (Castro & Loredo, 2018), as well as the patterns of upbringing, socialization, and genetic, epigenetic, maturational, and psychogenetic processes mesh with each other.

First of all, there is no mystery in the fact that many subjects—virtually all of us do it—internalize labels such as medical or psychiatric ones and practice a kind of examination of conscience that allows them to find out whether their behaviors, desires, or thoughts conform to them. If so, can they accept that deviations from the norm are part of their subjectivity or do they rather reject them and, in doing so, reject themselves, thereby internalizing opprobrium? Be that as it may, identity empowerment, which is what seems to predominate today, is the reverse of the acceptance of opprobrium: it consists in accepting that what was the object of shame is part of oneself and, moreover, feeling proud of it, manifesting it publicly instead of hiding it. Today it is a matter of discovering one's own identity within oneself, the authenticity of the self, and revealing it to oneself and to others, who function as a mirror in which the self is recognized—the theory of the psychosocial construction of the self is by no means foreign to developmental psychology either. Let us listen to the words of Carla, the transsexual whose first-person testimony is included in Guillamón's book (I include my own comments in curly brackets):

> "Thanks to the Internet, it is very easy to obtain information on any subject or to resolve doubts. [...] Finally I came to the conclusion that what was happening to me was called 'gender dysphoria' {She finds the label within the available scientific and cultural baggage}.
>
> "[...] My life had to begin to change because everything was based on a very basic principle: I wanted to be myself and I wanted to be happy {She seeks her personal authenticity in a cultural context that considers happiness as the highest value and as something linked explicitly to self-discovery}" (p. 30).
>
> And further on:
>
> "I saw I could really achieve what I intended: to be me, both inside and out {She leaves behind the pathologizing label and acts in accordance with the new identity, including in clothing and anatomy}" (p. 62).
>
> "What does it feel like to be a woman? In my case, I feel an inner peace, a peace that I had not managed to feel until now, I am fully myself {She has completed the process, she assumes the new identity, which she experiences as an authentic identity that was hidden, and achieves a happy equilibrium; in reductionist psychobiological terms, the brain has reconciled with the rest of the body}" (p. 121).

4 It is generally known that the Baldwin Effect or organic selection refers to the fact that learning throughout the life of individuals—which may also be culturally and institutionally structured—conditions the type of environment with which they interact and, therefore, the selective pressures to which they are subjected; so that, in the long term, behavior influences biological evolution (see Sánchez & Loredo, 2007).

5 Translator's note: The original version of this article uses the Spanish term "hecho" which is a play on words in Spanish as it has a double meaning: "made" and "fact".

## Conflict of Interest

There is no conflict of interest.

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Article

# High-Conflict Divorce and Forensic Therapy: An Intervention Framed in the Paradigm of Therapeutic Justice

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**ABSTRACT**

Forensic therapy constitutes an auxiliary element of justice framed in the paradigm of therapeutic jurisprudence. In this article, we present the bases that demonstrate the need for this resource and the basic associated characteristics, as well as the differential aspects with respect to other possible interventions. Finally, we propose basic guidelines to be considered by the professionals who assume these interventions.

## Divorcio Conflictivo y Terapia Forense: una Intervención Enmarcada en el Paradigma de la Justicia Terapéutica

***Palabras clave***
Divorcio
Alto conflicto
Justicia terapéutica
Terapia forense

**RESUMEN**

La terapia forense constituye un elemento auxiliar de la justicia enmarcada en el paradigma de la justicia terapéutica. En el artículo, se exponen las bases que evidencian la necesidad de este recurso y las características básicas asociadas, así como los aspectos diferenciales respecto a otras posibles intervenciones. Finalmente, se proponen pautas básicas a considerar por los profesionales que asuman estas intervenciones.

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In Spain, divorce has existed for 40 years, during which time it has been gradually consolidating within society, coming to resemble countries with a greater tradition of divorce. As a result, the number of minors who experience the breakup of their parents every year is high. The latest data from the National Institute of Statistics (INE, 2022) report that in 2021 there were 90,582 cases of annulment, separation, and divorce, of which "45.2% had only minor children, 4.2% had only economically dependent adult children, and 7.4% had economically dependent minor and adult children. Twenty-four point five per cent had only one child (minor or economically dependent adult)" (INE, 2022, p. 3). From these data it can be deduced that more than 150,000 children were involved in these processes; however, this figure leaves out those whose parents separate without a marital bond, which Fariña et al. (2020) established at approximately double the number presumed in the official records mentioned above. Thus, a large number of children and adolescents experience the breakup of their parents' relationship, which is not always well managed by them. Despite the fact that "since 1995 separations—and since 1999 divorces—have been mostly by mutual agreement" (Consejo General del Poder Judicial [General Council of the Judiciary], 2021, p. 171[1]), the dissolution of the couple does not solve the family problem. However, as indicated in the *Guide to Criteria for Judicial Action in matters of shared custody*, published by the General Council of the Judiciary, and coordinated by Martínez de Careaga et al. (2020), "there is a percentage of breakups that—whether they were initially channeled through mutual agreement or through contentious proceedings—after a period of time (...), present a high level of conflict, which results in continuous incidents in the execution, (...). Cases with a tendency to conflict are exacerbated if they are resolved by traditional adversarial procedures" (p.357). Also within the forensic environment it can be seen that the relationships between parents reach a high level of conflict, which is usually maintained and increased through the dynamics that are usually established in contentious judicial proceedings (Joyce, 2016), creating a process of triangulation in which the court, other legal agents, and even some of the positive means for conflict resolution can, paradoxically, become a means through which to perpetuate the conflict (Francia et al., 2019). Thus, it is estimated, internationally, that one third of couples separate with a high level of conflict and high judicialization (Fischer et al., 2005), which is maintained over time, even after the time required for the readjustment of the family system (Arch & Fabregas, 2020; Fischer et al., 2005; Mitcham-Smith & Henry, 2007), jeopardizing the well-being of the family. When this occurs, all the members of these families are immersed in a highly traumatic situation for a prolonged period of time, without the established means and systems appearing to offer an effective response that contributes to the adequate protection of the minors.

Thus, marital breakup processes have been considered a risk factor for children, regardless of their gender, and may affect their psychological and physical health (Contreras & Cano, 2016; Gómez-Ortiz et al., 2019; Hengesch et al., 2017; Lamela & Figueiredo, 2016; Larson & Halfon, 2013; Leopold, 2018; Lund et al., 2006; Lucas-Thompson et al., 2017; Schaan et al., 2019; Yap & Jorm, 2015), and also their adjustment (Corrás et al., 2017; Reuven et al., 2021; Seijo et al., 2016). They can carry the traumatic burden in terms of psychological well-being and social relationships, for years (Geurts & Gutterswijk, 2021), consquently, it has been categorized as an adverse childhood experience, whose effects can reach into adulthood (Becher et al., 2019; Dube et al., 2003). Moreover, the consequences are amplified and magnified when the parents continuously place children at the center of confrontations (Barrios et al., 2017; Kelly, 2002; Kirkland, 2004) and it is a high-conflict separation (Geurts & Gutterswijk, 2021). In these cases, they are more likely to suffer hostility, blame, criticism, family violence (Van der Wal et al., 2019), twice as likely to suffer behavioral, social, or emotional problems (Hald et al., 2020; Hashemi & Homayuni, 2017); we should also highlight, as Geurts and Gutterswijk (2021) do, the involvement in court proceedings and the consequences they have on children.

However, it is not the couple's breakup per se that puts the children at risk, but the parental conflict and lack of positive parenting (Fariña et al., 2022; Van Dijk et al., 2020), before and after the divorce (Cao et al., 2022). Therefore, it is not the separation of their parents that affects them the most, but the parental conflict and the subsequent decrease in family support. In the same vein, the American Academy of Pediatrics (2012) warned that adversity is not the only predictor of maladjustment and maladaptive health patterns in children and adolescents, but the lack of family relationships that provide protection and support (Fariña, 2021). Specifically, in post-divorce situations, interparental conflict causes dysfunctional family dynamics (Van Dijk et al., 2020), affecting the exercise of positive parenting (Fariña et al., 2022). It drains parents of energy, generates negative emotional states, and hinders them from carrying out positive behaviors in their parental role (Van Dijk et al., 2020). Consequently, the different operators who intervene with these families have become aware of the need to favor the adaptation of minors to the new reality, and to prevent, as far as possible, the appearance of health problems or loss of well-being that interfere with their correct development and evolution (Abel et al., 2019; Arch, 2010; Arch & Fabregas, 2020).

In line with what the paradigm of therapeutic jurisprudence (TJ) promotes (Fariña, 2022), more and more professionals believe that contentious procedures are inadequate due to their high emotional and economic cost for all family members, particularly for children and adolescents (Yamada, 2021). This has led, in recent decades, to specialized resources being increasingly designed and promoted with the aim of facilitating conflict resolution and the pacification of family life, primarily for those cases that, due to their special complexity, can have extremely negative psychological effects for those involved (particularly for the children). Among these tools are family mediation, psychoeducational programs, interventions from family meeting points, parental coordination, and forensic therapy, all of which are intrinsically friendly to TJ, and extrinsically so if applied from the perspective of TJ (Fariña, 2021). In Spain and Latin America, of all of these tools, forensic therapy is the least known and used. Accordingly, this article focuses on presenting this resource aimed primarily at the families that require an intense and specific intervention that allows them to get out of the detrimental situation they have been sustaining.

1 The INE (Spanish National Institute of Statistics, 2022) reports that, in 2021, 78.8% of divorces were by mutual agreement and 21.2% contentious; and with regard to separations, 87.9% were managed by mutual agreement and 12.1% were contentious.

## Therapeutic Jurisprudence (TJ)

Therapeutic jurisprudence (TJ) began in the field of law in 1970 with a study by Professor Werxler and a group of students who studied the Mental Health Law in Arizona and how it was applied. But officially the concept of TJ was not instituted until 1996, when the same David Wexler and Bruce Winick published *The development of Therapeutic Jurisprudence* (Fariña, 2022). Today TJ is one of the most important legal theoretical developments of the last three decades (Perlin, 2019), already established with paradigm status (Stobb, 2020), it focuses on the humanization of the law (Kawalek, 2020). Its principles are already considered worldwide, the *International Consortium for Court Excellence* even includes TJ in the third edition of its latest assessment tool (International Framework for Court Excellence), published in 2020 (Fariña, 2022). In it, it clearly defines, in a generic way, what TJ represents: "an area of study that focuses on the impact of the law on emotional and psychological well-being. A therapeutic jurisprudence approach considers ways that enhance the well-being of litigants, improve the perception of procedural fairness in the judicial experience, and when appropriate facilitate access to treatment and services" (p. 28). In family law it is appropriate to apply the TJ paradigm (Babb, 1997, Fariña et al., 2017, Wexler, 2015), as it helps professionals to facilitate beneficial outcomes for people in conflict (Babb, 2021), but it is also necessary to implement it if we want to have healthy families and societies. In TJ it is assumed that those involved in processes of separation/divorce not only have the obligation to resolve the issues taking into consideration the best interests of the minor, but also those of the remaining members of the family (Babb, 1997, 2014; 2021; Lund, 2015). And, therefore, they will be able to facilitate more positive family relationships, adequate relational family dynamics, and the wellbeing of the people involved in the process, mainly that of the children and adolescents involved in the case, which may include more than just the children of the separated parents.

## Forensic Therapy: a Specialized Intervention Framed Within the Paradigm of TJ

Some courts in Catalonia, in a pioneering manner in Spain, implemented forensic therapies to respond to the cases of families where, after the breakup of the couple, the parents maintained a very high level of conflict and the available therapeutic resources, which could contribute to positively resolve some of these cases, were not adequate (Arch & Fabregas, 2020) or had already failed. The appointment of a specialized forensic psychologist to carry out a therapeutic intervention in the family setting became particularly significant in situations where there was an unjustified and extreme refusal on the part of the child/children to relate to one of the parents and it was considered that this could be due to a process of parental interference. In this sense, it should be noted that some authors (Lampel, 1986; Lund, 1995), from different orientations, explicitly recommended the use of this forensic figure with therapeutic functions as the main element for an adequate approach to cases considered to be of moderate-high severity. However, regardless of the initial trends and the specific field in which this therapeutic task linked to the forensic context arose, with the passage of time, its involvement in conflictive divorces with very high judicialization has been gradually cemented. For these cases it is necessary to be able to offer a therapeutic resource aimed at both parents and children, given that other measures (e.g., meeting points, parental coordination, or family mediation) are insufficient in themselves, since their function is not to bring about changes of a therapeutic nature (e.g., affective bonds, negative emotions, specific personal problems). Obviously, this type of intervention is not exclusive but rather complementary and/or alternative to other resources, also friendly to TJ. In fact, some authors (e.g., Lebow & Newcomb, 2007) suggest that forensic therapy is especially indicated in the most serious cases of interparental conflict, for which measures such as those mentioned above have not been effective, or in cases in which the aforementioned resources are insufficient, as a more intensive one is needed to bring about the necessary changes in multiple aspects.

## Characteristics of the Families

The recipients of these interventions show special characteristics and specific needs (Lebow & Black, 2012). In this sense, it has been appreciated that parents may present a high rate of psychopathological problems. Specifically, Johnston and Campbell (1986) suggested that 64% of these parents involved in highly conflictive divorces met the diagnostic criteria for personality disorder. In some cases, the existence of substance addiction problems was also noted.

It has also been reported that some of these parents often present deficits in several areas, among others: the inability to understand another person's perspective and deficits in parenting skills (Sullivan & Greenberg, 2012); dysfunctional cognitive biases and attributions (Hooper, 1993) and/or personal characteristics that may hinder therapy (defensiveness, hostility, external locus of control) (Ellis, 2000).

It should also be considered that, generally, the parents present very significant difficulties in communication, which tends to be absent or very pathogenic (Grych & Fincham, 1999; Sullivan & Greenberg, 2012). Also noteworthy is the fact that they tend to present a distorted view of the other parent, which may contribute to increase the distortion of their own thinking (Lebow & Black, 2012).

Finally, it should be noted that these are usually very complex cases that may include unproven or inconclusive allegations of sexual abuse or mistreatment, allegations of family and gender violence, different perceptions regarding the status and needs of the children, or the prolonged absence of a parent in the life of the minor (Sullivan & Greenberg, 2012), aspects that contribute to increase the technical difficulty of approaching the case, since it will require, among other aspects, the re-evaluation of the family situation.

Francia et al. (2019) state as a significant factor involved the mistrust presented by one parent towards the other, which leads them to be permanently on alert regarding the possible motivations of their behaviors or attitudes, this seems to be related, consequently, to various deficits in interparental communication—and the exchange of significant information regarding the child.

In relation to the children, as previously mentioned, adaptive difficulties are common when they are trapped in the enormous interparental conflict involved in this type of "intractable" breakup (Barrios et al., 2017; DuPlooy & Van Rensburg, 2015; Francia & Millear, 2015; Francia et al., 2019).

### Mental Health Professionals and Therapy With Families Involved in Family Legal Proceedings With High Conflict

In the context of the judicialized breakup of couples with children, it has been seen that a therapeutic process can bring enormous benefits to the family, however, there have also been warnings that well-meaning therapists without specific training in the forensic environment, due to insufficient specialization and the great complexity that can occur in these cases (e.g., allegations of physical or sexual abuse, gender violence, accusations of neglect towards the children, inconsistent contact history between a parent and the children, etc.) may be carrying out interventions that cause harm to children and their families (Sullivan & Greenberg, 2012). Interventions in a forensic context are difficult (Fidnick et al., 2011), if not impossible, for clinical therapists to address. They have to deal with issues stemming from a complex family environment and specific demands from the court and lawyers, or even expectations or requests from parenting coordination professionals who may be working with the family at the same time as the forensic therapist. Therefore, the forensic therapist must have extensive training and experience not only in clinical/health psychology, but also in forensic family psychology, specifically in the field of divorce.

### The Forensic Psychologist and Their Role in Forensic Therapy

The role of the forensic psychologist is mainly associated with his or her functions as an expert witness in judicial proceedings. However, as we have mentioned, in the family setting and in cases that, due to their complexity, require highly specialized attention, some courts have agreed (on their own initiative or at the suggestion of the experts or lawyers) to make a judicial appointment so that the forensic professional, with training in clinical/health psychology, can carry out the therapeutic work required by the family (Arch & Fabregas, 2020). In some cases, this has been very complicated as it is not possible, from a legal point of view, to impose family therapy on the parents (nor to force, for example, participation in family mediation). However, many judges and magistrates, under Article 158 of the Civil Code[2], consider the referral to a specialized therapeutic process feasible when the purpose is to safeguard the best interests of the minor. In this case, the court may recommend that the family, or some of its members, undergo some treatment, or it may even set the adoption of a certain measure (e.g., changes in the parent-child relationship pattern) as a condition for the acceptance of treatment, in this case forensic therapy.

