The Master's in Drug Dependence at the University of Barcelona: Historical Perspective and Future Challenges

FERRER, X., SIERRA, E., SOLANAS, A., AMATLLER, O., ASPA, J., OVEJERO, M., CALVO, F.

Universitat de Barcelona, Faculty of Psychology, Institute of Lifelong Learning, Drug Dependence Specialisation Programme, Barcelona, Spain

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BACKGROUND: The two-year, multidisciplinary Master's in Drug Dependence (MDD) at the University of Barcelona was created in 1986, after some years of offering shorter seminars. It was a response to the heroin crisis of the 80s and 90s and Spain's long-standing alcohol and smoking problems. Addressing the situation required specialised professionals, and a specific curriculum for drug dependence did not exist. As far as we know, the MDD is the longest-running programme of its kind in Europe. **AIMS:** To describe briefly the conceptualization and development of this master's programme. **RESULTS:** The context of design and creation of the MDD, the historical perspective, and the current context are described. Then its structure and distinctive features are analysed. Next, qualitative and quantitative data are furnished to explain the relevance of the MDD throughout its more than 30 years of existence. Finally, future challenges and the need to respond to new societal demands are discussed.

Keywords | **Addiction Science – Drug Abuse Training – Learning Outcomes – University Specialised Study Programme – Drug Dependence**

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Corresponding author | Fran Calvo, University of Barcelona, Faculty of Psychology, Institute of Lifelong Learning, Ciutat de Granada 131, 080 18 Barcelona, Spain **fran.calvo@formadrog.net**

1 BACKGROUND

1.1 Current situation of the Master's in Drug Dependence

The Master's in Drug Dependence (MDD) is a two-year multidisciplinary master's programme developed at the University of Barcelona in 1986. The MDD was the first drug-dependence specialised master's degree in Europe. It started as a response to the heroin crisis of the 80s and 90s and Spain's long-standing alcohol and smoking problems. Addressing the situation required specialised professionals, and a specific curriculum for drug dependence did not exist. As far as we know, the MDD is the longest-running programme of its kind in Europe.

The objective of this case study is to briefly describe the conceptualization and development of this master's programme and to analyse secondary data about lecturers' and students' participation and practical issues.

2 METHODS

The case study was conducted using a documentary analysis of the University archives and records. In addition, secondary quantitative data, such as student satisfaction, was analysed using descriptive analytics such as central tendencies and dispersion measures (mean and standard deviation and median and quartiles, ranks).

3 RESULTS

3.1 Context surrounding the founding of the Master's in Drug Dependence

The Master's in Drug Dependence (MDD) of the University of Barcelona (UB) was launched in the 1986–87 school year, during a critical time in Spain's recent history. During this period, democracy was becoming consolidated after decades of an authoritarian regime. On top of the enduring problem of alcoholism rooted in Mediterranean culture (as in surrounding countries) and tobacco use that steadily increased since being introduced by Christopher Columbus, Spain had also experienced problems related to morphine and cocaine use from the start of the 20th century until the Spanish Civil War (1936–39). General Franco and the military forces that had rebelled against the Republic won the war with the help of Axis powers. Franco established a dictatorship that lasted until his death in 1975, drawing on the support of the United States starting in 1953 in the context of the Cold War (Ruiz-Vargas, 2006).

Spain began its transition to democracy between Franco's death in 1975 and the ratification of the Spanish Constitution in 1978. One of the reactions to regime change was the proliferation of countercultural movements. Perhaps the most important one was the so-called "Madrid Movement," which had similar expressions in other large cities, such as Seville and Barcelona. One of the hallmarks of these movements was the use of illicit drugs as part of a set of ideas that, along with clothing, music, art, theatre, and more, crystalised the desire for liberty, especially among young people (Aguilar, 1997; Edles, 1995).

The excesses of the post-Franco era soon arrived. Throughout the 80s and the beginning of the 90s, increasing cocaine, heroin, and cannabis consumption intensified the already long-standing problems of alcoholism and smoking (Vilarós, 2018). Heroin consumption, primarily via injection, would forever impact the phenomenon of illegal drugs in Spain. The situation became extreme: between the late 80s and the late 90s, 300,000 people were treated for addiction, 25,000 people died of an overdose, and 100,000 contracted HIV (and many more, Hepatitis C), as a consequence of using unsafe injection material (de la Fuente et al., 2006). Spain's population at the time was between 37.6 and 38.9 million inhabitants (INE, 2021).

