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Education and training in addiction medicine and psychology across Europe : a EUFAS Survey

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5 Education and Training in Addiction
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53

54 **0. Abstract**

55 **Introduction:** Training in addiction medicine and addiction psychology is essential to ensure the
56 quality of treatment for patients with substance use disorders. Some earlier research has shown
57 varying training between countries, but no comprehensive study of addiction training across Europe
58 has been performed. The present study by the European Federation for Addiction Societies (EUFAS)
59 aims to fill this gap.

60 **Methods:** A Delphi process was used to develop a questionnaire on specialist training in addiction
61 treatment in 24 European countries. The final questionnaire consisted of 14 questions on either
62 addiction medicine or addiction psychology covering the nature and content of the training and
63 institutional approval, the number of academic professorial positions and the estimated number of
64 specialists in each country.

65 **Results:** Six countries (Belgium, Denmark, Ireland, Italy, Poland, and Romania) did not report
66 specialized addiction medicine training, while 17 countries did. Seven countries (Belgium, France,
67 Ireland, Italy, Russia, Switzerland, and The Netherlands) did not report specialized addiction
68 psychology training, while 14 countries did. Training content and evaluation methods varied.
69 Approval was given either by governments, universities, or professional societies. Eighteen countries
70 reported having professorships in addiction medicine and 12 in addiction psychology. The number of
71 specialists in addiction medicine or psychology, per capita, varied considerably across the countries.

72 **Discussion:** The survey revealed a large heterogeneity in training in addiction medicine and addiction
73 psychology across Europe. Several countries lacked formal training and where present there was a
74 large variation in the length of the training. Harmonization of training, as is currently the case for
75 other medical and psychology specializations, is warranted to ensure optimal treatment for this
76 under-served patient group.

77 **1. Introduction**

78 Substance use disorders (SUD) contribute massively to the burden of disease worldwide (1). Globally,
79 more than 100 million people are affected by alcohol use disorder (AUD) and marginally fewer are
80 affected by other SUDs (2). These disorders already contribute to more than 5% of the lost disability
81 adjusted life years (DALYs) and show an increasing role (3). In addition, SUD are among the most
82 stigmatized medical conditions (4) and public acceptance to cut down treatment costs is comparably
83 high (5). Even among health care (both medical and psychosocial) workers, the importance of AUD
84 and SUD is often overlooked (6) and patients with these disorders are often frowned upon (7, 8).
85 Specific training and research in addiction medicine and psychology have long been lagging behind
86 other fields in public health (9). Fortunately, we have seen a slow increase in funding for addiction
87 research and a growth in the number of professionals involved in addiction medicine and psychology,
88 reflected in an increase in professional societies and scientific journals in the addiction field (10).

89 In 2010, 23 addiction societies from 16 European countries founded the European Federation of
90 Addiction Societies (EUFAS) (11). Since then, EUFAS has grown to include 36 national societies from
91 24 countries. The member societies represent both addiction medicine, addiction psychology and in
92 some cases, addiction practice related to social care. EUFAS aims to improve addiction treatment and
93 prevention measures at a European level and to support countries with less comprehensive systems.
94 In addition, EUFAS attempts to increase funding for addiction research as well as enhance and
95 harmonize knowledge and training in addiction medicine and psychology across Europe. However,
96 there are still large differences in training among European countries, and some countries struggle
97 with declining professional recruitment (12).

98 Throughout Europe and beyond, the larger domains in health care have developed comparable
99 treatment approaches and similar curricula in the training of medical doctors, psychologists, and
100 other specialists. However, there are doubts whether this also holds true for addiction medicine and
101 psychology as they are relatively new disciplines in a field that has been fronted by social workers
102 and public health nurses for decades (13). An earlier study described 34 addiction education
103 programs across 25 universities in eight European countries (14). Of these programs, five were
104 medically based and four psychology-based. The programs varied greatly in format and content. In
105 addition, some countries have published more detailed description of the trainings. For instance, a
106 study in the Czech Republic showed a broad range of graduate and postgraduate education programs
107 (15), and a US based study found quite comprehensive educational programs (16). Finally, a Canadian
108 study investigated the feasibility of training in addiction medicine and research simultaneously,

109 documenting possibilities for this approach (17). To the best of our knowledge, no broad European
110 overview has been presented so far.

111 Training at specialist level should be comprehensive, evidence-based, and aim at continuous quality
112 improvement (18). Recommendations state that training should follow a stringent curriculum, be
113 integrated in university programs, be provided by skilled teachers trained in university hospitals with
114 dedicated internships, be multidisciplinary and include educational activities in psychiatry and
115 general medicine (19-21).

116 Overall, increased traveling and academic exchange in Europe has been fuelled by exchange
117 programs like Erasmus. Also, the recent development of European Training curricula and board
118 exams in a growing number of medical specialities reflects this necessity. To make such exchange
119 possible, also for the addiction field, there is a need for harmonizing the quality of addiction
120 specialities. The basis for such harmonisations is a thorough knowledge on the current situation of
121 addiction medicine and addiction psychology training. Thus, the aim of the present study was to
122 investigate the organization and extend of specialized training in addiction medicine and/or
123 psychology across the 24 European countries conforming the EUFAS to provide an updated overview
124 of the training and research infrastructure that form the basis for education of addiction specialists.
125 The survey covered formal training in addiction medicine or psychology among other educational
126 aspects.