The intervention of the professional in these cases is specified in what the Guidelines for court-involved Therapy of the Association of Family and Conciliation Courts (AFCC, 2011) defines as the "Court-Appointed Therapist", i.e., the professional who has been appointed directly by the court. Although these guidelines clearly alert professionals to the need for specific knowledge and experience in a forensic setting, it is understood that any mental health professional could assume this position. This has generated intense academic and professional debate (e.g., Kleinman & Walker, 2014). In our opinion, and in line with what is established in the aforementioned Guidelines (AFCC, 2011), the assignment in these specific cases should undoubtedly be carried out by a forensic psychologist, since they are the ones that have the specialized knowledge essential for the treatment of these cases. However, this professional must also have adequate and solid training at the therapeutic level, as previously mentioned. Likewise, there are several elements that require special attention with respect to the performance of this therapeutic role by forensic psychologists, which are summarized below.

Conceptually, the terms "therapist" and "forensic" suggest a confrontation since the former refers to concepts such as professional secrecy and a relationship of trust, while the latter involves acting in the forum and, therefore, the necessary transmission of results to the court. Therefore, initially, the role of the "forensic psychologist" in interventions of a therapeutic nature may generate confusion for the participants and/or the experience of ethical dilemmas for the professionals.

In general terms, from the forensic field, there is no doubt that the professional's obligation regarding the clarification of the confidentiality rule consists of explaining clearly and in detail to the user that there will be no secrecy and that any information that the judge or court requires will necessarily be exposed by the psychologist (Echeburúa et al., 2011). However, it should be noted that, in all areas of psychology, the rule of confidentiality to which psychology professionals are subject is not absolute and can and should be circumvented by legal requirements, the issue at hand being one of those clearly included in this possibility. Therefore, it is evident that, in these interventions, they must clearly inform the participants that they will inform the court in the terms that it may determine.

Some authors (e.g., Dwyer, 2012) have warned of the influence of this aspect on the therapeutic alliance that the forensic professional must establish with the participants, due to the adverse effects that the latter may consider that it will have in relation to their interests in the judicial procedure. Despite this, it has been pointed out that it must be clearly stated that non-participation or boycott of the intervention may have risks as well, derived from the judicial resolutions that may be adopted in such a case. Thus, before the necessary explanation of confidentiality, it is understood that the professional must openly inform of all the risks for the interests of the participants, always demonstrating the positive effects for the family—especially for the children—that the success of the therapy will entail, for which their active participation in the therapy is required.

Likewise, it has been argued that users who have been forced by the court to participate in treatment cannot provide true informed consent since this type of therapy, with some exceptions, lacks the element of voluntariness (Melton et al., 2007). However, authors such as Dwyer (2012), support the idea that alerting adult participants about the effects that may result from choosing not to participate actively in the therapeutic process (e.g., limited access to their children, loss of parental rights, intervention of child protection systems) is conducive to a greater willingness on the part of parents to become involved in therapy.

Warnings are also made about the need to work on the adequate awareness of clients regarding the need for intervention. In this

2 Article 158 of the Civil Code establishes a mechanism to guarantee the rights and interests of the children. It establishes that the judge, will dictate, ex officio or at the request of the child him- or herself, any relative, or the public prosecutor's office, among other particularities "1st: The appropriate measures to assure the provision of alimony and to provide for the future needs of the child, in case of breach of this duty by their parents. 2nd: The appropriate provisions in order to avoid harmful disturbances to the children in cases of change of guardianship."

sense, treatment is derived from court orders, usually after forensic evaluations (Greenberg et al., 2012) or proposals from a parenting coordination professional, who has identified treatment goals that one or both parents may not agree with at the beginning, especially if the proposal comes from the forensic expert. It is common for both parents and children to be fearful of the changes that may result from the intervention. Therefore, professionals cannot resort to traditional models of therapy that have been developed for people who voluntarily choose to undergo treatment. The right approach can only be facilitated from a forensic perspective with a comprehensive and highly structured intervention design from the beginning of treatment (Sullivan & Greenberg, 2012).

## Concluding Remarks

TJ aims to humanize the law and resolve court cases by eliminating the cause that motivates them and seeking the wellbeing of the people involved (Fariña, 2019). In contentious separations, to achieve these objectives, the intervention of jurists is not enough; de facto, professionals from other fields such as mediation or parental coordination are required. When it comes to separations of very high conflict with high judicialization that require—of some member or the whole family—changes that involve interventions of a necessary psychotherapeutic nature (e.g., presence of active psychopathology), forensic therapy should be used.

However, although the potential benefit of forensic therapy for families is clear, particularly for the children and adolescents involved, the fact is that the existing resources in the Spanish health care system do not seem to be able to deal adequately with these specific cases, either due to a lack of specialized training of health psychologists or because they do not have the time required for these interventions. For this reason, it is necessary to consolidate a protocol that directs these families to a specialized resource, thus also contributing to decongest the services destined to other problems of a fundamentally clinical nature.

## Conflict of Interest

There is no conflict of interest.

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Article

# Dear Trainees, Take Care of Yourselves: A Guide to Surviving Clinical Psychology

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**ABSTRACT**

The training system in clinical psychology in Spain is a process that will test the adaptability of trainees to the limit, especially if they do not have adequate supervision and institutional support. Aware of this issue, the present paper aims to normalize the complexity of training as a clinical psychologist in Spain, placing special emphasis on the first steps as a trainee in the Spanish National Health System and on the personal challenges involved. Moreover, it seeks to increase sensitivity and awareness about the importance of establishing measures that enable trainees to survive clinical psychology. Therefore, the state of the art on the topic of self-care within the field of clinical psychology and psychotherapy is discussed from the perspective that better trained specialists will improve the National Health System and mental health care for the most vulnerable people.

## Queridos Residentes, Cuidaos: una Guía para Sobrevivir a la Psicología Clínica

***Palabras clave***
Psicología clínica
Psicoterapia
Formación sanitaria especializada
Autocuidado
Sanidad pública

**RESUMEN**

La residencia en psicología clínica es un proceso que pondrá al límite la capacidad de adaptación de los residentes, especialmente si no gozan de la supervisión y el soporte institucional adecuados. Conscientes de esta situación, este trabajo pretende normalizar la complejidad que supone formarse como psicólogo clínico en España, poniendo un énfasis especial en los primeros pasos como residente en el Sistema Nacional de Salud y en los desafíos personales que ello implica. Asimismo, persigue incrementar la sensibilidad sobre la necesidad de medidas que permitan a los residentes sobrevivir a la psicología clínica. Por ende, se discute el estado del arte sobre el concepto de autocuidado dentro del campo de la psicología clínica y la psicoterapia desde la perspectiva de que especialistas mejor formados podrán mejorar el Sistema Nacional de Salud y la atención a la salud mental de los más vulnerables.

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## Introduction

Training in clinical psychology and psychotherapy is a complex, gradual, and permanent learning process (Prado-Abril et al., 2017, 2019a) that includes formal aspects of study, participant observation, and supervised practice, as well as personal and interpersonal processes of the resident psychologist intern (PIR in Spanish) under the framework of a given historical, sociocultural, and autobiographical context. Furthermore, one of the distinctive features of psychotherapy is that it is articulated in the relationship between two people in the enclave represented by the therapeutic relationship (or alliance). This interpersonal nature and the fact that no two patients and no two therapists are alike endows psychotherapy with an unquestionable "craft" element in its strictest sense. That is, each psychotherapeutic process is unique and unrepeatable; it is tailor-made, ideographic, personal, and intersubjective (Fernández-Álvarez et al., 2020). Thus, training as a clinical psychologist in our country, among other aspects, also involves a certain element of tailoring, whereby all the agents involved, such as teaching committees, specialty tutors, teaching collaborators, etc., should adapt to the person on the PIR who is beginning his or her residency.

Hereinafter, we will reflect on the complexity of training as a clinical psychologist in Spain, with special emphasis on the first steps as a resident in the Spanish National Health System (SNS in Spanish) and the personal challenges that this entails. An attempt will be made to explain some of the normative aspects of the training process, such as professional stress, the risk of emotional burnout, and the ethical imperative of self-care, with the aim of normalizing them and placing them at the core of the training process (Gimeno-Peón et al., 2023). Likewise, a number of recommendations will be outlined for balancing the professional and personal demands of clinical psychology and psychotherapy practice, while the professional tries to take care of him/herself as a person or simply tries to survive (Randall, 2019).

## Training in Clinical Psychology in Spain

In our country, clinical psychology is legally regulated in a manner equivalent to the other health specialties established via Specialized Health Training (FSE in Spanish), allowing access to the title of psychologist specialized in clinical psychology and the exercise of the competencies inherent to this specialty (Prado-Abril et al., 2019b). The FSE aims to provide residents with the knowledge, techniques, skills, and attitudes inherent to their corresponding discipline, simultaneously with the progressive assumption of responsibilities inherent to practicing it autonomously. Moreover, it is programmed and supervised work experience that guarantees the rights of professionals as workers, while they complete placements or training periods in different units (rotations) that allow them to obtain a global vision of the SNS, the multidisciplinary work, and an in-depth knowledge of the field of professional practice. It also guarantees patient safety since the teaching supervisor assumes responsibility for the first and successive steps of the PIR (Prado-Abril et al., 2019b).

The creation of the specialty in clinical psychology was an achievement for the whole of psychology that strengthened the role of the psychologist in the SNS, giving him/her the highest professional category and responsibility established by the condition of Area Specialist. This was a substantial milestone in a hegemonically biomedical trajectory and context. The progressive consolidation of clinical psychology as a standardized specialty with stable growth, although not without turbulence, can be confirmed in the recent public offer of 231 PIR places for access in 2023 (Order SND/840/2022). Whilst not taking the figure for granted, the upward trend of both PIR places and specialists in the SNS cannot be ignored when comparing their relative position with respect to the rest of the predominantly medical specialties (Fernández-García, 2021).

## The PIR Residence

There are few published data on the personal characteristics and processes involved in obtaining a PIR position. Among the exceptions, the survey by Carreras and Morilla (2010) stands out, in which a representative sample—of candidates who obtained a place in 2010—was asked about what factors they associated with the result of the exam and obtaining a place on the PIR. The most frequently mentioned emerging category was *"effort"*, which included aspects such as *"persistence"*, *"perseverance"*, or *"study"*, together with the category *"study technique or academy"*. Likewise, the study indicates an average of between two and three attempts to obtain a position. These results emphasize the demands and difficulties involved in accessing PIR specialized health training. It does not seem unreasonable to point out that the demands and risks to personal integrity of the process do not end with the access to a PIR position. In fact, they continue during the residency and throughout the professional career shaping a certain character or sense of identity in residents and future clinical psychologists (Prado-Abril et al., 2017).

The beginning of the PIR residency is usually a turning point in the life and autobiographical trajectory of the residents. For many of them it represents the first work experience or, at least, the first professional experience in the field of mental health after a multipurpose academic training, not focused on the field and with little practical preparation. Added to this are the complexity and apparent chaos involved in the SNS as a work context, the possibility of geographical displacement, the difficulties of access to housing, moving away from the usual social support networks, etc. In short, it is a highly stressful process. Over the four years involved in the training process via PIR, residents will assume responsibilities and gain autonomy in an increasing and progressive manner under the supervision of supervisors and teachers. The clinic involves contact with the suffering, misery, and pain of human beings that will inevitably awaken personal, professional, and existential insecurities in a context of need for validation as professionals and of life transition where the key lies in the support and learning with peers and supervisors of different care units that, additionally, will present varied and broad theoretical-technical perspectives (Areas et al., 2022; Pastor Morales & del Río Sánchez, 2018, 2022).

When residents settle into their teaching unit, as in any maturation process, they will gradually become aware that the reality often does not meet their expectations. Among other things, they will see that the supervision does not always meet their needs; that the institution sometimes pushes them to assume responsibilities

that do not correspond to them; that there is not always a deliberate effort to care for professionals; that patients do not receive care under ideal conditions; that the formal and informal dynamics of multidisciplinary teams are complex; and they may even feel lonely and helpless during the process (ANPIR, 2022; Uhrig, 2021). It is possible that many specialists in clinical psychology have —at some time during their training process— felt some of the issues described above, having to grieve in order to readjust their expectations. This is a process of considerable emotional intensity that should be formally supervised and contemplated within the training process. In a certain sense, the very nature of the PIR residency consists of a concatenation of rotations where, when one adapts and feels comfortable, it necessarily comes to an end only to start all over again. A relentless grieving. A constant learning to say goodbye, for which it is particularly important to talk explicitly about how residents are cared for and how their self-care is encouraged.

## The Importance of Self-Care

Regarding therapist self-care, it is no secret that on many occasions clinicians do not lead by example (see Gimeno-Peón et al., 2023 for an exhaustive review). The very pace of life in contemporary Western societies, with structural stress and multitasking as hallmarks, does not exactly invite us to incorporate into our lives some of the aspects that we specifically work on to improve the health of our patients. Committing to this profession requires significant effort and energy, which predisposes practitioners to an increased risk of stress (El-Ghoroury et al., 2012; Garrido-Macías et al., 2022) burnout, and professional deterioration (Harrison & Westwood, 2009). Paradoxically, the more patients are helped to move toward wellness, the more likely the clinician is to overlook his or her own needs (Barnett et al., 2007). In contrast, increased practice of self-care strategies has been found to be associated with greater satisfaction with professional and personal life (Garrido-Macías et al., 2022).

During the PIR residency, after having overcome a high intensity process focused on a specific goal, a stage begins where it is necessary to develop a great flexibility to adapt and learn the singularities of each of the health care units through which they rotate, together with a weekly working day that exceeds 40 hours of exclusive dedication, when shifts and afternoons of continuous service are added. Likewise, a significant percentage of residents, in their free time, choose to undertake postgraduate training in various fields, start their doctorates, or even take on both tasks. The hours of work and training sometimes rise to over 50 hours per week. Of course, they read up on the state of the art in the field, prepare clinical sessions, organize part of their theoretical training, attend congresses, present papers, etc. High standards and excellence are taken for granted. The potential associated risks are barely questioned or reviewed.

As the months go by, residents may begin to experience the tension, restlessness, nerves, or anguish of working for the first time with patients in the SNS who often present complex clinical conditions that are difficult to manage. They also have to deal with the discovery that real practice is often far removed from the theoretical content they learned in their degree and in the competitive examination phase for access to the PIR. With experience, increased reflective capacity, and adequate supervision, they learn to listen slowly and in detail to people, prioritizing relational aspects over technical aspects that standardize and reduce (not always accurately) the complexity of people's mental health problems (Fernández-Álvarez et al., 2020; Mahoney, 1991; Truijens et al., 2019). At this stage, learning to perform ethically grounded psychotherapeutic interventions will entail understanding and recognizing the patient, integrating the synchronic with the diachronic, through a relational experience that helps patients to overcome their disturbing experiences while respecting their idiosyncrasies, values, and preferences. Finally, they will have to learn this craft and the art of its implementation in an environment and context that is eminently biomedical and hostile to the framework, principles, and timing of clinical psychology, psychotherapy, and the processes of human change (Deacon, 2013). Consequently, issues consubstantial to the practice of clinical psychology will emerge sooner rather than later, such as the need for supervision that is not always available or satisfactory, their own vulnerability, or questioning—in a more or less radical way—of central and nuclear aspects of their way of being and of being in the world (Mahoney, 1991).

To recapitulate, and following Skovholt and Trotter-Mathison (2010), it can be considered that this profession, in a significant part, consists of the ongoing construction of multifaceted therapeutic relationships with an endless number of patients. As the authors aptly point out, this basic aspect of practice demands of clinicians an ongoing accommodation of both emotional and personal involvement, setting boundaries, calibrating multiple variables, and with specific person-to-person sensitivity. Establishing and maintaining these working relationships requires significant effort and energy that, when sustained over time, can represent high professional stress that can lead to burnout and professional deterioration. As Barnett et al. (2007) and Norcross and VandenBos (2021) point out, paradoxically, the more you help patients, the more you work and, therefore, the more likely it is for clinicians to neglect their own self-care. In short, including an explicit chapter on self-care in PIR specialized health training is a pending issue in our country. It should not be forgotten that in clinical psychology the technology is the actual person of the practitioner, and that ensuring one is in optimal conditions to attend to patients is not only advisable in order to avoid professional burnout but also a responsibility and an ethical imperative for the patients.