The MDD was launched at a time when heroin consumption in Spain was reaching epidemic proportions. Professionals lacked general knowledge of the phenomenon, its etiology, the pathologies resulting from consumption of the various substances, prevention and harm reduction measures, and treatments. At the end of the 70s and beginning of the 80s, based on outpatient clinics that served people with alcohol addiction and occasionally with other drug addictions, treatment centres began to emerge in large cities (such as Barcelona, Bilbao, Madrid, and Valencia), and pioneering preventive interventions began to be developed. In 1985, Spain's National Drug Plan was formally launched. Other Western European countries were experiencing similar effects of injection drug use (Barrio et al., 2013). At the beginning of the 90s, specialised networks for drug dependence care began to be developed. However, the lack of specialised training, specific subjects in basic university education, and postgraduate training in substance use treatment were the norm rather than the exception.

3.2 The MDD in historical perspective

The need for specialised training in drug dependence had been observed since the late 70s. Professionals needed knowledge and skills that were not sufficiently developed in the undergraduate studies of the time. Thus, in 1977 courses on drug dependence were launched at the Faculty of Medicine of the UB, led by Dr. F. Freixa. In 1979–80, the undergraduate degree in psychology added the optional subject, "Drug Addictions," led by professors Ferrer, Mendoza, and Sierra. This subject was discontinued but was taken up again years later. Between 1978 and 1985, professors Sánchez-Turet, Ferrer, and Mendoza designed and taught annual seminars about drug dependence lasting about 70 hours. In the same period, Ferrer published the first proposal in Spain for specialised, evidence-based, multidisciplinary university-level training (Ferrer, 1981). The training addressed all drugs of abuse from a health perspective, through an interdisciplinary and biopsychosocial approach. This first proposal focused on addiction treatment, although it also contained elements of prevention and research. However, at that time, Spain's university structures prevented this training programme from being launched.

The opportunity came four years later, during the 1986–87 academic year, after the UB adopted new statutes (1985) in response to a recent law promoting the autonomy of universities (University Reform Law, 1983). The reforms sought to adapt the training that university graduates received to their professional and social realities so that the university could respond to the demands of the labour market with a flexible supply of adapted degrees. Thus began the first cohort of the MDD, the first master's in Europe specialised in drug dependence. During the same academic year, the Diploma in Addiction Behaviour was started by Professor Griffith Edwards of the Institute of Psychiatry of the University of London. This diploma became a master's in 1994 (King's College London, 2021). Additionally, in 1983–84, Trinity College Dublin launched an undergraduate Diploma in Addiction Studies, although unfortunately, this diploma was later discontinued (Woods & Butler, 2011).

To create the curriculum of the MDD, the designers reviewed the existing programmes and found that the training offered by the University of Montreal (Nadeau & Boivin, 1985) aligned closely with their teaching goals. The two institutions launched a collaboration. The results of this review were published in 1987 (Ferrer & Sánchez, 1987). A comprehensive prevention syllabus was added to the treatment syllabus, along with harm reduction curriculum (Ferrer & Sánchez, 1989). In 1994, an initial account of the specialist training was presented at the International Congress during European Drug Prevention Week (Ferrer-Pérez, 1994).

The MDD was originally housed within the Division of Health Sciences of the UB, in a mixed department within the schools of Medicine and Psychology, namely the Department of Psychiatry and Clinical Psychobiology, which Faculty of Psychology later absorbed. Since 2006, the MDD has been taught within the Institute for Lifelong Learning (IL3), which offers numerous postgraduate degrees in health, education, and the economy. The MDD is partially funded by the Department of Health of the Autonomous Government of Catalonia to demonstrate its commitment to training professionals specialising in drug dependence. This funding covers approximately 30% of the costs.

3.3 Information about the MDD

The MDD is an in-person, modular postgraduate degree. The prerequisite is a bachelor's degree or, in the case of degrees earned before the Bologna Plan (from 2007 on), a university degree at the mid-level (three-year diploma) or upper level (five-year *Licenciatura*). The official teaching language is Spanish, although some practical sessions and materials are in Catalan or English.

3.4 Objectives of the MDD

The general objective of the MDD is to provide the necessary training for specialised practice in the field of drug dependence. Specifically, the MDD aims to i) provide sufficiently broad and multidisciplinary theoretical and practical training that facilitates a comprehensive understanding of the phenomenon of drug consumption and dependence; ii) train participants to carry out their specialised professional role with respect to drug dependence, in the areas of treatment, rehabilitation, prevention, etc., providing them with the necessary skills; iii) enable students to analyse or modify, if necessary, their attitudes toward consumption of or dependence on certain substances (e.g., tobacco); build awareness of the facilities and resources available for drug dependence intervention in our community and orient participants in their current use; v) introduce participants to applied research in drug dependence; vi) introduce participants to the techniques of interdisciplinary work and service management and planning; and vii) complement a homogeneous basic training for all participants with a subsequent concentration in concrete areas, depending on each student's profession and motivations. Faculty emphasize that the master's degree is focused on professionalisation and is not oriented toward research, which is only addressed in an introductory way at the applied level, as described above.

3.5 Structure, tracks, and the distribution of credits

The MDD is a two-year program that runs from October of the first year to June of the second year. The MDD can be done part-time and can be combined with paid work. Often students are already working in drug dependence or another related area (mental health, homelessness, criminal justice). The curriculum involves an estimated 2,000 hours of training (900 of in-person training and the rest of individual work by the students), which add up to 82 credits in the European Transfer and Accumulation System (ECTS).

The 82 ECTS credits are distributed as 38 during the first year: 21 credits theoretical training, five credits master's thesis, and 12 credits practical training. Students receive general theoretical training complemented by a series of practical sessions with visits and short stays at a wide variety of care and prevention centres.

From this point, they choose an area to explore more deeply during the next stage of the programme.

The master's thesis is an applied or theoretical research project or a clinical project supervised by an adviser. In this sense, it involves personalised supervision throughout almost the entire training period (in the first year, the literature search and review, and in the second year, application, obtaining results, and writing).

Students take the remaining 44 ECTS credits during the second year: 24 credits of theoretical training (with a theoretical-practical orientation), 15 credits of internship at collaborating centres, and five credits for the master's thesis. Unlike in the first year, a series of optional monographic seminars is offered in the second year. Students can select them based on their interests and the need to find complementarity among the various subjects. In this sense, the subject offerings are adapted to the needs of each student *(Table 1)*.

Each student carries out an internship at a single centre that he or she chooses freely, under the adviser's supervision and according to the availability of placements. The number of theoretical and practical credits listed is the minimum required. However, students often surpass this minimum voluntarily because they choose to attend more seminars or carry out more internship hours (with the agreement of the collaborating centre) at no additional cost.

3.6 Expert course

Linked to the MDD is a less comprehensive postgraduate training course entitled "Expert." This course (15 ECTS credits, around 375 hours of work) is geared towards professionals with a university degree in health sciences, social intervention, or another area of university studies (with prior approval). Also, people without a university degree are occasionally accepted after consideration by the management team. They may include former drug users who serve as volunteers or sponsors for current users or members of patient associations. Upon completing the course, students without a university degree receive a university extension diploma.

The "Expert" course is focused solely on drug dependence treatment, and it includes the relevant part of the master's curriculum. It is primarily directed at professionals who are already working in therapy or social integration related to dependence in public or private services and who already have a certain degree of familiarity with basic concepts in the field. Participants are selected firstly, based on their educational and professional trajectory, and secondly, according to the order of application.

The objectives of the "Expert" course are to acquire the necessary skills to diagnose and treat addictions, especially those produced by psychoactive drugs, and to become qualified to work with people with a dual diagnosis, and to reduce harm.

3.7 Distinguishing features

The MDD has several features that distinguish it from similar specialised training programmes in drug dependence in Spain. First, the MDD enjoys close links with the most important civil society organisations in the field, which provide most of its teachers and a wide array of internship placements. Currently there are 43 internship sites, including outpatient centres, hospitals, treatment centres, day centres, harm-reduction services, prisons, and prevention programmes. Additionally, the MDD strives to balance theory and practice, with an approximate proportion of four hours of practice for every three hours of theory.