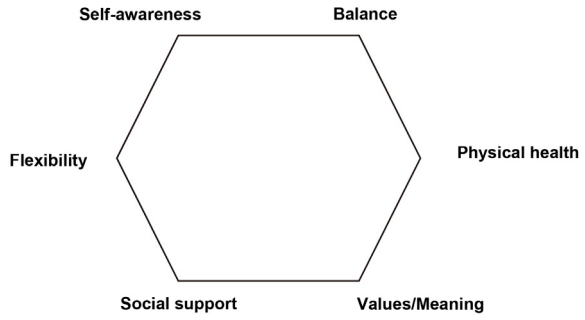
## Self-Care Domains

Given that the interest of this work, rather than theoretical, is decidedly didactic and pragmatic for the purpose of outlining a simple guide to self-care for residents, we will follow the results of the literature review conducted by Posluns and Gall (2020) who synthesize the challenge of self-care into six main components (see Figure 1). A summary of the self-care domains adapted to the needs of PIR specialized health training can be seen in Table 1.

### *Self-awareness*

Residency, when it is a meaningful process, involves a painful realization of our own limitations as individuals. However, at the

**Figure 1.**
*Hexagon of self-care.*




same time, it is also an opportunity to explore some of our zones of proximal development with a certain margin of safety. We agree with Barnett et al. (2007) that it is during the first steps of the training process as specialists that residents should be encouraged to be especially aware of their own vulnerability, of the emotions aroused by working with patients in extremely serious situations, of the dynamics surrounding multi-professional work, and the associated stress. It is a matter of learning to look and listen in order to be able to register what one feels and to put it into words in order to build the habit of internal self-monitoring. Only if residents learn to detect the signs of risk will they be able to set up prevention mechanisms in time. The more aware a professional is of their needs, the more likely they are to recognize and address them (Norcross & VandenBos, 2021).

### *Balance*

Distributing attention, energy, and dedication to various aspects of life by building a polyhedral existence or, at the very least, not neglecting basic aspects of daily life such as friends, family, and time to disconnect from a sometimes overwhelming job. Perhaps residency can be approached as four years to squeeze the most out of, but allocating more than 40 hours a week, sometimes 50, is not a habit that can be sustained for many years without consequences. The empirical literature on this is compelling. For a clinician to tolerate and manage the vicissitudes of a relatively intense daily clinical practice, avoiding the intoxication of the hardest part of the job, there need to be spaces where he or she cares in a different way, is cared for, breathes, or simply forgets that he or she is a clinical psychologist (Skovholt & Trotter-Mathison, 2010).

### *Flexibility*

The PIR residency, with few exceptions, is a process of such emotional intensity that it will test the residents' capacity for adaptation to the limit, especially if they do not have adequate supervision and institutional support. Some data obtained with the NEO PI-R™ questionnaire, not published but advanced by Carreras (2022), indicate that the personality of PIR candidates who obtain a place, in general terms, is characterized by high scores in responsibility, in the facets related to perfectionism, and by a noteworthy tolerance to frustration. Incentivizing and encouraging the moderation of these performance tendencies may be very healthy for dealing effectively with the inconveniences and inconsistencies that occur daily in the SNS. Adaptive perfectionism, for example, involves accepting that mistakes and doubts are part of any learning process, that the important thing is the process, not the immediate result, and that the achievement of long-term goals involves resting and taking care of oneself. Perfectionism, on the other hand, can be maladaptive when it is rigidly oriented towards control or it covers the need to hide one's imperfections because it can hinder the natural process of making contact with one's own insecurity, vulnerability, or painful personal experiences that are inevitably activated when working with human suffering. Consequently, it can increase and maintain the emotional distress related to the residency (Thomas & Bigatti, 2020).

**Table 1.**
*Domains of self-care and possible strategies during residency.*

| Domain | Implications | Strategies |
|---|---|---|
| Self-awareness | Understanding the privileges and risks of being a mental health professional, adjusting expectations, reflecting on difficult experiences, monitoring one's own needs | Express and share difficulties with peers Seek and request supervisory spaces<br>Organize group activities such as Balint or DART in the teaching spaces.<br>Consider personal psychotherapy |
| Balance | Adequately distributing the time dedicated to personal and professional aspects | Perform activities not related to clinical psychology<br>Plan breaks and vacations<br>Spend time with family and friends |
| Flexibility | Adaptation to the complexity and work dynamics of the SNS, to unforeseen events, inconsistencies, frustrations and disappointments<br>Adaptive perfectionism | Set limits if excessive responsibilities are received<br>Learn to say no with assertiveness<br>Initiate stimulating projects<br>Accept that the world is not fair |
| Physical health | Well-being and body care, healthy habits | Take care of hygiene, sleep, food, exercise, check health status, do not work when sick, rest |
| Social support | Close relationships with people in the personal and work environment who provide appreciation and positive appraisal | Ask for help<br>Accept help from others<br>Cultivate personal and professional relationships<br>Join an association, participate in a community |
| Values and meaning | Sense of consistency<br>Noble values<br>Prosocial behavior | Cultivate introspection<br>Establish an individual and collective commitment<br>Be compassionate towards one's own mistakes and shortcomings and to those of others |

*Note.* DART = "Difficulties in Acquiring Role of Therapist" Group (Bolado, 2018).

### *Physical Health*

Any chapter of primary prevention includes among its recommendations the importance of healthy lifestyle habits covering aspects related to overall health care, such as maintaining minimum levels of hygiene, sleep, rest, food, exercise, etc. Yet it is not clear how many hours a week mental health professionals spend on these activities (Gimeno-Peón et al., 2023; Norcross & VandenBos, 2021). However, when practitioners with a long career history are questioned, they clearly indicate that maintaining a healthy lifestyle constitutes one of the pillars of their self-care (Thériault et al., 2015).

### *Social Support*

Like any human being, clinicians and especially residents need different sources of support, both personal and professional, that provide self-esteem and a positive sense of self. This point, in part, ties in with the domain of balance in terms of moderately calibrating sources of personal and professional social support. With regard to aspects related to the residency, the supervision of teaching collaborators, the figure of the tutor, and institutional support should all play an essential role here. However, our daily experience confirms—in convergence with the findings of the study by Thériault et al. (2015)—that perhaps the key factor is played by peers. Residents often form informal networks of mutual support, both within their own specialty and outside it, with other specialists in training, which serve as a space for accompaniment, emotional support, and peer supervision that ultimately contain and protect them from the stress associated with the process. It would perhaps be interesting to address and direct this natural process associated with the residency in an explicit way within the teaching spaces in group format, such as those focused on the Difficulties in Acquiring the Role of Therapist (DART; Bolado, 2018). Similarly, it is important to take care of these mutual support networks instead of favoring other dynamics related to peer competitiveness that may occur in highly demanding environments. In this context, the equanimous and equidistant role of tutors and teaching supervisors with respect to all their supervisees can act as a guarantor of equal access to the same opportunities. At this stage, they should stay away from dual or extraprofessional relationships that could favor or be interpreted as sympathies that would disregard the professional merit and ability (Pastor Morales & del Río Sánchez, 2018). Finally, participating in a community or getting involved in a professional association can facilitate contact with peers, reducing the risk of isolation and the feeling of loneliness, to create collective systems that serve as an umbrella for the containment of troubles derived from professional and organizational challenges (Posluns & Gall, 2020).

### *Values and Meaning*

Perhaps one of the great challenges for residents in the specialty of clinical psychology throughout the four years of FSE is to find a certain sense of coherence articulated in certain values and behaviors that, in our context, are part of a collective heritage that now has 25 years of official history (Royal Decree 2490/1998). Noble values such as the defense of the public sector, the priority of the rights of vulnerable people, the importance of multidisciplinary work versus corporatism, the preponderance of the collective over the individual, as well as the ethical and professional behaviors that derive from positioning oneself in this way, may be difficult to understand or assimilate in the current SNS which, due to more than a decade of cutbacks and the recent social and healthcare crisis, is at the worst moment in its history. It may even be at risk of being progressively dismantled over the coming decades (Lamata & Pérez, 2011). In this context, perhaps participating in the values and meanings that led to universal public health care and an FSE system of excellence could be an antidote to the suffering generated by the drift of our health care model. Basically, what is at stake is whether we adequately train specialists in clinical psychology who, with their knowledge, skills, and attitudes, situate themselves in an open constructive disposition in the health and social context in which they must participate responsibly to improve the health care of the population and of the SNS (Olabarría & García, 2011). Obviously, there may be other values, meanings, and behaviors that serve to find a sense of personal coherence that protects the health of the professional, but our proposal is to participate in a historical and collective process that transcends the individual.

## Discussion

Resident psychologists are specialists in training who, to a large extent, will be the specialists in clinical psychology that will serve citizens over the coming decades with an SNS designed to guarantee their right to receive specialized health care of the highest quality (Law 14/1986). Consequently, caring for them with the highest standards of quality and affection is not only an intelligent and sensible policy, but also represents a clear investment in the resilience of the system and in the mental health care of Spanish people (Ministerio de Sanidad [Ministry of Health], 2022a). Currently, most FSE programs are subject to review and updating by the national commissions of the respective specialties under the coordination of the General Directorate of Professional Management of the Spanish Ministry of Health. Therefore, practicing conscious and deliberate self-care is our ethical duty, if we want to continue to be able to provide the best possible treatment to our patients. For their part, the institutions should help and facilitate substantial improvements to the future training program of the specialty in clinical psychology—as well as updating its duration to 5 years—establishing a program where self-care and empirical knowledge on the development of the practice of psychotherapy are present throughout the program. Likewise, this program should establish the organizational mechanisms and guarantees that are necessary for the program to be implemented in the daily reality of the SNS.

At this precise moment, given the agenda established by the Ministry of Health in relation to mental health (Ministerio de Sanidad [Ministry of Health], 2022b), the planning and systematization of those formal and informal spaces that during residency contribute to cultivate the attitudes, competencies, and behaviors associated with the self-care of residents with the aim of facilitating satisfactory, functional, and lasting professional careers over time is of particular importance. Throughout this text, some of the main targets have been outlined regarding what a training program that cares and teaches self-care could look like. Without being exhaustive, we should be aware of our own needs, of the difficulty of working with vulnerable people or those with high levels of psychopathological disturbance, of the relevance of self-monitoring of the general state of health, of the balance between the personal and the professional, of the importance of working on

flexibility and the ability to adapt to changing environments, and of the orientation towards joining an association and the development of a sense of community that protects one from the isolation and loneliness that is intrinsic to this profession. Without forgetting that residency involves an identity process in which each person tries to find a personal meaning that balances his or her own principles, values, and ideals with the collective ethos that permeates the specialty. The residency is, in fact, an unrepeatable environment for cultivating introspection, learning from mistakes, sharing difficulties, gaining relational security, and getting involved in stimulating projects; that is, implementing self-care strategies if these are encouraged, taught, and facilitated. Providing spaces and opportunities for care in the training process and redefining self-care as an unavoidable learning need will not only allow residents to survive a period of considerable intensity, but also to become specialists that are more capable of helping patients, colleagues, and residents. There is enough empirical evidence and significant accumulated clinical knowledge to avoid leaving this chapter to chance, on the informal level, without ordering and structuring it in an adequate manner.

However, it is of little use to teach how to detect needs and to ask for help if there is not a reliable response adjusted to those needs. The role of the FSE tutor and teaching supervisors is of a transcendence that is not always taken into consideration or valued in its full dimension. Tutors and supervisors are the reference figures for residents and, consequently, the first example to be followed. If they take care of themselves and take good care of the residents that may be the best modeling available. They are partly responsible for fostering friendly, egalitarian, and non-competitive environments, overseeing relational dynamics, promoting reasonable schedules, and ensuring time for rest. Perhaps tutors and teaching supervisors should be required to have a higher curriculum for their accreditation and performance, but they should also be provided with real spaces, outside the healthcare agenda, for the supervision and teaching of residents. It cannot be ignored that the available information indicates that 54% of residents say that the supervision they receive is not sufficient or of the desired quality and that 32% directly underline that there are no formal spaces for supervision (ANPIR, 2022; Uhrig, 2021). The day-to-day dynamics, characterized by the collapse and overload of care in the SNS, cannot justify informal or "corridor" supervision. Improvement is non-negotiable and there is certainly no greater consensus among residents than that regarding the need to improve group teaching spaces and supervision.

In conclusion, the specialty in clinical psychology was a milestone for all psychology in this country and, now that it is 25 years old, with the updating of its training program currently under consideration, it deserves a rethinking in order to improve its social function and vocation of public service. Educating trainee specialists in caring for themselves in order to care for others, as well as in the best evidence-based health technologies, will surely serve to complete another 25 years of service to the community in good health. Likewise, it will provide the SNS with specialists who are sensitive to the needs of residents and perhaps establish a much-needed cycle of care in stormy times such as the ones we are currently experiencing.

## Conflict of Interest

The authors declare that they have no conflicts of interest.

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Article

# What Does Sexual Behaviour Encompass? Mapping Human Sexual Repertoire

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**ABSTRACT**

*Introduction:* For sciences applied to sexual behaviour, research has traditionally reported a wide variety of non-unified pools with a lack of a gold standard classification. Therefore, this work aimed to propose a comprehensive taxonomy. *Methods:* A broad model was developed under expert criteria using a thematic analysis of the literature. After that, a systematic review was conducted to test and extend it within the given conditions of unification. *Results:* 36 variables of actions and surrounding context were found and allocated in 5 groups: partner description, combinatory variables, objects associated, paraphilic behaviours and actual behaviours. 650 reports were screened, and 143 were fully assessed. Of them, one was finally selected to add to the previous model. *Discussion:* A comprehensive taxonomy was brought in, along with a method to expand and retest it if necessary. It is aimed to set a commonly shared framework of repertoires to enable valid comparisons among samples or individuals.

## ¿Qué Conductas Componen el Comportamiento Sexual? Mapeo del Repertorio Sexual Humano

***Palabras clave***
Conducta sexual
Repertorio sexual
Conducta humana
Investigación sexual
Mapeo de conducta sexual
Comportamiento sexual

**RESUMEN**

*Introducción:* Para las ciencias del comportamiento sobre la conducta sexual, tradicionalmente, la investigación ha expuesto conjuntos no unificados de repertorios en ausencia de clasificaciones fundamentales. Por ello, este trabajo trata de exponer una propuesta de taxonomía completa y fundamentada. *Métodos:* Se desarrolló una propuesta de largo alcance bajo criterio de expertos haciendo un análisis temático de la literatura. Después, se llevó a cabo una revisión sistemática para ponerla a prueba y extenderla. *Resultados:* Se encontraron 36 variables descriptivas de las acciones y el contexto inmediato, y se situaron en 5 grupos: pareja (descripción), combinatorio, elementos u objetos (asociados), conductas parafílicas y conducta sexual. Se revisaron 650 estudios de los que 143 se evaluaron en profundidad. Sólo un elemento fue incluido al listado final tras la revisión sistemática. *Discusión:* Se obtuvo una taxonomía general del comportamiento sexual humano. El objetivo de este mapeo es facilitar mejores comparaciones entre muestras o individuos basándose en un criterio de referencia unificado.

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Sexual behaviour, when not coerced, is widely recognized as more than simply a biological reproduction function, but mostly a leisure (Williams et al., 2020). Pursuing for pleasure in sexual activities, the mainly shared motive in Western populations (Wyverkens et al., 2018), conforms a common activity fulfilling human needs and increasing well-being (Berdychevsky & Carr, 2020; Diamond & Huebner, 2012; Satcher et al., 2015; Lehmiller et al., 2021; Xia et al., 2022).

Although traditionally addressed only by medical and health sciences (Williams et al., 2020), more recently, the positive effects on mental health of engaging in meaningful social leisure activities (Timonen et al., 2021) has led sexual behaviour to become the focus of multidisciplinary research, evolving the initial framework to a more complex and multidimensional one, including both leisure and health sciences (Williams et al., 2020).

In short, citing Williams et al. (2020, p. 9), "the integration of leisure and positive sexuality allows for a broad application of scholarship to diverse sexual issues (such as those related to identity, experiences, and preferences) across various structural levels that impact academics and professionals in medicine and healthcare, counselling and psychotherapy (…)".

## Volume of Research

Regarding this perspective, sexual behaviour is a broad and growing field of research. Just by looking up peer-reviewed articles containing "sexual behavior" in their title, abstract or keywords in PsycInfo database, limited to human subjects, without any other consideration such as "behaviour" (English or American writing) or any other related keyword like "sex experience" or "sexual attitudes", 59760 documents were found, with an increasing trend for almost every year over the last two decades (Figure 1). It is also possible to find more signs of the interest in this field as, for instance, "sexual experience", which is mentioned in 12044 reports in the same period. Indeed, it seems this area of study has been driving attention of many researchers.