Other monographic training programmes focus solely on treatment or prevention of alcohol abuse or illicit drug abuse. In contrast, in the MDD, we address all of these areas and provide harm reduction training. In this way, the MDD responds to training needs surrounding the three axis of care for people with drug dependence and related problems. The MDD covers alcohol, tobacco, prescription drugs, and illicit drugs. It is based on a solid interdisciplinary focus: learning together to work as a team. It complements the emphasis on mental health with psychosocial, socioeconomic, anthropological-cultural, and public health approaches. The design of the curriculum and the structure of the MDD is flexible, adaptable, and modular, combining common areas of learning with optional ones and others designed to adapt to the needs of the students, such as individualised supervision.

Additionally, the MDD offers a focus that is scientific, open, and non-dogmatic. Academic freedom is respected, and the presentation of opposing views is encouraged so that students can construct their own expert, evidence-based perspectives based on different points of view.

3.8 Data about MDD students and teaching staff

Students' characteristics

Since the first cohort, which began in the 1986–87 school year, there have been 19 subsequent cohorts. The 20th cohort will begin in 2021–22. During the first 30 years, the program trained a single cohort every two years, starting a new group biannually. However, lately, the increasing societal demand has led us to offer it annually.

Over these years, 601 students have participated in the MDD, with a mean of 32.1 per cohort (SD = 8.3); 72.5% were women. The mean student age was 32.6 (SD = 9.1) and the median age was 30.5 (Min = 22, Q^1 = 26, Q^3 = 37, Max = 69). In terms students' prior education, 48.9% had completed undergraduate university studies in psychology; 15.1% in medicine (including psychiatry); 13.6% in social intervention fields (including 6.8% in social education and 6.8% in social work); 6.2% in nursing; 2.3% in pharmacy; 0.7% in occupational therapy, and 0.5% in criminology. In other areas of study, 5.4% of students had undergraduate degrees in fields such as geography, humanities, law, labour sciences, business sciences, biology, sociology, psychopedagogy, pedagogy, and education. Finally, 7.3% of students without an appropriate undergraduate degree in health sciences, social sciences, or social intervention received a university extension diploma.

In terms of origin, 81.1% of the students were Spanish. In comparison, 18.9% were international students from 20 different countries, including Andorra, Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, Guatemala, Italy, Mexico, Peru, Portugal, Romania, Russia, South Korea, Uruguay, and Venezuela.

Faculty

The MDD draws on a consolidated faculty team that coordinates its different subjects. Another group of teachers and internship supervisors participates occasionally or on a rotating basis in seminars and practical sessions in the classroom. They are all highly competent and well-regarded by our students, and they update the subject material continuously.

Table 1 | Description of contents

	Module	ECTS	Contents
FIRST YEAR	**Module 1.** General aspects of drugs	6	Introduction to the course. Basic concepts, terminology, and classifications. Historical, cultural, and socioeconomic aspects. Epidemiology. Originating and favouring factors: genetic, psychobiological, and psychosocial conditions. Risk factors and protective factors. Basics of law, criminal law, and administrative law. Civil law, labour law, and international regulations on drug addiction. Legal issues, judicial expertise, and prison regulations for drug addiction.
	Module 2. Preventive measures	6	Foundations for preventive intervention. Prevention strategies. Local action plans. Intervention from the workplace. Prevention in social and health services. Prevention and the role of the media. Prevention in educational institutions. Family prevention. Community and structural prevention.
	Module 3. Substances: pathology and treatment	9	Alcohol and alcoholism. Tobacco use and dependence. Synthetic drugs and natural and synthetic hallucinogens. The abuse of psychopharmaceuticals. Volatile solvents. Natural and synthetic hallucinogens, cannabis. Cocaine and other psychostimulants. Opiates. For all: description of the product and how it is obtained; biochemical, metabolic, pharmacokinetic, and pharmacodynamic foundations; effects on the organism and behaviour; diagnosis of dependence syndrome; treatment process (phases and objectives); emergencies and main medical complications; evaluation of techniques and treatment programs specific to this addiction.
	Module 4 (a). Basic practices in treatment and reintegration	7	Outpatient care for alcoholics and other drug addicts, methadone distribution. Therapeutic communities, sheltered housing, and other resources connected to residential pathways. Day centres, work in prisons, social and labour market insertion or reinsertion connected to these pathways (workshops, training courses). Detoxification and hospital emergencies.
	Module 4 (b). Prevention and harm reduction	5	Information and guidance services. Prevention in the media and through new technologies. Prevention in the family, educational institutions, health and welfare services, the workplace, and the community. Harm reduction with drug addicts and "recreational" users.
	Module 5. Master's thesis* (I)	5	Choice of topic, determination of objectives and methodology, literature review. Interim report.
SECOND ACADEMIC YEAR	**Module 5.** Master's thesis* (II)	5	Carrying out research tasks. Application of procedures, results, analysis, conclusions, discussion. Public presentation.
	Module 6. Individual treatment techniques in drug addiction	3	Evaluation and diagnostic criteria for treatment. Cognitive and emotional factors in the treatment of drug addiction. Treatment in prisons, treatment communities, and sheltered housing. Emotion management in individual treatment. Drug addiction care networks. Cognitive-behavioural techniques. Treatment of behaviours and states that result from drug use or that may interfere with treatment. Relapse prevention. Training in social skills. Multimodal programmes. The treatment process. Dialectical therapy and mindfulness in the treatment of drug addiction.
	Module 7. Family therapy for drug addiction	3	Theoretical foundations of the systemic model. Theory of systems and communication. Hypothesis, circularity, neutrality. The concept of homeostasis. First- and second-order cybernetic change theory. The family as a unit of health and disease. Relational diagnosis of symptoms. Symptoms and demands as messages. Context of origin and patterns of symptom maintenance. Diagnosis in family therapy. Functioning of the family in terms of symptoms and demands. Family structure. Double-bind theory. The family life cycle: rules, norms, rituals, myths, loyalties, secrets. Adolescence and the onset of substance consumption. Processes of individuation and separation. Relational triangles. Difficulty of conflict resolution in the family life cycle. The couple and the marriage contract. Family crisis theory. Concept of family play. Migration and associated conflicts. Genograms. Data collection sheet. Formulation of clinical hypotheses. The first interview. Schools of family therapy and its precursors. Drug addiction as a symptom. Onset of the symptom. Explanation of the symptom. Patterns of maintenance. Demand in drug addiction. Pre-treatment interviews. Different programmes. Therapist and co-therapist, a collaborative team. Transference and countertransference. The concept of resistance. Multi-family group therapy. Final evaluation.