## Motor Behaviour

For a good understanding of what researching on sexual behaviour means, a clear distinction must be set: in behavioural science, researchers are used to deal with cognitive and emotional variables, not subjects of direct observations, in order to try to relate them with behaviours which, in other words, are visible actions. Thus, variables such as appeals and consequences foreseen, other people´s opinions, and one´s ability of execution are often used to predict those actions, patterns of actions or habits (Sheeran et al., 2016).

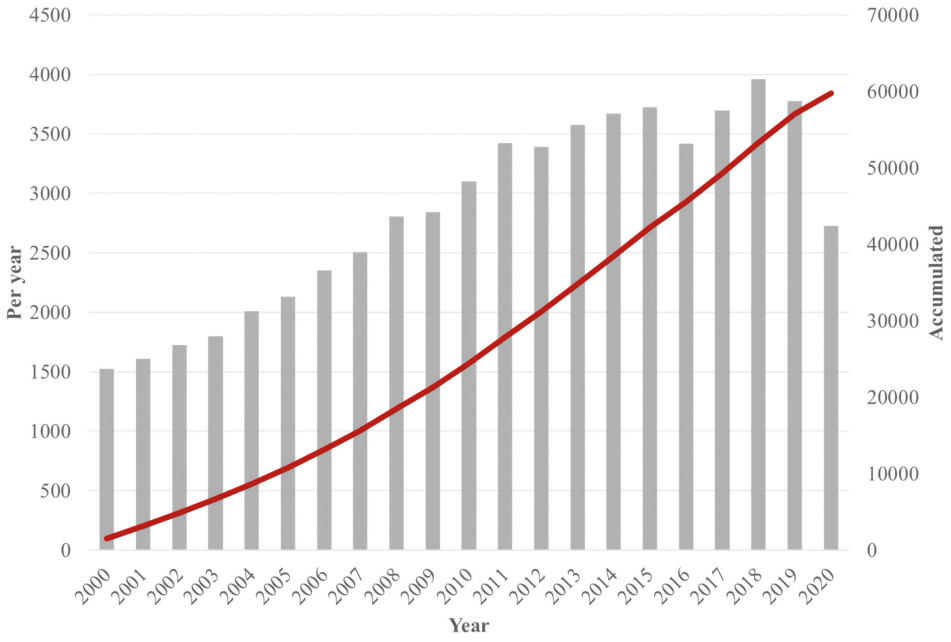
In fact, a general definition of behaviour, more specifically motor behaviour, is quite simple: it has been previously delineated as every kind of movement in every physical and social context (Adolph & Franchak, 2017). This includes every alternative of what subjects visibly do in the way they relate to the environment: "movements generate perceptual information, provide the means for acquiring knowledge about the world, and make social interactions possible" (Adolph & Franchak, 2017).

Thereby, the application of motor behaviour to sexual field must consider this "every movement" specifically oriented to erotic intercourse or sexual experience, taking here erotic and sexual as synonymous terms. Consequently, studying the repertoire of sexual actions, can be understood as a synonymous of mapping the compendium of those motor behaviours that are someway related to sexual experience.

## Research on Repertoire

Is it possible to describe the human potential repertoire of sexual behaviour? Initially, the answer must regard the high plasticity of

**Figure 1.**
*Search of peer-reviewed papers containing "sexual behavior" in their title, abstract or keywords. Extracted from PsycInfo database.*



actions moderated by cognition and appeals (Sheeran et al., 2016), which can result in a huge number of possibilities. Nevertheless, research on the field has already explored it for decades attempting to select the best items, although, to our information, unfortunately, this task has been done in a not standardized way.

Along the XX century, there were published some reports trying to carry out a wide description of sexual repertoire, such as the famous attempt to explicitly research on sexual behaviours conducted by Kinsey on males (Kinsey et al., 1949), and on females (Kinsey et al., 1998), which, despite its severe methodological problems (Cornel, 2021), constituted one of the most acknowledged examples of sexual studies, even to the point of naming an Indiana University research institute (Kinsey Institute, 2022), and inspiring a popular film (Mutrux, 2004).

Other contemporary researchers attempted to pool human sexual repertoire (Cowart & Pollack, 2011, firstly published in 1988; Zuckerman, 2011). All of them presented different considerations from Kinsey et al. (1949) but, unfortunately, it is not possible to find any mention or explanation about the method for constructing, checking or revaluating their proposals, apart from their own narrative review of the bibliography, illustrating the lack of integration of perspective and method until that date.

Back in early 2000s, another far-reaching project was intended to draw a picture of sexual behaviour and dysfunction in populations beyond 40 years old (Laumann et al., 2005; Laumann et al., 2006; Nicolosi et al., 2004; Nicolosi et al., 2006). In this case, when trying to look for the design of the survey, despite the title of Global Study of Sexual Attitudes and Behaviours, the authors did not provide information about any gold standard of sexual repertoire, not even the criteria used to elaborate it.

The same issue is observed in Lindau et al. (2007) study on sexual dysfunction, which informed about the criteria for classification of sexual problems, but did not the same with sexual behaviour, where only some variables were mentioned, all in absence of specific referenced standard.

Another example is the research published by Wylie (2009) to "identify the variety of sexual behaviours undertaken by adults across the world" (p. 39), where he presented a pool of twelve options without explaining the method or criteria for consideration and inclusion. Although the list could be a sensible proposal, the author did not provide any explanation of what the rationale was to consider that classification sufficient to summarize every possible action, maybe assuming sexual intercourse can be composed of just 12 choices.

More recently, the Wesche et al. (2017) search for latent category profiles analysed the appearance of cluster classes and their links to emotional intention and consequences, again, without a certain explanation of their reasons to choose that specific list of behaviours.

Those are just some of the most cited and acknowledged studies focused on the search of wide classifications. However, when looking into sexual repertoire, the large-scale national surveys conducted in Finland (FINSEX) (Kontula, 2009, 2015), in USA NHSLS (Lauman et al., 2001) and NSSHB (Herbenick et al., 2010), in UK (NATSAL) (Erens et al., 2021), and in Australia (ASHR) (Smith et al., 2003) are probably the most extensive and comprehensive cases.

They all include a large number of variables apart from specific actions, and also draw a detailed frame of sexual behaviour, selecting specific variables for each applied study, which, consequently, changes the pool used in every case. Despite this huge effort, in terms of their baseline substantiation, we found that all those projects did not consider the same pack of motor behaviours. In fact, Herbenick et al. (2017) uphold that their National Surveys of Sexual Health and Behaviour (NSSHB) has more items than United Kingdom's National Surveys of Sexual Attitudes and Lifestyles (NASTAL) (Erens et al., 2014; Erens et al., 2021) but less than Australian Survey of Health and Relationships (Richters et al., 2014). Eventually, as previous studies, they do not share the way they define actions and items, so some inconsistencies among them are found in the final sexual repertoire frame applied.

As we see, although sexual behaviour is a prolific field with a huge volume of studies, is still difficult to find consistent repertoires proposals under a common criterion in many studies, and it is possible to find reports not even mentioning any source (Hensel et al., 2008; Lehmiller et al., 2021; Shilo & Mor, 2020).

## Aims

For all aforementioned, this work was intended to 1) propose a map of motor sexual behaviours which allows to exhaustively record any erotic situation given, and 2) test it through a systematic review of field research studies, which is also set as a method for further revision and expansion of the proposal, if needed.

## Method

### *Map Structure*

There is a primary clarification needed to be addressed in the map structure construction: taking into consideration, for instance, the label "anal sex", it does not mention a real context behaviour. People perform or avoid anal sex in different contexts. Thus, other variables such as the number of people involved, the privacy of the venue, the characteristics of the partner or the number of partners, could elicit or block the action. Although "oral sex", another example, does not change its name when performed with a partner or a group of partners, the act and the situation is different enough in both scenarios to evoke unlike motivations among individuals. Therefore, a study about sexual behaviour, set of behaviours or repertoires must consider not only the main movement, but also the proximal context or, in other words, the surrounding significant variables which shape the action.

Under that consideration, elaborating a simple list or a complete repertoire can be an almost endless task, including every possible action with every possible partner or group of partners, objects, and combinations of behaviours. For that reason, the present work did not aim to elaborate a repertoire draft in a list format but in a map, or a chart used to include the significant variables that encompass all those possible situations and combinations previously found in the literature.

### *Method*

The present study was divided into two stages. In the first one, we gathered information through a narrative review to compose a preliminary plot of variables. The final proposal was discussed and agreed by all authors in a prior step to the testing phase. Subsequently, the second part consisted in the testing stage, when

a set of systematic searches were conducted to validate the preliminary map.

All the information found was analysed trough a thematic analysis (Braun & Clarke, 2006) and accepted only after consensus of all authors.

This method was chosen to take advantage of the highly developed state of the art on sexual behaviour. Instead of conducting a discovery stage, which could imply massive efforts to screen all the current reports, it was decided to benefit from a narrative review conducted by experts in the field who may draw a sensible picture of the repertoire. Anyway, the standardization comes in a second stage where the model must be tested, and a method is to be set, making available the reproduction and external checking of the results.

Finally, as the aim of the work is not to delineate relations or coefficients, but just a complete map of possible actions, the validation stage requires only to ensure that the plot proposed does not leave any situation given out.

### Inclusion Criteria and Labelling

There were not considered any attitudinal variable, in order to keep the information as clear as possible in the meaning of motor behaviour. Furthermore, in both stages, during the process of generating initial codes, searching for themes and reviewing the themes (Braun & Clarke, 2006), variables regarding proximal context were also included, as they provide with important information to record properly the sexual experience.

Hence, we finally defined and named 5 groups of variables to define the actions (Table 1) and the relevant proximal context to be able to distinguish every specific movement from another one similar, or even the same one preformed in a completely different scenario (Table 2). These groups included variables about partner´s description, combinatory aspects of the behaviour, actions, separated by specific movements and the ones defined as paraphilic (American Psychiatric Association, 2013), and also associated elements, which include objects, drugs or pornography content (Table 1).

All the variables included were reported in prior studies as part of sexual behaviour (Table 1). Nevertheless, we had some special considerations for the partner´s description variables after applying thematic analysis principles (Braun & Clarke, 2006).

Initially, we regarded these variables as dependent on the personal perception of each individual. Nevertheless, to sustain the definitions, we included only those variables chosen basing on a reference pointing out common patterns consistently identified through different subjects or samples. This is the case of body shape, studied under the proportion criteria for men and women (Price et al., 2013), or the strength appearance for men (Price et al., 2013; Sell, Lukazsweski & Townsley, 2017). The same criteria were applied with the term of gender expression, totally dependent of the subjective perception but possible to describe in a short of classification previously reported (Sandfort et al., 2021).

Finally, most of the references consulted (Table 1) addressed both emotional bond and stability of the relationship in the same label such as "married", "stable relationship" or "casual intercourses", this latter referring to events with partners without emotional bond and commitment. However, after our thematic analysis, we decided to divide bond and commitment into the two separated variables in order to get a more accurate description.

**Table 1.**
*Cluster, label and definition of every variable included in the review.*

| | | | Proximal contex | | | | | | | | | | | | | | | | Actions | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Partner | | | | | | | Combinatory | | | | | | Elements | | | Paraphilic behaviours | | | | | | | Behaviours | | | | | | | | | | | | |
| Nº | Authors | Year | Commitment | Emotional bond | Partner´s biological sex | Partner´s gender | Partner´s body shape | Partner´s age | Partner´s ethnic | Privacy of the venue | Comercial (pay/earn) | Solo practice | Couple practice | Group practice | Recieve/give | Sex toys/other elements | Drugs | Pornography | Exhibitionism | Fetishism | Non-consent contact | Masochism | Sadism | Travestism | Voayeurism | Observe | Show/tape/sexting | Role play | Seduction/sex talk | Non-genital contact | Masturbation | Oral sex | Coital sex | Anal masturbation | Anal oral sex | Anal penetration | Ejaculation/squirt | Defecating/peeing | Sum |
| 1 | American Psychiatric Association | 2013 | | | | | | • | | | | | | | | | | | • | • | • | • | • | • | • | • | | | | | | | | | | | 9 |
| 2 | Blanc et al. | 2018 | • | • | | | | | | | | • | • | • | • | | | • | | | | | | | | • | • | | | • | • | • | | | • | | | 13 |
| 3 | Brooks & Neville | 2017 | • | • | | | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| 4 | Couffignal et al. | 2020 | • | • | • | | | | | | | | | | • | | | | | | | | | | | | | | | | • | • | | | • | | | 11 |
| 5 | Cowart-Steckler | 1998 | | | | | | | | | | | • | | • | | | • | | | | • | • | | | • | | | • | • | • | • | • | • | • | | | 14 |
| 6 | del Río et al. | 2013 | • | • | • | | | | | | | • | | • | | | | • | • | | | | | | | • | | | • | | • | • | | | • | | | 11 |
| 7 | Döring & Poeschl | 2020 | | | | | | | | | | • | • | • | | • | | • | | | | • | • | | | | | | • | | | • | | | • | | | 9 |
| 8 | Frederick et al. | 2017 | • | • | | | | | | | | • | | • | • | • | • | • | | | | • | • | | | • | • | | • | • | • | • | • | • | • | | | 19 |
| 9 | Hannon et al. | 2011 | • | • | • | | | | | | • | | | • | | | | • | | | | • | • | • | • | • | • | • | | | • | | | | | | | 14 |
| 10 | Hensel et al. | 2008 | • | • | | | | | | | | | | | • | | • | | | | | | | | | | | | | • | • | • | • | | • | | | 9 |
| 11 | Herbenick et al. | 2020 | | | • | | | | | | | • | • | • | • | | | • | | | | • | • | | | • | | • | | | | | | | • | • | | 12 |
| 12 | Martín et al. | 2003 | • | • | | | | | | | | | • | | | | | | | | | | | | | | | | • | • | • | | • | | | • | | 8 |
| 13 | McBride & Fonteberry | 2010 | | | • | | | • | | | | • | • | | • | | • | • | | | | | • | | | • | | | | | | • | • | • | • | | | 12 |
| 14 | Mercer & Dermer | 2020 | • | • | • | | | | | | | • | • | • | • | • | | • | | • | | • | • | • | | • | | • | | • | • | | | • | • | | • | 20 |
| 16 | Price et al. | 2013 | | | | | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| 15 | Richters et al. | 2003 | • | • | • | | | | | | | | | • | • | • | | • | | | | • | • | • | | • | • | • | • | | • | • | | • | • | • | | 19 |
| 18 | Sandfort et al. | 2021 | • | • | • | • | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| 19 | Wang et al. | 2020 | | | • | | | | | • | • | | | • | | | | | | | | | | | | | | | | | | | | | • | | | 5 |
| 17 | Wesche et al. | 2017 | • | • | • | | | • | | | | | | | • | | | | | | | | | | | | | | | • | • | • | • | | | • | | 10 |
| | | Sum | 12 | 12 | 10 | 1 | 1 | 3 | 1 | 1 | 3 | 7 | 6 | 9 | 10 | 4 | 3 | 9 | 2 | 2 | 1 | 8 | 9 | 4 | 2 | 10 | 4 | 4 | 6 | 6 | 10 | 8 | 9 | 5 | 3 | 12 | 2 | 1 | |

### Stage 2

In the second phase, we conducted 3 systematic searches following PRISMA principles (Moher et al., 2010) adapted to the needs of our work (Figure 2). They were carried out in EBSCOhost database (PsycARTICLES, Psychology and Behavioural Sciences Collection, PsycINFO, PSICODOC), both in English and Spanish, including only articles published in peer-review scientific journals, focused on human population, no matter what age, with the search terms in the title and/or abstract.

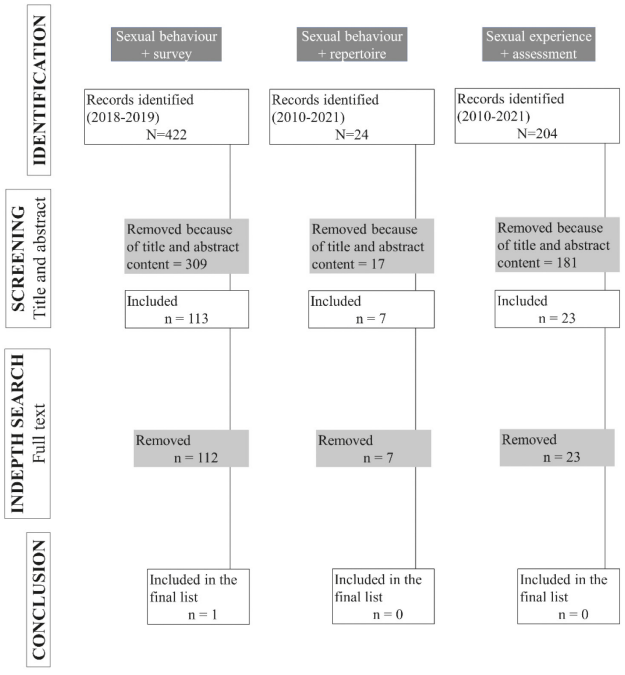
The first search included the terms "sexual behaviour" + "survey", from 2018-2021. The second one, oriented to the general pool, including "sexual behaviour" + "repertoire", from 2010 to 2021. Finally, the third was conducted with the terms "sexual experience" + "assessment", from 2010 to 2021.

As the objective of the study was not to review the evidence of each behaviour, but only to detect them, this search was not oriented to fully reference every item, but only to identify the ones reported in, at least, one sexual behaviour research. For this reason, to test the preliminary proposal, instead of recording all the information, the process required the continuous comparison between already contained variables or new ones. Then, we selected the reports containing behaviours which did not share exactly the same label on our proposal or were compounded by more than one of our variables, to be analysed trough thematic analysis (Braun & Clarke, 2006) and assessed for the inclusion.

The risk of bias of the present study lies in the selection of information from a non-unified pool of studies where each author describes verbally each action under their own criteria.

For that reason, the analyses consisted in applying the terms of the thematic analysis (Braun & Clarke, 2006) given 2 conditions: (coding and theme) the description of the behaviour along with the proximal context only in motor terms, and (analysis) the prospect to describe the same behaviour with the prior components.

**Figure 2.**
*Three-armed systematic search through PRISMA steps seeking for new sexual behaviours.*




### Results

After a screening of 650 papers, and an in-depth search in 146 previous studies (113 with terms: "sexual behaviour" + "survey"; 7 with terms "sexual behaviour" + "repertoire"; 23 with terms "sexual experience" + "assessment"), 1 variable was selected for inclusion in the final repertoire.

Then, the discussion led to add the privacy of the venue to the set, concluding that the rest of behaviours were already describable with the preliminary proposal.

Finally, with the decision of including one more variable (privacy of the venue), we obtained a preliminary version of a compilated map of human sexual motor behaviours with 36 items allocated in 5 groups, 3 for the context and 2 for the actions (Table 2).

This model is supposed to collect enough information to accurately describe any sexual conduct, allowing a description through a flow chart of 8 layers (Figure 3) corresponding with the five mentioned groups. They are, consecutively, 1) privacy of the venue, 2) commercial context, 3) number of people involved in the situation, 4) partner description, 5) direction of the action, 6) specific behaviour, 7) paraphilic behaviours, and 8) associated elements.

Of them, layers 1, 2 and 3 are context specifications of each scene, which constitute combinatorial elements, as number 5. Layer 4 gathers variables used for the description of the partner, and the eighth includes possibly associated objects or elements used in the specific behaviours. Finally, 6 and 7 were the specific motor action of the situation.

### Discussion

The aim of this paper is to bring in a systematic, exhaustive, and reviewable mapping of human sexual repertoire in terms of motor behaviour. Ideally, this compilation enables to allocate different behaviours in a sustained framework, and to compare them with a wide range of possible observations without the need of elaborating a complete list which, presumably, would be long and more difficult to handle.

There are two main reasons for why this study adds useful information. The first one is simple: in science, gathered knowledge is always suitable to be included in the framework of the field, and allows unification of perspectives for further works. We identified a gap in the basic rationale of several studies across different leisure and health areas, and proposed a piece of information along with the method to review it. As long as it achieves totally or partially the goals, is useful for the scientific knowledge by setting a standard where to consult and compare.

The second reason derives from the explanation of the first one. Sexual behaviour is a usual topic in human life and behavioural research, fact that may lead to the bias of avoiding exhaustive classifications by arguing common sense. Nevertheless, we expect more for scientific research. As we introduced, some papers do not mention sources or selection criteria (e.g. Hensel et al., 2008; Lehmiller et al., 2021; Shilo & Mor, 2020; Wesche et al., 2017; Wylie,

**Table 2.**
*Layer, label and definition of every variable included in the review.*

| References number* | Number of references | Layer | Label | Definition |
|---|---|---|---|---|
| 2,3,4,6,8,9,10,12,14,15,17,18 | 12 | Proximal context/partner | **Commitment** | Relationship steadiness in time |
| 2,3,4,6,8,9,10,12,14,15,17,18 | 12 | Proximal context/partner | **Emotional bond** | Emotional intensity of the relationship between partners |
| 4,6,9,1,16,14,15,17,18,19 | 10 | Proximal context/partner | **Partner´s biological sex** | Biological sex of the partner |
| 18 | 1 | Proximal context/partner | **Partner´s gender expression** | Gender expression in a masculinity-femininity scale |
| 16 | 1 | Proximal context/partner | **Partner´s body shape** | Body proportions/strength/appearance of the partner |
| 1,17,13 | 3 | Proximal context/partner | **Partner´s age** | Age appearance of the partner |
| 3 | 1 | Proximal context/partner | **Partner´s ethnic** | Ethnic physical characteristics of the partner |
| 19 | 1 | Proximal context/combinatory | **Privacy of the venue** | Sexual intercourse in public or private space |
| 9,13,19 | 3 | Proximal context/combinatory | **Commercial (pay/earn)** | Exchange of money due to the sex intercourse (pay/earn) |
| 2,6,7,8,11,13,14 | 7 | Proximal context/combinatory | **Solo practice** | Sexual experience alone |
| 2,5,7,11,12,14 | 6 | Proximal context/combinatory | **Couple practice** | Intercourse with one person |
| 2,6,7,8,9,11,14,15,19 | 9 | Proximal context/combinatory | **Group practice** | Intercourse with more than one person |
| 2,4,5,8,10,11,13,14,15,17 | 10 | Proximal context/combinatory | **Receive/give** | Combinatory feature referring to direction of the action |
| 7,8,14,15 | 4 | Proximal context/elements | **Sex toys/Other elements** | Use of objects such as specific toys or others to increase sexual arousal or in a specific behaviour |
| 8,10,13 | 3 | Proximal context/elements | **Drugs** | Drug use in sexual context or with sexual motivation |
| 2,5,6,8,9,11,13,14,15 | 9 | Proximal context/elements | **Pornography** | Consumption of any kind of audio-visual sexual content |
| 1,6 | 2 | Actions/Paraphilic behaviour | **Exhibitionism** | Showing the body or any sexual act to a person who does not expect to see it |
| 1,14 | 2 | Actions/Paraphilic behaviour | **Fetishism** | Experiencing special sexual arousal and acting on any specific object or element |
| 1 | 1 | Actions/Paraphilic behaviour | **Non-consent contact** | Touching or rubbing on a person who has not complied |
| 1,5,7,8,9,11,14,15 | 8 | Actions/Paraphilic behaviour | **Masochism** | To be humiliated, tied, hit or any other kind of pain or suffering in sexual context |
| 1,5,7,8,9,11,13,14,15 | 9 | Actions/Paraphilic behaviour | **Sadism** | Humiliating, tying, hitting, or causing any other kind of pain or suffering in sexual context |
| 1,9,14,15 | 4 | Actions/Paraphilic behaviour | **Transvestism** | Dressing up with clothes commonly regarded as not typical of people in own biological sex |
| 1,9 | 2 | Actions/Paraphilic behaviour | **Voyeurism** | Hiddenly observing people nude or in sexual intercourse |
| 1,2,5,6,8,9,11,13,14,15 | 10 | Actions/Behaviour | **Observe** | Act of staring purposely any erotic scene or content |
| 2,8,9,15 | 4 | Actions/Behaviour | **Show/tape/sexting** | Act of showing, live or recording, the body and/or any sexual behaviour with erotic intention |
| 9,11,14,15 | 4 | Actions/Behaviour | **Role play** | Any action of performing and/or dressing pretending to be a determined character in a seduction situation or sexual intercourse |
| 5,6,7,8,12,15 | 6 | Actions/Behaviour | **Seduction/sex talk** | Any interaction oriented to seduce or increase the sexual arousal |
| 5,8,10,12,14,17 | 6 | Actions/Behaviour | **Non-genital contact** | Any physical contact not focused on genitals oriented to increase sexual arousal |
| 2,5,6,8,9,10,12,14,15,17 | 10 | Actions/Behaviour | **Masturbation** | Any manipulation of genitals |
| 2,4,5,6,8,10,15,17 | 8 | Actions/Behaviour | **Oral sex** | Any oral contact with genitals |
| 2,4,5,6,7,8,10,12,17 | 9 | Actions/Behaviour | **Coital sex** | Act of vaginal penetration (coitus) |
| 5,8,13,14,15 | 5 | Actions/Behaviour | **Anal masturbation** | Any anal manipulation |
| 5,13,15 | 3 | Actions/Behaviour | **Anal oral sex** | Any oral contact with anus |
| 2,4,5,7,8,10,11,13,14,15,17,19 | 12 | Actions/Behaviour | **Anal penetration** | Act of anal penetration (anal coitus) |
| 11,12 | 2 | Actions/Behaviour | **Ejaculation/squirt** | Any act of ejaculating or squirting |
| 14 | 1 | Actions/Behaviour | **Defecating/peeing** | Any act of defecating or urinating with sexual motivation |

* Reference numbers are extracted from order in table 1.

2009), and others validate their choices in the light of their own data without a cited gold standard (Erens et al., 2021; Laumann et al., 2005; Richters et al., 2014). With this review, we propose a framework, for those repeatedly mentioned panels of expert who select behaviours for different research, to be able to not only rely on their advanced knowledge but also in a referenced and reviewed classification.

In that sense, despite the fact that the objective of the present study is not to assess the validity and scope of all those short and large-scale projects introduced, this discussion brings up the question of adequacy of the repertoires, which are often different in extension and inclusion (Table 1) (Herbenick et al., 2010).

Thereby, the absence of a common framework impedes in some term to draw parallels between populations. In psychopathology, for example, it is widely acknowledged that symptoms are backed up by an exhaustive classification of symptomatic behaviours related to each other, which are, likewise, based in studies that enable them to enter that frame, and are constantly revisited. Then, we can compare a psychopathological action given within a validated group of actions.

However, in sexual behaviour we have not been able to find out any short of complete list, map, flowchart or cluster proposal. Under the argument of its intrinsic difficulty, it has been ignored. Thus, can we really develop models and rely on the coefficients without been totally sure of the extension of our surveys?

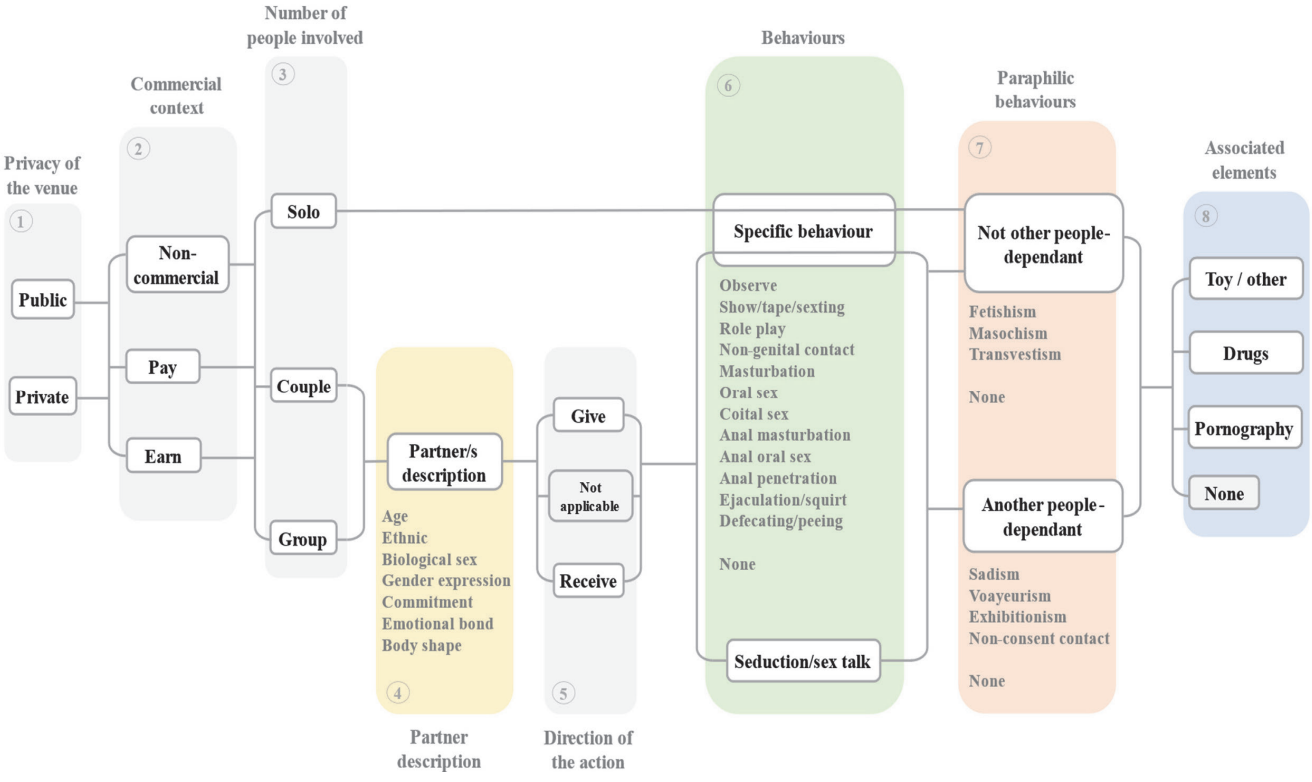
Although, we insist, it is not the objective of the present report to globally assess the quality of the national-scale surveys FINSEX (Kontula, 2009, 2015), NHSLS (Lauman et al., 2001), NSSHB (Herbenick et al., 2010), NATSAL (Erens et al., 2021) and ASHR (Smith et al., 2003), we still have the feeling of lacking information about the baseline selection of specific behaviours, and the consistency among projects in labelling, choosing and defining. Indeed, Herbenick et al. (2017) mention item differences among those surveys.

Furthermore, we uphold as another contribution of our work the contextual consideration of the behaviours. For example, in terms of motor behaviour, a man masturbating himself alone in a private venue is not equal than a man masturbating in group in a public venue and showing it to people who do not expect to see it. Evidently, it is possible to describe that scene in separated labels although the motor act of the person is, indeed, the same action. This example perfectly draws the importance of pointing out the proximal context because it allows a precise comparison and a proper distinction.

As explained above, we included four layers to describe the eliciting variables (1, 2, 3, 4 in Figure 3) one more for the use of associated elements or objects for the sexual behaviour (8 in Figure 3), another for the direction of each action, if necessary (5 in Figure 3), and two of specific behaviours which constitute the nuclear information of every scene traditionally mentioned isolated.

Then, different strategies can be used to inform about the full situation, such as following the path (Figure 3) for every conduct in a specific date, or reporting about each category for a scene given, where more than one option can be chosen. It is also possible

**Figure 3.**
*Flowchart of the taxonomical classification of variables included in the definition of sexual behavior.*



to gather information about avoiding trends or motivational experience for every variable, or simply answer about variables experienced. The main point is that, under this criterion, every report can be delimited and explained within same conditions given, and every subject can be assessed within the same full set of categories, enabling then good comparisons between studies and accurate description within a broad scope.

If a group of authors consider a specific set of behaviours for their research, they should provide either an exhaustive screening of possible situations, or an explanation or reference for why they select only a shorter list of them. Otherwise, the limitation of cherry-picking ones and not the others should be indicated.

We conclude that following this path and applying it to new studies is a suitable way to standardize sexual research and allow a deeper understanding of human sexual behaviour.

## Conclusion

With the present work, we report how we developed, referenced, defined, and preliminary tested a useful taxonomy of human sexual behaviour, along with the method to increase the quality of sexual research and address the methodological issue traditionally avoided.

This result, anyway, is not a closed form, but a dynamic framework susceptible to review, redefine and retest in order to get improvements and to assure the exhaustiveness of the data collected.

## Limitations

A preliminary search of "sexual behaviour" in EBSCOhost database (PsycARTICLES, Psychology and Behavioural Sciences Collection, PsycINFO, PSICODOC), in both English and Spanish and including only articles published in peer-review scientific journals focused on human population, no matter what age from 2000-2021, turns up in 59760 papers. This is only regarding the last twenty years, and by far is not all of the sexual behaviour research, so we discuss that the final validation of our classification requires a huge effort to compare with several sources and ensure about the complexity of the final outcome.

We began from an expert panel consideration of sexual behaviour alongside with the references needed, and a preliminary testing stage afterwards, so that we could get to a renewable model which is susceptible of amendments for a robust outcome. Our proposal contains what we considered necessary to present a preliminary version but, anyway, we regard the importance of further research to validate it completely.