Module 8. Group therapy for drug addiction	3	Introduction. Motivational approach in the group setting. Phases of the group. General objectives of groups of alcoholics. The therapist: role and functions. Group indications and contraindications. The problem of the setting. Supervision and continuous training in groups. Experimental design in group techniques. Groups for cocaine addicts. Setting. Facilitator. Phases of the group. Introduction to basic concepts of group analysis. Group scene. Group therapy for cannabis addicts. Groups for smokers.
Module 9. Harm reduction in drug addiction	3	Harm-reduction policies: justification and resistance. Epidemiology and user typologies. Harm reduction programmes. Social emergency centres, consumption rooms, and outreach teams. Professional teams in harm reduction. Opioid substitution programmes. Peer-to-peer intervention programmes. Implementation of resources in the community. Harm reduction under other programmes. Overdose prevention and medical care. User participation. New programmes in harm reduction. Design and evaluation of harm-reduction programs.
Module 10. Pharmacological treatment for drug addiction	3	Foundations of the pharmacology of addiction. Pharmacological treatment of addiction to psychostimulants and new psychoactive drugs. Pharmacological treatment of opioid addiction. Pharmacological treatment of tobacco addiction in patients with psychiatric comorbidity. Pharmacological treatment of alcohol addiction. Pharmacological treatment of hypnosedative addiction. Pharmacological interactions and complex addiction patients. Treating psychiatric comorbidity in all of the above situations. Practical clinical cases.
Module 11. Social reintegration of drug addicts	3	Contextualization of forms of substance use in contemporary societies: On the socialising instances in social maladjustment. Theoretical references and institutions that work on drug addiction. Exclusion and insertion. Insertion, education, and social space: moral and social subject. Notion of attachment. Limits, pleasure, and transgression in drug addiction. The effects of institutionalisation. The professional relationship with the subjects: Professional bond. Foundations. Group, individual, and institutional work. Characteristics. Casework. Notion of authority. The relationship between knowledge and power. Presentation of practical experiences: social insertion from prisons. Labour process and insertion. Social insertion from housing and other support schemes. 5. Analysis and discussion of cases.
Module 12. Management and planning of centres and projects related to drug addiction	3	People management": Managerial functions. Management roles: Mintzberg model. Characteristics of the leader. Motivating people. "Project leadership and management": Basic concepts, purpose, and elements of management by objectives (MBO). Scope and definition of objectives. How to make a situational diagnosis. Design of the management process. Resource estimation. Introduction to accounting for projects/cost centres. Evaluation criteria and indicators. Keys to managing a project. Advantages and limitations of MBO. "People management": Leadership styles: different perspectives. Situational leadership. Developing collaborators. "Coaching skills for drug addiction centre managers": Introduction to coaching: Definition of coach and coaching. Skills of the coach, "the five key concepts of coaching": observe, listen, ask, give feedback, reach an agreement. "Five key concepts" practice in pairs. "Emotion coaching" (accompanying the client in his/her "here and now"). "Emotion coaching" practice in pairs. "Solutions coaching" (searching for new possibilities and perspectives). Group coaching: "solutions coaching" practice. Individual reflection and individual action plan to put the concepts to practice at a drug addiction centre. 5/ "Team management": The team and teamwork. From group to team. Stages of team maturity. Team roles to optimise performance: Belbin model. Team management and development
Module 13. Organisation and conduct of non-therapeutic groups	3	Applied introduction and group initiation techniques. Content: how to organise a group, recruitment, initial assessment, and essential skills of the group facilitator. Practice group warm-up and welcoming techniques. Knowing how to start, knowing the different roles, and identifying the main components of the group for the optimal running of the sessions. Know the main roles of the participants and the specialists who lead the group. Know how to detect personal difficulties, identify normative elements, carry out basic communication, and analyse observations. Trust and work development techniques. Practice the cohesion and communication techniques to improve the running of the sessions. Types of groups most suitable for the field of drug addictions. Psychoeducational groups, support groups, task groups. Groups of young people, parents, professionals. Learn to create group affect and group tasks. A personal plan will be developed based on the strengths and weaknesses of each participant in the module. Practice closing and evaluation techniques. Group closures, follow-up in groups/ teams. Group intervention plans for each group participant.

Module 14. Long-term internships	15	Carrying out an internship. Centre chosen by the student, according to the period established by each centre. Minimum of 300 hours.
Module 15. Experiences of applied research in drug addiction	3	Recent experiences of applied research are presented, with special attention to methodology and problem-solving strategies. The contents vary each year. Topics from the most recent edition: Psychotic symptoms induced by cocaine use: a line of research. Evolution of research of the GRET-CERETOX group on the toxic effects of ecstasy (MDMA). Personality patterns and comorbidity in adolescents with substance use disorder. Study of cohorts of users treated in Catalan treatment communities. Study of elaboration and adaptation of scales to measure technology addictions. Multi-20: a longitudinal follow-up study of alcoholic patients after 5, 10, 15, and 20 years. Methodology and results. The WHO collaborative study Beber Menos – Drink Less. Methods, phases, and application. Evaluation of drug addiction prevention and treatment programmes for adolescents.
Module 16. School-based drug abuse prevention	3	Contextualisation of school-based prevention. Experiences of intervention in drug prevention in educational contexts. Environmental prevention in educational contexts. Strategies of an educational intervention to work on personal determinants. Planning of drug prevention in educational contexts.
Module 17. Family prevention of drug abuse	3	Contextualisation of family prevention. Family prevention with the general population. Analysis of experiences. Family prevention with a population at social risk (selective prevention). Analysis of experiences. Family prevention with individuals at social risk or with behavioural problems (prevention indicated). Analysis of experiences. Comprehensive programmes, training, requirements and evaluation in family prevention.
Module 18. Community- and youth-service-based prevention	3	Prevention interventions. Community-based prevention. Review of local prevention programmes. Planning of prevention interventions: a system for project analysis. Design and planning of prevention projects. Case work. Trials/ simulations.

Since the beginning of the MDD, approximately 840 faculty members have participated, including teachers, seminar coordinators, seminar speakers, internship supervisors, and master's thesis supervisors.