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## Conflicts of Interests

The authors declare not having conflicts of interests.

## Authors Contribution

All authors contributed to the study conception and design, and approved the final manuscript.

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Article

# Emotional Experience and its Biological Underpinnings: Improving Emotional Well-Being Through Vagal Tone

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**ABSTRACT**

The main objective of this study is to present knowledge on the biological underpinnings of emotional experience and on the possibility of improving emotional well-being by increasing vagal tone. Vagal tone is considered an indicator of emotional experience. An emotional experience is conceived as a dynamic process in which an emotional reaction and the ability to regulate the emotional reaction interact. Through heart rate variability biofeedback interventions focusing on breathing and through transauricular vagus nerve stimulation, it is possible to increase the vagal tone in a way that improves the emotional state.

## Experiencia Emocional y sus Fundamentos Biológicos: Mejorando el Estado Emocional a Través del Tono Vagal

***Palabras clave***
Emoción
Fundamentos biológicos
Tono vagal
Variabilidad de la frecuencia cardíaca

**RESUMEN**

El objetivo principal de este trabajo es el de recopilar conocimiento sobre la base de los fundamentos biológicos de la experiencia emocional y sobre la posibilidad de mejora del bienestar emocional a través del aumento del tono vagal. El tono vagal es considerado un indicador de la experiencia emocional. Y la experiencia emocional es concebida como un proceso dinámico donde interaccionan la propia reacción emocional y la capacidad de regular la reacción emocional. Mediante las intervenciones en biorretroalimentación de la variabilidad de la frecuencia cardíaca centradas en la respiración y mediante la neuroestimulación transauricular del nervio vago es posible aumentar el tono vagal de forma que se mejora el estado emocional.

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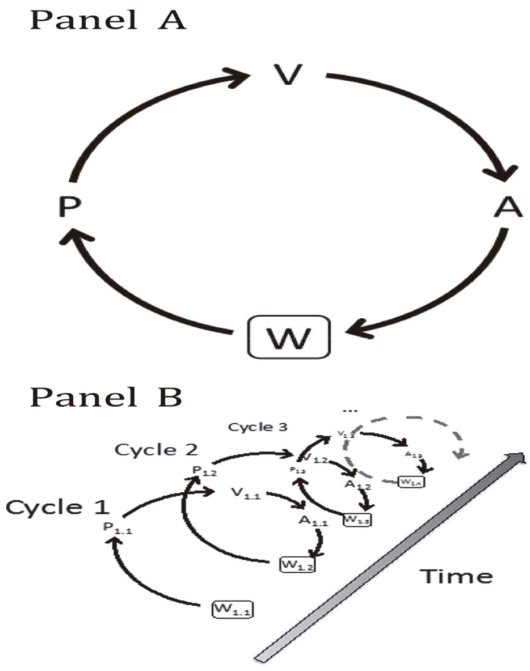
The importance of this work lies in the importance of the emotional experience for survival (Darwin, 1872; LeDoux, 2012) and for the adequate psychosocial development of human beings (Borges & Naugle, 2017; Pleeging et al., 2019). When the emotional experience is deficient or when it is not adequate to the situational demand, it becomes a problem for adaptation (Aldao et al., 2010; Colombo et al., 2020). The emotional experience takes place in the very organism of the person who experiences it (Blair & Diamond, 2008; Raz et al., 2016). For this reason, we consider that, together with the knowledge of the characteristics of the process of emotional experience, it is essential to understand its biological foundations in order to facilitate resources for the improvement of the emotional state based on its foundations.

## The Emotional Experience

The emotional experience is the dynamic result of the interaction between the emotional reaction and emotional regulation (Ochsner et al., 2012; Ochsner & Gross, 2014). In the *Process Model of Emotion Regulation,* hereafter PMER- (Gross, 2015) and based on the World-Perception-Perception-Valuation-Action (*hereafter,* W-PVA) framework of Ochsner & Gross (2014), the activation of the emotional experience occurs in a certain *world* (W) with the activation of *perception* (P). In this initial *perception* stage, sensory inputs are encoded for their *valuation* to take place (V). *Valuations* are made by an overlapping set of brain systems. And three types of *valuations* are differentiated located on the cognitive processing continuum. At the most basic level, there are *basic valuations* which represent relatively direct associations between perceptions and the valence given to them. At the intermediate level, *contextual valuations* refer to evaluations about stimulus-response relationships that are made based on three categories of information: the subject's history, the social context, and the subject's motivations. Finally, at the most complex cognitive level, there are *conceptual valuations,* which represent abstract valuations about different stimuli and realities. And at the level of activated valuation, emotion is generated. In turn, on any level of *valuation* (V) the *action* (A) is activated, which can be either mental (for example, a memory) or belonging to the organism (for example, an increase in heart rate). The actions generated have consequences on the surrounding reality, on the world (W). In turn, the changes generated in the world (W), will again affect the P, and this again affects the V, which will also affect the A again. Emotional experience occurs longitudinally over time on the basis of the aforementioned interdependencies. And the W-PVA cycle will cease when the emotional experience ends (Figure 1).

Also in PMER theory (Gross, 2015), the emotional experience is defined as the processual result of the interaction between the emotional reaction and emotional regulation. The emotional reaction is automatic (Behnke et al., 2022), whereas emotional regulation is conscious and refers to the efforts we subjects make to change our own emotions (Gross & Thompson, 2007). Adequate emotional regulation allows us to regulate our own emotional reactions in order to also be able to manage our own discomfort (Goldin et al., 2019; Uccula et al., 2020). In PMER theory, emotional regulation is composed of three stages: *identification, selection,* and *implementation*. *Identification* corresponds to the

**Figure 1.**
*Perception-Valuation-Action Framework (PVA)*




Panel A: The world (W) provides information to the perception (P). The valuations (V) that are made result in different actions (A) which can alter the situation of the world (W).
Panel B: the process occurs over time (Adapted from Ochsner & Gross. 2014).

stage in which the subject who is experiencing the emotional 'to the W-PVA cycle, the *perception* phase (P) corresponds to detecting the experience of emotion; the *valuation* phase (V) corresponds to evaluating whether the emotional reaction being experienced is sufficiently positive or negative to activate regulation; and the regulation itself occurs in the *action* phase (A).

## Biological Foundations of Emotional Experience

Based on neuroimaging findings, Etkin et al. (2015) have distinguished different neuroanatomical areas related to the processes of emotional response and emotional regulation. Thus, in relation to experiences of emotional reaction, the areas involved are as follows: on the one hand, the subcortical system composed of the amygdala, the ventral striatum, and the periaqueductal gray matter; and, on the other hand, a set of cortical regions including the anterior insula and the anterior dorsal cingulate (Beissner, et al., 2013; Costafreda et al., 2008; Etkin et al., 2015). The variety of information encoding that occurs in these structures explains, in part, the cognitive, subjective, motor, and physiological multidimensionality of emotional experience. Each structure processes information at different levels. For example, the central regions of the limbic system—such as the amygdala, ventral striatum, and periaqueductal gray matter—process simple motivational features of a stimulus, such as the threat we feel from a large spider; and the cortical regions, such as the insula, provide additional interoceptive information.

From an evolutionary point of view, the brain areas characteristic of prototypical adult emotional experience are the result of evolutionary development (Decety et al., 2011; Diamond, 2002;

Michalska et al., 2013; Thomas et al., 2017). In such development the human brain presents a prolonged heterogeneous maturation, whose development follows a rostral caudal direction, a prior development from phylogenetically older structures towards more recent ones directed from areas of low neuronal expansion towards those of high expansion. Thus, certain areas of the cerebral cortex, being characteristic of the areas of long expansion and phylogenetically more recent, are the ones that present a more prolonged development as occurs with the prefrontal cortex (Aubert-Broche et al., 2013) whose interneurons are the last neurons to mature (Lagercrantz, 2016). Thus, from an evolutionary perspective, the early postnatal years are an exceptionally dynamic and critical period of structural, functional, and connectivity development of the human brain (Haartsen et al., 2016; Li et al., 2019). Over approximately the first two decades, the process of synaptogenesis will widen the cortical columns and through the process of myelination the processing speed of multiple brain areas will be enhanced (Dehaene-Lambertz & Spelke, 2015). It has also been observed how the amygdala, together with the posterior part of the insular cortex, exerts a strong influence on emotional processing in childhood, the consequence of which is that children tend to experience emotional reactions more intensely than in adulthood (Casey et al., 2005; Silvers et al., 2016, 2017).

### Vagal Tone: an Indicator of Emotional Experience

Having differentiated emotional reaction and emotional regulation both as autonomous (and interdependent) processes and as processes located in different brain areas which develop throughout the evolutionary development, we will now focus on the vagal tone indicator.

Porges (1992) defined cardiac vagal tone as a physiological measure of stress, and he equated high vagal tone with high heart rate variability (*hereafter* HRV) and an experience of homeostasis with positive emotional valence; conversely, low vagal tone implies low HRV and a stressful experience with negative emotional valence (Porges, 2022). HRV is also defined as the average time between heartbeats (Task Force, 1996).

In polyvagal theory (Porges, 2007, 2009) it is considered that the origin of emotional reactions is found in the automatic and non-conscious perception that the autonomic nervous system performs based on perceived *safety*, *risk,* or *extreme risk.* Based on this theory, the autonomic nervous system is hierarchically organized on the configuration of the vagus nerve. The vagus nerve has multiple innervations and connections to much of the organism (Berthoud & Neuhuber, 2000; Neuhuber & Berthoud, 2021). And structurally the vagus nerve is composed of the ventro-vagal branch and the dorso-vagal branch; the dorso-vagal branch has no myelin and is phylogenetically the oldest; while the ventro-vagal branch has myelin and is phylogenetically the most recent (Gourine et al., 2016, Porges, 1995). Both complexes together with the sympathetic-adrenal axis, characteristic of the sympathetic nervous system, make up the three neurobiological circuits of the autonomic nervous system (Porges, 2022).

The ventro-vagal complex (VVC) or myelinated vagus is activated when the organism perceives security. Its center is located in the nucleus ambiguus (NA) and its innervations are directed to supradiaphragmatic areas. From the ventral area of the NA, it exchanges information with the nucleus of the solitary tract (NST), with some cranial nerves and with the sinoatrial node of the heart. The NST establishes connections with the hypothalamus, the limbic system, the periaqueductal gray matter, the amygdala, and different parts of the cortex (Berthoud & Neuhuber, 2000). In relation to the cranial nerves in the NA there are also several innervations of the glossopharyngeal nerve and the facial nerve. As a result of the automatic activation of the ventro-vagal complex, the face and voice show prosocial patterns such as, for example, a smile and a pleasant tone of voice (Porges, 2004). And in relation to the sinoatrial node, at the cardiac level the myelinated vagus is an inhibitor of the sympathetic system, which functions as a brake enabling a rapid slowing of the heart rate and an increase in HRV (Porges, 1995). Thus, the emotional reaction generated in the organism is characteristic of a state of well-being.

When the organism automatically detects risk, the influence of the ventral vagus disappears, and the sympathetic-adrenal system is activated. The sympathetic-adrenal system is part of the sympathetic nervous system and is considered an adaptive mobilization system that supports fight-flight behaviors; this, together with the perception of risk, is associated with a withdrawal of the parasympathetic influence of the ventro-vagal complex (Porges, 2004, 2022). Thus, when the organism processes risk, the parasympathetic influence of the heart is deactivated, and the sympathetic-adrenal system is activated. The sympathetic influence on heart rate is mediated by the release of epinephrine and norepinephrine (Kim et al., 2018). The beta-adrenergic receptors are activated upon the release of these hormones resulting in cAMP-mediated membrane protein phosphorylation (Brown et al., 1979). Thus, in the absence of the influence of the ventral vagus on the sinoatrial node and as a consequence of activation of the sympathetic-adrenal system, heart rate increases and HRV decreases. And although the blood-brain barrier prevents epinephrine from acting on cognitive functions (Weil-Malherbe, 1959), beta-adrenergic receptors in the vagus nerve allow the reuptake of norepinephrine in the brain (Chen & Williams, 2012; Noble et al., 2019), supporting the experience of stress more solidly and thus the functioning of cognitive functions is subordinated to amygdalar functioning (Arnsten et al., 2015). The emotional reaction generated is typical of a state of emotional distress.

Finally, when extreme risk is detected, the dorsal-vagal complex (DVC) or unmyelinated vagus is activated, which mainly innervates subdiaphragmatic areas. The neurobehavioral functions of this complex are immobilization or passive adaptations that include apparent death and loss of consciousness (Porges, 2007). Thus, the emotional reaction generated will be related to the characteristics of emotional shock.

The validity of the heart rate and HRV indicator is based on the fact that ventral vagal efferents are cardioinhibitory and synapse in the sinoatrial node of the heart (Goggins et al., 2022). When myelinated ventral vagal fibers of the NA are activated through their parasympathetic influence on the sinoatrial node, they reduce heart rate by increasing the time between heartbeats, increasing the HRV as an indicator of high vagal tone. However, when risk is detected, the parasympathetic influence of the vagus ventral to the sinoatrial node disappears, producing an increase in heart rate, a reduction in vagal tone and HRV. The activation of the sympathetic-adrenal complex generates stressful emotional experiences

characteristic of low vagal tone (Porges, 1995, 2022). This is why HRV is also considered a biomarker of stress with which it maintains an inverse relationship: the higher the HRV level the lower the stress, and the lower the HRV the more the stress (Balzarotti et al., 2017; Goessl et al., 2017).

Regarding the experience of the emotional reaction and its evolutionary development, given that our starting assumption is that the genesis of every emotional reaction is related to the experiences of security, risk, and extreme risk (Porges, 1995, 2022), we should mention that from the moment of birth the human being possesses the adequate functionality of the neurobiological circuits of the ventro-vagal complex, the sympathetic-adrenal axis, and the dorsal-vagal complex. However, given that the brain is immersed in its evolutionary development process, the different brain areas mentioned in the postulates of polyvagal theory do not possess throughout childhood and adolescence the sufficient maturity required for their adequate performance. Nevertheless, the connection from the ambiguous nucleus of the vagus nerve to the sinoatrial node of the heart is fully developed, so we can consider that the validity of the HRV is justified. Thus, throughout the ontogenetic development, with the exception of pathological states, a reduction in HRV will imply the experience of emotional realities characteristic of the fight-flight system of the sympathetic autonomic nervous system, while an increase in HRV will make possible the experience of emotional realities close to the state of well-being and security characteristic of the activation of the myelinated vagus nuclei of the NA (Porges, 2022).

Based on this knowledge, two types of interventions aimed at increasing HRV in order to provide emotional well-being will be described below.

## Interventions to Increase Vagal Tone

Biofeedback is a widely used method to train and educate people in the skills of voluntary control of some physiological functions, such as breathing, which consists of providing users with instantaneous information on the variations that occur in their own physiological activity (Schwartz & Andrasik, 2003).

Thus, through HRV biofeedback programs and by practicing relaxed breathing subjects learn to breathe in a way that increases HRV (Kiselev et al., 2016). In this regard, it has been observed that a breathing-focused HRV biofeedback teaches people to breathe at a rate of approximately six breaths per minute (Karavaev et al., 2013).

HRV biofeedback can be performed by fitting a person with a device that connects to a computer and provides real-time feedback on their HRV. By observing the impact of breathing on HRV in real time, they learn to breathe—through trial and error and feedback—thus improving their HRV values.

Various HRV biofeedback interventions focused on breathing have increased the values of participating HRV subjects in both adult (Aritzeta et al., 2017; Goessl et al., 2017; Lantyerm et al.,2013) and child populations (Aranberri Ruiz, et al., 2022; Aritzeta et al., 2022; Jones et al., 2019; Rush et al., 2017).

As an emerging neuromodulation therapy, transcutaneous auricular vagus nerve stimulation (*hereafter* taVNS) has been shown to be safe and effective for major depressive disorders, insomnia, and anxiety (Wang et al., 2022). This procedure is now CE marked (European Community Conformity Mark) for depression and anxiety (Farmer et al., 2020). And in January 2022 the *United States of Food and Drug Administration* (FDA) granted ElectroCore's noninvasive vagus nerve stimulator (nVNS) designation as an innovative device for treating post-traumatic stress disorder (PTSD).

The mechanism of action of this procedure is as follows: the external ear is the only site to which the vagus nerve sends its peripheral branch, the auricular vagus nerve (Trevizol et al., 2015; Goggins et al., 2022). From the auricular pathway of the nerve the fibers project to the nucleus of the solitary tract (NST) (Farmer et al., 2020). Neuronal anatomy has shown that the auricular branch of the vagus nerve projects to the NST which in turn is connected to other brain regions, such as the locus coeruleus, parabrachial nucleus, hypothalamus, thalamus, amygdala, hippocampus, anterior cingulate cortex, anterior insula, and lateral prefrontal cortex (Beekwilder & Beems, 2010). The NST is the source nucleus for all vagal afferents and its stimulation affects both lower motor neurons in the brainstem and upper motor neurons in the cerebral cortex (Komisaruk et al., 2022; Porges, 2007). Within the medulla, the NST projects directly to the dorsal motor nucleus (DMN) of the vagus nerve and to the nucleus ambiguus (NA), from where preganglionic parasympathetic efferents to visceral organs originate (Frangos et al., 2015). In turn, from the NST, signals will be sent to the ventrolateral caudal nuclei of the medulla, which will send information to the ventrolateral rostral nuclei, which through the intermediolateral cell columns reduce sympathetic influence (Butt et al., 2020). Thus, through parasympathetic influence on the heart with taVNS, HR will be reduced and HRV will be increased.

Although in one intervention the relationship between HRV and taVNS has been questioned (Wolf et al., 2021), in different investigations a robust relationship between taVNS and increased HRV is observed (Antonino et al., 2017; Bretherton et al., 2019; Clancy et al., 2014; De Couck et al., 2017; Sclocco et al, 2019).

## Conclusions

Both biofeedback interventions of HRV focused on breathing, as well as the taVNS through different mechanisms of action generate an increase in HRV in the organism, which implies an increase in vagal tone, typical of emotional states with positive valence related to states of security that generate experiences of emotional well-being (Porges, 2022).

The therapeutic potential of the two interventions is justified both by the knowledge of the biological bases addressed throughout this work, as well as by the understanding of the PMER Theory and W-PVA cycle mentioned above. By means of both procedures, *actions* (A) are generated in the organism that make possible an increase in HRV, generating in turn a safer *world* (W) where emotional experiences have greater emotional wellbeing.

On the one hand, by means of biofeedback of HRV, the subjects, infants (for the aforementioned reasons of evolutionary development, mainly from 7 years of age), adolescents, and adults learn to breathe at a rate of approximately 6 breaths per minute in such a way that this learning makes it possible to improve their emotional well-being. Thus, after the intervention, the subjects are able to breathe in a way that increases their own HRV and their own psychological well-being (Aranberri Ruiz et al., 2022; Aritzeta et al., 2022). Therefore, when such subjects are immersed in an emotional reality of low HRV, typical of states of emotional

discomfort, after *identifying* their own state of emotional discomfort, they will be able to *select* and *implement* the learned breathing pattern automatically to increase their own HRV values and thus approach a state of emotional well-being.

On the other hand, through taVNS, even though no emotional self-regulation procedure is taught to the subject, the professional trained in the use of taVNS provides the intervening subject with an increase in HRV, making a better emotional state possible. That is, this procedure, like the biofeedback mentioned above, affects the subject's *world* (W) through the *actions* (A) of increased vagal tone carried out, this time not by the subject him- or herself, but by the trained professional.

## Conflict of Interest

There is no conflict of interest.

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Article

# Interoception in Emotional Processing: From Sensation to Psychopathology

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**ABSTRACT**

The perception of body changes, defined as interoception, is a key element in current research. The present review article aims to characterize the role of interoception in emotional processing. First, we describe the main interoceptive models and their measurement methods. Then, we delimit in a general way the mechanisms of atypical interoception. The results indicate that research in the area has not been systematic, which has led to the widespread practice of extending the definition of interoceptive as "not exteroceptive". It has also, in a more restricted way, been described as simply a physiological pathway. This has led to the measurement of interoception having certain limitations that must be resolved wherever possible. Finally, it is concluded that atypical interoceptive mechanisms are a common factor related to the symptomatology present in different emotional disorders such as alexithymia, depression, anxiety, and somatic disorders.

## La Interocepción en el Procesamiento Emocional: de la Sensación a la Psicopatología

***Palabras clave***
Interocepción
Emociones
Trastornos psiquiátricos
Alexitimia
Depresión
Ansiedad

**RESUMEN**

La percepción de los cambios del cuerpo, definido como Interocepción, es un elemento clave dentro de las investigaciones actuales. El presente artículo de revisión, tiene como objetivo caracterizar el rol de la Interocepción en el procesamiento emocional. Primero, describimos los principales modelos interoceptivos y sus métodos de medición. Luego, delimitamos de forma general los mecanismos de la Interocepción atípica. Los resultados indican que la investigación en el área no ha sido sistemática, por tanto, la definición de lo interoceptivo ha sido lo "no" exteroceptivo. También la medición del concepto ha tenido limitaciones que deben ser resueltas en la medida de lo posible. Finalmente, se llegó a la conclusión de que los mecanismos interoceptivos atípicos son un factor común que se relaciona con la sintomatología presente en diferentes trastornos emocionales tales como la alexitimia, depresión, ansiedad y trastornos somáticos.

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## Introduction

Cognitive neuroscience as an interdisciplinary approach has made enormous progress in understanding the neural basis of cognition and behavior in relation to the world. External stimuli, perceived and integrated by our nervous system, correspond to the exteroceptive system. But much of the sensory information processed by our system originates inside our body (interoception), which is not attributable to an external agent, thus generating two different sensory fields. It has also been accepted that interoception is the antonym of the external. In the sensory domain, that which is "external" encompasses the primary sensory systems of vision, hearing, smell, taste, and somatosensation (See Figure 1). The way these external perceptual processes have been defined has to some extent affected the functioning attributed to the interoceptive system, which can represent our internal world (Chen et al., 2021). Because of this, the label of "interoceptive" has yet to have an overarching concept (Ceunen, Vlaeyen, & Van Diest, 2016). The relevance of this issue is that a more inclusive meaning may involve this term across a spectrum of different areas of psychology and health. Within these areas, there is certainty of the existence of brain-body connections, along with the neural circuits underlying the dynamic interactions between the nervous and peripheral systems (Craig, 2002). However, a new review on this topic is occurring at a human/clinical research level. The present article considers current debates in interoception and aims to produce a broad overview of the research in this area, defining and delimiting its dimensions. It also seeks to review elements of interoceptive processing, measurement methods, to finally characterize the role of interoception in emotional processing.

## Interoception: Characterization and Measurement

### *What is Interoception?*

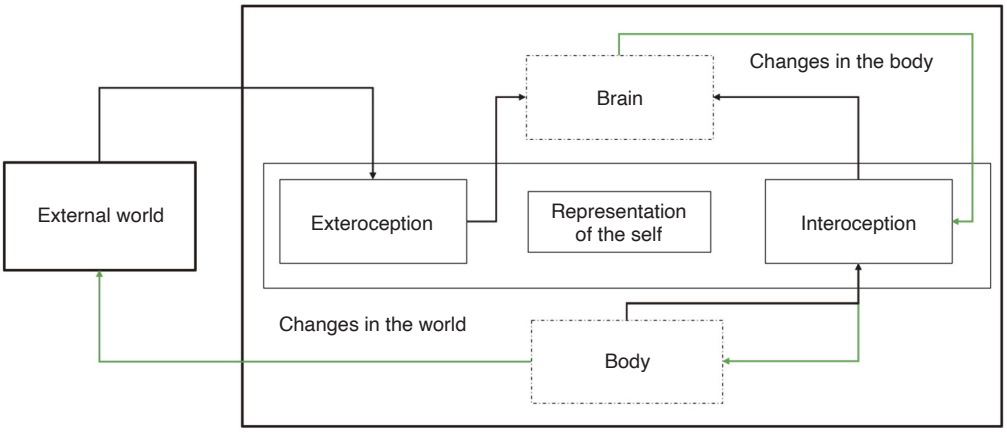
Interoception refers to the process by which we sense, integrate, and interpret information from signals originating from within the body, thus generating a global, moment-to-moment representation of the body's internal landscape at both conscious and unconscious levels (Khalsa et al. 2018). This mapping involves the integration of a relatively restricted set of information pathways associated with all the major biological systems that are involved in maintaining body homeostasis, including the cardiovascular (Oppenheimer & Cechetto, 2016), respiratory (Von Leupoldt et al., 2010), gastrointestinal, genitourinary, nociceptive, chemosensory, osmotic, thermoregulatory, visceral, immune, and autonomic systems (Craig, 2009). This interoceptive information is communicated through a set of distinct neural and humoral (i.e., transmitted via the blood) pathways with different signaling modes, which the brain represents, integrates, and prioritizes.

In turn, there is also a kind of communication between different physical axes and representations or dynamic maps of the internal state of the body that are generated not only at different anatomical and psychological levels, but also on different time scales. Therefore, there should be an integration of the different sensory information, as is the case with the exteroceptive systems. With this conceptual framework, it is possible to study interoception based on physiological body responses and representation at the brain level to the metacognitive perception of interoception associated with the conscious perception of internal signals (Quadt et al., 2018).

### *Interoception Complexity Levels*

**Interoceptive Signals and Sensory Processes.** A first level of interoceptive complexity refers to the physiology of the receptors, regarding the transduction mechanism of the transmission of afferent signals from the internal organs (viscera) to the central nervous system and how this afferent information is represented and processed at the level of the central nervous system (Vaitl, 1996). Sensory information from different body organs and different types of viscero ceptors converge in the nucleus of the solitary tract (NST) and its main target is the parabrachial nucleus (PB) (Craig, 2003). The PB is the main site of integration for all homeostatic afferent activity and is therefore essential for the maintenance of cardiovascular, respiratory, energy (food and glucose), and fluid (electrolytes and water) balances (Saper, 2002). Moreover, the PB projects to the periaqueductal gray matter (PAG;

**Figure 1.**
*Interoceptive processing model.*




*Note.* The figure is intended to illustrate how interoceptive and exteroceptive information is recognized, integrated, and processed to represent the self in the world and the selection of actions toward the external world with respect to internally and externally directed actions.

the mesencephalic homeostatic motor center) and the hypothalamus (the diencephalic homeostatic motor center), which guide goal-directed autonomic, neuroendocrine, and behavioral activity (Craig, 2003). In this sense, there is a neuroanatomical basis, and the functioning of part of the interoception process depends on the development and indemnity of these functional areas.

**Processing, Interpretation, and Integration.** A second level of complexity, reflects the impact of visceral afferent signals and other forms of sensory processing on cognitive processing and behaviors. This level does not necessarily include a perceptual awareness of interoceptive signals (Quadt et al., 2018). This dimension has been measured, for example, through cardiac synchronization experiments, where, it is possible to test, for example, an interaction and integration of sensory information, where interoceptive cues can modulate threat appraisal or even racially biased behavior in a context-dependent way (Azevedo et al., 2017).

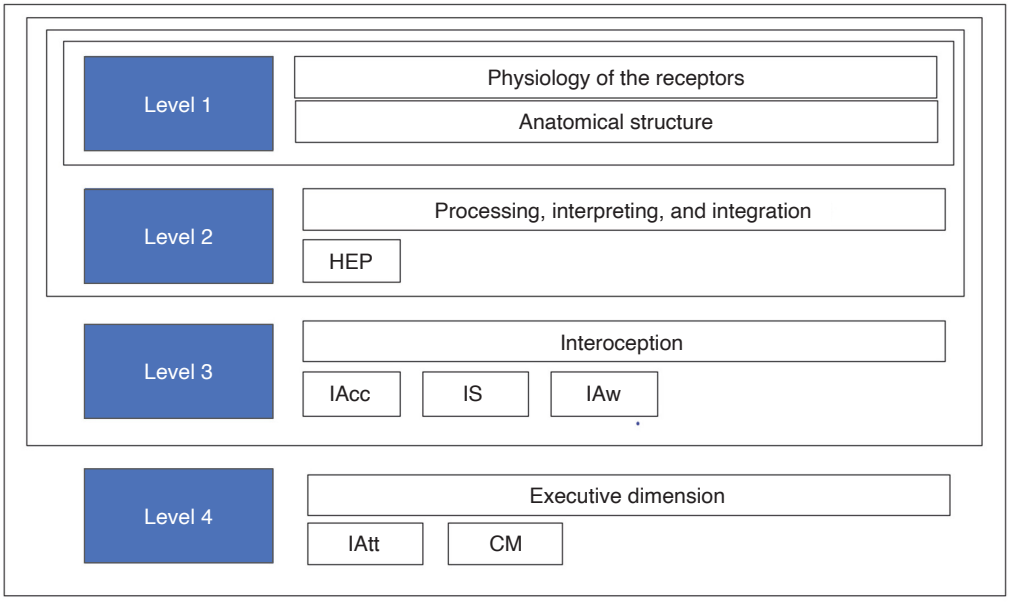
**From the Unconscious to the Conscious.** A third level of complexity, refers more directly to the perception of interoceptive signals; the base model is the one proposed by Garfinkel and Critchley (2013) known as the tripartite model of interoception, which alludes to the psychological dimension and is composed of three facets of interoceptive ability, interoceptive accuracy understood as the accuracy with which one perceives one's internal state, interoceptive sensitivity as the subjective report of interoceptive cues, and interoceptive meta-awareness, understood as the correspondence between the above measures. These three dimensions have been measured through cardiac detection tasks (Quadt et al., 2018). Following this description, several variants of the model have been proposed (Khalsa et al., 2018; Murphy, Catmur, & Bird, 2019), among these, a recent model stands out that posits the need to distinguish between interoceptive accuracy and attention towards interoceptive information (Murphy et al., 2019). From this, a 2x2 dimensional structure of interoception is proposed that reflects both what is measured (accuracy versus attention) and how it is measured (objective performance versus self-report) (Murphy et al., 2019). In this sense, Garfinkel and Critchley's (2013) tripartite model can be understood as the degree to which measures of accuracy and sensitivity (self-report) correlate with each other in both the objective and self-report dimensions (See Figure 2).

### *Interoception Measurement*

**Experimental Tasks.** In general, it is recognized that the measurement of interoception represents a great challenge (Quigley et al., 2021) for two reasons; firstly, because of the difficulty of directly measuring and/or manipulating interoceptive signals in humans due to the fact that interoceptive afferences are fine, and they are diffusely dispersed, and secondly, there is a sort of multisensory integration in interoceptive modalities, consequently, although interoceptive signals are dissociated from each other they can also be associated with each other.

Interoceptive signals arise from four systems: cardiovascular, respiratory, gastrointestinal, and urogenital. Among these, the cardiovascular has emerged as the main focus of study of the interaction between viscera and brain (Critchley & Harrison, 2013), especially because of bidirectional connections between these two (Tsakiris, 2017). Most studies on interoception perception, based on the perceptual accuracy of internal signals, have been carried out by performance in heartbeat counting tasks. In this type of procedure, participants are asked to count their heartbeat, without any physical aid, over a series of intervals (Schandry, 1981). The measure of interoceptive sensitivity is considered as the difference between the objective measurement and the participant estimation. While this task is easy to implement, its validity has been repeatedly

**Figure 2.**
*Multidimensional interoceptive model.*




*Note.* Figure 2 illustrates the idea of interoception as a dynamic and multilevel process; these levels interact with each other and go from lower to higher complexity. HEP: heart evoked potential; IAcc: interoceptive accuracy; IS: interoceptive sensitivity; IAw: interoceptive awareness; IAtt: interoceptive attention; CM: computational model.

questioned. First, approximately 40% of normal individuals cannot consciously perceive their heartbeat (Khalsa et al., 2009), therefore, these measurements may not be suitable for quantifying interoceptive sensitivity in all individuals. Furthermore, heartbeat can also be perceived through the exteroceptive (such as chest wall vibration, among others), which may affect the degree to which heartbeats are perceived via the interoceptive pathway (Brewer, Murphy, & Bird, 2021).

Although the cardiac tests described above are the most commonly used measures to explicitly assess interoceptive ability, the idea of assessing more interoceptive domains that are less explicit than cardiac signals is highlighted. However, it must be noted that every existing task that assesses interoceptive accuracy will have its own limitations regardless of the modality.

## Interoception in Mental Health

The starting point of this section is that atypical interoception is associated with impairments in different psychological processes, and furthermore, these impairments are points of convergence that characterize a wide range of conditions in the field of psychopathology (Barrett & Simmons, 2015; Murphy et al., 2017; Khalsa et al., 2018). Below, we seek to set out an overview around the role of interoception in emotional processing.

### *The Role of Interoception in Emotional Processing*

Conscious emotional experience is closely linked to changes in bodily sensations. Moreover, emotional experience must be, by its nature, physiological (Pace-Schott et al., 2019). By way of summary, early theorists of interoception associated it with emotional processes, suggesting that emotions were the result of physiological reactions to events in the environment (James, 1884). Subsequently, Damasio (1994) proposed that physiological reactions and their emotional responses together result in somatic markers that can inform future decision making. Along with this, the literature addresses the issue that interoceptive and emotional processes share underlying neural substrates. Moreover, emotional impairments accompany most mental disorders (Quadt et al., 2018) acting as a possible pathway linking interoception to mental health.