Some faculty members are affiliated with other renowned specialised institutions where students can complete their internships and master's theses. Some of these centres include the Department of Drug Dependence of the Catalan Government, which manages the public and sub-contracted network of services for treatment and harm reduction linked to drug consumption; the European Monitoring Centre for Drugs and Drug Addiction; the National Drug Plan (under Spain's Ministry of Health); the public health agencies of Catalonia and Barcelona; *Hospital Clínic, Hospitala Vall d'Hebron, Hospital Bellvitge,* and *Hospital del Mar.* The MDD also draws on faculty members from other universities and prestigious professionalised NGOs, such as the Red Cross and the *Fundación Salud y Comunidad* (Health and Community Foundation).

Outcomes and student satisfaction

To earn the degree, students must pass exams corresponding to each module. These exams consist of questions submitted by all teachers and module coordinators each semester. The questions are usually a combination of multiple-choice and open-ended questions. These rigorous exams contribute to maintaining the quality of the training, given that a student must achieve at least a 70% to pass. The student must also receive a favourable report from internship supervisors and successfully defend a master's thesis. Despite this rigour, we estimate that between 90% and 97% of students successfully complete the programme. The few students who do not tend to leave the programme early for one of the following reasons: i) complexity of the course content (they did not expect such a high level); ii) family logistics; and iii) health reasons. Among those leaving for health reasons, some students who had previously suffered from a drug dependence have withdrawn from the programme because of a relapse.

Throughout their training, students are urged to participate actively in evaluating the program. One of the most important indicators of students' satisfaction is the evaluation they carry out for every module, in which they are asked to rate their teachers and the compulsory subjects curricula. Student evaluations serve as a good barometer for the MDD organizers, providing useful indicators of the evolution of the course content and its relationship to students' expectations.

If we take as an example the last five cohorts that completed the programme (2015–16 to 2019–20), the mean overall score for the MDD is 8.1/10 (SD = 0.8), and the median is 8. This score is obtained from two general subcategories. The first refers to the teaching ability demonstrated at each session, or the ability to transmit knowledge and skills. The mean score was 8.0/10 (SD = 0.8), and the median was 8. The second refers to the quality and adequacy of the contents covered in each module. In this subcategory, the mean was 7.9/10 (SD = 0.8) and the median was 8. For more detailed information, see *Table 2.*

Another aspect of the MDD that students rate highly is the opportunity for direct and indirect labour market insertion. By

Table 2 | Student satisfaction indicators in the last five cohorts of the MDD

Cohort	Pedagogy and teaching		Content design		Total satisfaction	
	Mean (SD)	Median (Min., Q1, Q3, Max.)	Mean (SD)	Median (Min., Q1, Q3, Max.)	Mean (SD)	Median (Min., Q1, Q3, Max.)
2019–2020	8.6 (0.6)	8.6 (6.7, 8.2, 9.1, 9.7)	8.6 (0.6)	8.7 (6.6, 8.3, 9.1, 9.7)	8.6 (0.6)	8.6 (6.6, 8.3, 9.1, 9.7)
2018–2019	8.3 (0.8)	8.5 (5.5, 8.0, 8.7, 9.7)	8.3 (0.4)	8.4 (7.4, 8.1, 8.5, 9.3)	8.3 (0.7)	8.4 (5.5, 8.0, 8.7, 9.4)
2017–2018	7.7 (0.7)	7.7 (5.7, 7.1, 8.1, 8.9)	7.7 (0.8)	7.8 (5.8, 7.1, 8.2, 9.0)	7.7 (0.7)	7.7 (5.7, 7.1, 8.2, 9.0)
2016–2017	7.5 (0.6)	7.5 (6.3, 7.1, 8.2, 9.2)	7.5 (0.6)	7.6 (5.8, 7.1, 7.8, 9.2)	7.5 (0.6	7.6 (5.8, 7.1, 7.8, 9.2)
2015–2016	7.4 (0.8)	7.5 (4.5,7.0, 7.9, 8.8)	7.4 (0.8)	7.5 (4.6, 7.1, 7.9, 8.9)	7.4 (0.8)	7.5 (4.5, 7.1, 7.9, 8.9)
Total	**8.0 (0.8)**	**8.0 (4.5, 7.5, 8.6, 9.7)**	**7.9 (0.8)**	**8.0 (4.6, 7.4, 8.5, 9.5)**	**8.1 (0.8)**	**8.0 (4.5, 7.4, 8.6, 9.4)**