Neuroimaging studies support the notion that interoception and emotion are intertwined (Wiens, 2005; Herbert & Pollatos, 2012), likewise, both processes are carried out in overlapping brain structures such as the insula and the anterior cingulate cortex (Craig, 2008). Along these lines, Craig (2002) suggests that interoception should be redefined to reflect both the physiological condition of the body, as well as the perception of the body's response to different stimuli and their impact on one's emotional experience. This suggests that greater accuracy in the perception of the body's signals may facilitate the regulation of emotional responses, as ongoing bodily changes can be more accurately detected.

There is now evidence that interoceptive responses are associated with immediate discrete emotions (Verdejo-Garcia & Bechara, 2009; Critchley & Garfinkel, 2017). For example, interoceptive accuracy may constitute a positive precondition for effective self-regulation of emotion-driven behavior in healthy individuals (Füstös et al., 2013). Recent research has suggested that there is an association between a person's sensitivity to their own heartbeat and the intensity of the emotion they experience (Herbert, Pollatos, Schandry, 2007; Pollatos, Traut-Mattausch, Schroeder, & Schandry, 2007).

Furthermore, interoceptive awareness plays a role in many higher-order skills such as memory, learning, decision making, and emotion processing. Therefore, a deficit in this measure could increase difficulties in identifying emotions, which in turn, may impact the risk of difficulties in emotional regulation (Critchley & Garfinkel, 2017; Kever et al., 2015). Accordingly, several studies (Pollatos, Gramann, & Schandry, 2007; Füstös et al., 2013) conducted in general population have found that a deficit in interoceptive awareness is associated with higher levels of alexithymia—defined as a deficit in the cognitive processing of emotion and the inability to mentally represent emotions, limiting the ability of emotional regulation through cognitive processes (Jakubczyk et al. 2020)—along with lower differentiation in the emotions of others (Terasawa et al., 2014) and less empathy (Grynberg & Pollatos, 2015), among other things. In addition, other studies have reported that measures of heartbeat perception accuracy correlate positively with measures of affective traits, such as a tendency toward general anxiety (Pollatos et al., 2009, Stewart et al., 2001). The evidence as a whole supports the notion that the monitoring and central representation of bodily signals play a critical role in emotion.

### *Low Dysregulatory Interoceptive Processing*

Some research (Brewer, Cook, & Bird, 2016; Shah, Hall, Catmur, & Bird, 2016) has examined the relationship between interoceptive ability and alexithymia, a subclinical construct, traditionally characterized by difficulties in identifying and describing one's own emotions. Currently, evidence suggests that alexithymia may be associated with difficulties in perceiving some non-affective interoceptive cues, such as one's own heart rate. Thus, it is possible that the impairment experienced by people with alexithymia is common to all interoceptive aspects (Murphy, Catmur, & Bird, 2018). In short, this condition would be most clearly characterized as a general failure in interoception (Brewer, Cook, & Bird, 2016).

Low interoception has also been associated with social, sensory, and self-representational symptoms in autistic disorder (ASD) (Quattrocki & Friston, 2014). While the authors surmise that an early pathophysiology in the oxytocin system could disrupt the assimilation of interoceptive cues and exteroceptive cues within generative models of the "self," their empirical evidence supporting this theory speaks to abnormal interoceptive processing and consequent failures in social-emotional learning in ASD. The latter is a pervasive developmental disorder encompassing a group of neurodevelopmental disorders characterized by profound social and verbal communication deficits, stereotyped motor behaviors, restricted interests, and cognitive abnormalities (Quattrocki & Friston, 2014; Fernandez & Scherer, 2017). However, the literature in this regard is inconclusive (Brewer, Cook, & Bird, 2016).

Evidence of conceptual links between alexithymia and interoception has made it possible to assert that atypical interoception represents a central disturbance in psychiatric disorders (Brewer, Murphy, & Bird, 2021). This assertion has been

based on the idea that interoceptive deficits appear to represent a "risk factor" for the development of severe mental disorders, however, several issues remain (Brewer et al., 2021), as not all studies are consistent with a relationship between alexithymia and interoceptive accuracy. For example, the results of one study (Nicholson, Williams, Carpenter, & Kallitsounaki, 2019) partly support theories that reference the importance of altered interoceptive processing in the development of ASD. However, while alterations in interoceptive accuracy may be present in children with ASD, as they grow older these difficulties resolve over time, and they may be absent in adulthood (not so the difficulties with mind reading and emotion processing, which remain altered throughout life in ASD).

Moreover, alterations in body awareness have also been implicated in depression. Some studies have revealed that individuals with major depressive disorder (MDD) show alterations related to the sensation, interpretation, and integration of internal body signals (Barrett, Quigley, & Hamilton, 2016, Eggart et al., 2019, Bonaz, et al., 2021, Dunne, Flores, Gawande, & Schuman-Olivier, 2021. Empirical data on the relationship between depression and interoceptive processing have increased considerably in the last decade. Functional magnetic resonance imaging (fMRI) studies demonstrate that unmedicated MDD patients show reduced insula activation relative to healthy control volunteers while (a) attending to cardiac, stomach, and bladder sensations (Avery et al., 2014); (b) being exposed to appetizing food imagery (Simmons et al., 2016). Second, MDD has been linked to abnormal behavioral performance on heartbeat counting tasks (Eggart et al., 2019), however, this relationship may not be linear. One study (Dunn et al., 2007) examined the objective accuracy of heartbeat perception in control volunteers, moderately depressed volunteers, and a more severely depressed clinical sample. The moderately depressed participants demonstrated less accurate heartbeat perception than the control group of volunteers. However, contrary to expectations the more severely depressed clinical sample performed better than the moderately depressed sample and equivalent to the control volunteers.

Finally, it is possible to conclude that interoceptive dysfunctions can affect the whole system and are involved in the expression of psychological and physical symptoms in the different acquired and neurological disorders addressed.

### *High Dysregulatory Interoceptive Processing*

Another interesting case to review would be associated with an increased attention to internal stimuli to the detriment of external stimuli. In this line, different studies have investigated the relationship between interoception and anxiety (Pollatos, Traut-Mattausch, Schroeder, & Schandry, 2007; Paulus & Stein, 2010; Paulus, 2013; Büttiker, Weissenberger, Ptacek, & Stefano, 2021). Anxiety is an emotional state associated with a cognitive component of increased attention to the threat to the individual's integrity, together with a complex sympathetic arousal response and different behaviors aimed at avoiding stimuli or contexts that predict a threat to the individual (Paulus, 2013).

Empirical data indicate that (a) the perception of visceral cues (interoceptive awareness) plays an important role in the pathophysiology of anxiety disorders (Pollatos et al., 2007); (b) there is a positive relationship between interoceptive awareness and trait anxiety (Pollatos et al., 2007); (c) given that perceiving bodily states compatible with sympathetic arousal in the absence of external triggers can itself induce anxiety (Paulus, 2013), it is possible that miscommunications between the brain and the body represent a key component of anxiety, where bodily sensations may be under-, over-, or mis-interpreted (Paulus & Stein, 2010) (d) several anxiety disorders have been associated with altered breathing, breathing perception, and response to breathing manipulations (Paulus, 2013).

In this regard, one possible explanatory model posits that anxiety is the result of an increased anticipatory response to possible adverse consequences, which is manifested in increased processing of the anterior insular cortex. Specifically, when anxious individuals receive bodily signals, they cannot easily differentiate between those associated with possible aversive (or pleasant) consequences and those that are part of a constantly fluctuating interoceptive afferent (Paulus & Stein, 2010). Consistent with this model, studies in humans have suggested that the insular cortex plays a central role in the integration and representation of cardiorespiratory and other interoceptive signals (Craig, 2002; Cameron, 2009). Functional neuroimaging studies have revealed that the insula is a key viscerosensory region (Craig, 2009). Moreover, in clinical patients with anxiety disorders, such as panic disorder, specific phobia, social anxiety disorder, and generalized anxiety disorder, abnormal overactivity in the insula has been frequently reported (Brooks & Stein, 2015; Duval, Javanbakht, & Liberzon, 2015; Paulus & Stein, 2010).

The main conclusion is that increased attention to the body does not necessarily lead to an accurate perception of bodily signals. A second conclusion is that it may be associated with misperceptions of internal body states (Leonidou et al., 2020).

## Conclusion

This paper has described, based on current research, how interoception has been defined and conceptualized in a non-systematic way. This has led to the widespread practice of extending the definition of interoceptive as the non-exteroceptive, associated purely with the processing of body signals and in a more reductionistic way to the physiological pathways involved. This is problematic, given that this concept is a multifaceted process that relies on different physiological pathways and operates at different levels both temporal and functional. This has led to difficulty in measuring interoceptive dimensions, which in addition to being empirically remote, capture phenomena that in practice have little relation to each other. This reflects a decrease in reliability and validity measurements in the interpretation of the results.

Secondly, beyond the limitations described above, it is possible to link interoception to typical and atypical emotional experience. Evidence was presented that atypical interoception was a common factor among the emotional disorders addressed, and the mechanisms that related it to the symptomatology in the psychopathologies described were also generally delimited. Although several questions are still pending, it is possible to conclude that it is highly likely that deficits in the interoceptive process represent a general risk factor for the development of different mental disorders in the emotional

domain. In this sense, alterations or changes in abilities could predispose the development of different psychological disorders and/or function as a comorbid condition to the disorder (as in the case of alexithymia). Furthermore, the idea of a cognitive component associated with interoceptive attention to interoceptive signals is proposed, which could modulate certain symptoms present in anxious and somatic disorders.

Finally, it should be noted that interoception is presented as a bridge between the biological and the psychological, and is a convergence zone for understanding individual differences. Therefore, future empirical work should investigate the factors that determine which manifestations of psychopathology occur after atypical interoception, and whether different interoceptive domains and dimensions are associated with different clinical outcomes. Moreover, progress should be made in identifying interoceptive markers for diagnosis and prognosis, along with new targets for intervention, with the goal of advancing psychological, behavioral, and pharmacological treatments for the management of complex psychopathologies.

## Conflict of Interest

There is no conflict of interest.

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Book review

# Manual de Psicología de la Conducta Suicida [Psychology Manual on Suicidal Behavior]

Susana Al-Halabí, Eduardo Fonseca-Pedrero (Coords.)
**Pirámide (2023)**

Concern for intervention in suicidal ideation and behavior has gained considerable momentum in recent years. This is not surprising, bearing in mind the shocking numbers of deaths due to this cause (it is estimated, for Spain, that one death occurs approximately every two hours), which have been publicized more than ever in the media and via the Internet. This collective awareness of a problem that has existed for too many years has galvanized public opinion, part of the political class and, of course, different associations and groups. But it is also influencing clinical and health psychologists to become aware of the need to improve their training and update their professional practices in order to better manage these challenging situations.

In this context, the publication of the extraordinary *Manual De Psicología De La Conducta Suicida* [Psychology Manual On Suicidal Behavior] has filled a gap with its length, depth, thematic plurality, and topicality, both in terms of research data and in terms of theories, frameworks, and perspectives. It is not, however, a text that was thrown together at the drop of a hat, without in-depth research or attention to detail; quite the contrary, it is a manual that covers the reality of suicide as a whole, presents detailed and well-tested interventions, and demonstrates a great depth of reflection. Furthermore, the writing of the chapters has been entrusted to academic and clinical psychologists, all of them Spanish; without drawing from the usual North American manuals or other previous texts[1] which, as far as the psychologist's particular activity is concerned, are now surpassed by the novelty, size, and quality of this new publication.

The first thing to note is the organization of the more than seven hundred pages in clear and logical thematic blocks, as follows: firstly (in Block I), we are introduced to the phenomenon of suicidal behavior, and four chapters are dedicated to the conceptualization of this behavior, the explanatory models (with special attention to the contextual perspective), the association between self-injury and suicidal behavior in childhood and adolescence, and the legal framework. Subsequently (Block II), we find the necessary section on prevention, with the description—over several chapters—of the general intervention strategies, the work in educational contexts or with vulnerable groups, and the specific programs carried out in Spain. In Block III, we come to the essential content for health psychologists, with the description of the assessment (interview, instruments) and the psychological approach to suicidal behavior, that is, types of interventions and their evidence-based evaluation, work in crisis situations, and the hospital and Spanish National Health System approach. But if the previous block seems to be the core for psychologists in practice, Block IV is no less so, dealing with postvention, i.e., work after suicide attempts or death, which is another of the usual activities for many professionals in clinics and health centers. There are chapters on the management of grief and intervention with survivors, references to useful resources available on the Internet, the media, good practices in psychological care, and—no less important or timely—a chapter on the self-care of the therapist who deals with this always difficult and challenging problem. A final Block (V) includes a chapter on future perspectives and challenges in suicide prevention.

The length of the description in the previous paragraph, although necessarily concise, will give a better understanding of the variety and breadth of the content of this manual, as well as its broad spectrum of potential readers and consultants. All types of professionals, associations, educators, researchers in the field, public and private institutions, now have an essential reference in the text by Professors Al-Halabí and Fonseca-Pedrero. The compilers, in presenting this book—and as is usual in their editorial work, as seen in other works on psychological intervention—have proposed highly practical chapters, which, in all cases, together with the numerous bibliographical references (general and recommended), incorporate summaries, a section of key terms, web links and, in the intervention chapters, practical clinical cases, some of which are described in remarkable detail.

However, in the opinion of the author, the most interesting contribution of this text, and the reason why it will become a work of reference, does not lie in the amassed information—rich and complex though it may be—on suicidal behavior, but in the analysis or approach with which it is treated. The manual is not a more or less ordered juxtaposition of chapters on the subject, it has an essential basic approach and a central theme: to understand suicide as a behavior, with all that this involves. Therefore, both in the chapters on conceptualization and the explanatory theories (already

1 It is obligatory here to mention texts such as the one directed by Andoni Anseán Ramos: *Suicidios: manual de prevención, intervención y postvención de la conducta suicida* [Suicides: Manual on the Prevention, Intervention, and Postvention of Suicidal Behavior] (Ed. FSM, 2015); or the one coordinated by Michel A. Reyes Ortega and Kirk D. Strosahl: *Guía clínica de evaluación y tratamiento del comportamiento suicida* [Clinical Guidelines for the Assessment and Treatment of Suicidal Behavior] *(*Ed. Manual Moderno, 2020).

mentioned, of contextual orientation), but also in those on intervention (with special attention to cognitive-behavioral and dialectical-behavioral therapy), we find a basic approach: to present the phenomenon of suicide as something multi-causal, multi-contextual, and diverse, depending on the circumstances and people; that is, understood based on the broadest functional analysis. This perspective is the opposite of that of a society and media that are interested in suicide, but continually fall into the linear, if not simplistic explanation; and that, under the influence of movies, series, and best-sellers, go to the extreme of believing it possible for an epidemic of suicides to be generated by a virus, a genetic mutation, an environmental pollution, a totalitarian environment, a series of teenagers or, indeed, hypnosis. Or equally, that any adolescent who is bullied at school or has negligent parents or disappointments or traumatic experiences will be a sure prey to suicide.

Less than a year ago, Marc Caellas published[2] a small volume dedicated to the suicide notes left by illustrious personalities, especially in literature, culture, and art (e.g., V. Wolf, W. Benjamin, E. Salgari, K. Cobain, S. Zweig, R. Akutagawa, G. Sanders, L. Lugones, etc.). Although this is a simple and humble essay, compiling and linking the words of these notes, as well as commenting on them with some possible reasons about the lives of these characters, the interesting thing about this booklet lies in discovering the enormous variety of alternatives that can be glimpsed in the motivations, keys, and readings of the act of ending one's own life, the "crime of passion" that suicide always is. In this way, one discovers (or rediscovers) the incomprehensibility of this human reality. But delving a little deeper, covering a part of this knowledge within psychology, with a functional and practical approach, the manual by Al-Halabí and Fonseca-Pedrero summarizes an excellent body of research and offers strategies to help the many people with whom psychologists have to work in perhaps the most transcendent moment of their lives.

In conclusion, it is an extensive, coherent, and necessary book, a reference work for researchers, but, above all, for active psychologists in the hospital, educational, and clinical fields, those who collaborate with associations, those who create community prevention programs, and any professional who wishes to update their knowledge on the management of suicidal behavior, to know the best practices and help those affected and their families before and after.

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2 Caellas, M. (2022). *Notas de suicidio* [Suicide Notes]. Ed. La Uña Rota, SL.