direct labour market insertion, we mean the process by which we communicate job offers directly to students. These are job offers known to the MDD organisers or offers that companies communicate to the MDD organisers. By indirect labour market insertion, we mean the knowledge that MDD students acquire about the network of organisations and specific services in which they carry out their internships. The MDD management team estimates that 15–20% of graduates end up working at the centre where they carried out their internship and 20–25% at centres that they contacted through the MDD's community resources directories. If we add the participants who find work without relying on the MDD structures, the percentage of graduates employed in the field, if they choose, is high, although we do not have this data. As a qualitative observation, in some cohorts, nearly all students had found employment before the programme ended, creating conflicts between their work and class schedules. In other cohorts, employment rates have been lower. However, there are notable differences by profession: high employability for doctors and nurses, medium for social educators and social workers, and low for psychologists, for reasons related to labour supply and demand.

4 DISCUSSION

4.1 Prospects and challenges for the future

The MDD turns 35 years old in the same year that we publish this article, which outlines its birth and trajectory. The programme has been characterised by its capacity to anticipate future needs, highlighting a comprehensive and non-exclusive view of the phenomenon of drug consumption and drug dependence. For example, in as early 1988, MDD added a seminar on harm reduction, when little was known about this approach and it had low political and professional acceptance in Spain.

University education has also changed significantly during over the past 35 years. We must highlight, for example, the changes that Europe experienced with the Bologna Process, which ended a few years ago. Incrementally, basic university education (bachelor's degrees) has become more generalist so that specialised training is both advisable and necessary. This is particularly important in the addiction treatment field for two main reasons. First, using the bachelor's in social education as an example, of the 36 Spanish universities that offered this degree in 2014, only seven (19.4%) offered specific courses in drug dependence, and these were always optional (Bas-Peña, 2014). Second, specialised training is important because the drug dependence field is both very broad and very specific, encompassing cross-cutting areas and sub-specialties. Note, for example, the originality of the Czech approach of creating a bachelor's degree in addictology, little seen elsewhere in the world (Miovsky et al., 2016).

This greater specialisation requires greater adaptability so that training programmes align with the training needs of the professionals who will enter the real world. The distance between academia and professional practice has been an enduring problem. The need to reconcile these two areas has shaped the MDD program.

The MDD has resisted major politico-social ups and downs. However, the COVID-19 pandemic has undoubtedly been the most challenging situation, forcing the programme to demonstrate its capacity to respond, adapt, and consolidate. At the beginning of 2020, as infections, hospitalisations, and deaths rose, Spain's government declared the second-ever national emergency in its history, imposing a stay-at-home order. Academic activity was paralysed because travel to educational centres at any level prohibited. As a result, the MDD switched to virtual learning in the middle of the academic year. Since then, the MDD has been taking place through videoconferences, although the in-person internships have been maintained despite many difficulties.

With this change, student, faculty, and management team motivation has not diminished but has increased. One example of this is that the 2021–21 cohort is one of the largest in MDD history, and students' mid-term evaluations of the teaching and contents are comparable to or even superior to those in previous years. In the current moment, in which the pandemic seems to be waning, the management team intends to return to the classroom in October 2021 to continue training specialists in preventing and treating drug dependence, as well as reducing the harm and risk linked to drug consumption.

5 CONCLUSIONS

In conclusion, since its initiation, the MDD has demonstrated the capacity to respond to many socio-cultural changes related to drug dependences. The number of candidates pursuing the MDD, and their satisfaction with the program, has increased over three decades. The workforce market is changing, and the MDD provides a specific and specialized curriculum that facilitates incorporating professionals into the specialized services. The MDD meets new challenges every year. The COVID-19 international pandemic presents the most pressing current challenge. Never the less, the MDD has adapted successfully, as it has since its inception.

Authors' contributions:
XF, ES, and FC designed the study. MO, OA, and FC performed the statistical analysis and participated in data interpretation and manuscript preparation. All authors designed the initial structure of the manuscript. OA, JA and XF conducted a literature review and summary of related work. AS supervised the statistical analysis and participated in the preparation and final review of the manuscript. All authors contributed to reviewing the article and approved the final version.

Declaration of interest:
The authors are part of the management team of the master's degree in drug dependence that is discussed in this article.

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