127

128 **2. Materials and methods**

129 The current study on training in Addiction Medicine and Psychology in Europe (EUFASamp) was
130 initiated by a working group in the EUFAS in collaboration with all authors.

131 *Development of the questionnaire*

132 The authors JB and ML used a modified Delphi technique (22) for consensus building among experts,
133 which resulted in the final online survey EUFASamp (supplementary fig. S1). For the Delphi process,
134 an international committee of experts was composed from the list of EUFAS member societies. When
135 identifying experts, special attention was given in obtaining a wide geographical coverage, while
136 keeping the committee small enough to allow efficient exchanges. Other selection criteria were
137 scientific and clinical experience in the field of addiction medicine and/or psychology, extensive
138 knowledge of addiction medicine or psychology, visible in scientific papers and having a central role
139 in the addiction training in their respective countries. Following these criteria, we were able to
140 incorporate a wide range of expertise and different perspectives. At the end of the selection process,
141 13 addiction clinicians and researchers alike, across ten European countries (Belgium, France, Italy,
142 The Netherlands, Poland, Portugal, Spain, Sweden, UK, and three from Germany), comprised the
143 expert committee and were involved in the Delphi process.

144 In the first round, the experts received via e-mail a draft of the survey on “Status of Addiction
145 Medicine and Psychology Specialist Training in European countries” (EUFASamp) in English, and were
146 asked to comment on completeness, structure, and comprehensibility of the survey. After the first
147 round, authors JB and ML discussed the comments of the experts and programmed a synthesis of the
148 results within “Nettskjema” (23), an online solution for data collection for research. In a second
149 round, the experts were invited to comment on the feasibility of the online survey and the answer
150 options of all items. This resulted in a two-armed survey – one arm for addiction medicine training
151 and another arm for addiction psychology training, taking country specific circumstances into
152 account. After a third expert round, a consensus was reached. The final online EUFASamp comprised
153 14 questions concerning different aspects of addiction medicine and psychology training,
154 respectively. Each item consisted of a multiple-choice question followed by a comment section,
155 enabling the report of country specific aspects. To verify the technical feasibility of the online survey
156 (e.g., use of different browsers, filter functions, view on PC, smartphones, tablets, etc.) a pre-test
157 among eight colleagues was conducted. The final EUFASamp survey can be found in supplementary
158 material.

159 *Data collection*

160 A snowball sampling (24) was used by sending the survey to all 34 member societies of the EUFAS by
161 e-mail in April 2021. The survey included the option to provide an e-mail to another person who
162 might answer the survey. This person then automatically received the survey by e-mail. Gentle
163 reminders and personal e-mails were sent to further representatives of the different countries where
164 EUFAS has member societies between May and June 2021. By June 30, 2021, we had received 36
165 responses from all 24 countries. The number of responses per country ranged from one to five with
166 an average of 1.5 responses and a median of one response per country. We received 11 responses
167 concerning addiction medicine training and five responses concerning addiction psychology training
168 only, the remaining 18 responses were for both arms of the survey. For some countries, we did not
169 receive responses on the psychology arm (Czech Republic, Denmark, Finland, Poland, Spain, UK).

170 There were some duplicate answers, i.e., countries with more than one response both in the medical
171 and psychology arms. These were studied in detail and noted in tables. In case of conflicting results, a
172 summary of the responses was sent to the societies for verification.

173 *Analysis*

174 All data were compiled in a spreadsheet and numerical data were entered into tables and figures,
175 and from the text in the commentary answer options, a short country summary was prepared.
176 Following this step, 24 country reports were produced. For those countries that provided information
177 on the training, the responses were e-mailed back to the member society of the respective country
178 for feedback on the authors' interpretation of the results. The response to this feedback was taken
179 into consideration before writing the final publication.

180 **3. Results**

181 *Addiction medicine*

182 Having an officially recognized specialization in addiction medicine was reported from 17 out of 24
183 countries (table 1), with training durations ranging from 0.5 (Germany) to 72 months (Norway). Most
184 countries (16 of 17) included theoretical learning, education about basic procedures,
185 pharmacological and non-pharmacological treatments, and most of them reported clinical
186 supervision (14 of 17), tutorials or interactive learning (12 of 17), practical courses (14 of 17), medical
187 emergencies (12 of 17), medical complications (15 of 17) and dual diagnosis (15 of 17). Of the 17
188 countries that reported having addiction training, an official authorization, diploma, or approval, was
189 given by the government in seven countries, by a professional society in six countries, and by
190 universities in four countries (see Table 1 for details). The approval/authorization was given after an
191 examination in 15 of the countries. Eight countries included a written task on their final approval and
192 nine countries included an evaluation of the course work.

193 Table 2 shows the number of professorships dedicated to addiction medicine in the different
194 countries responding to the survey. Also, the estimated number of medical specialists dedicated to
195 addiction medicine are provided, together with the number new specialists each year. Of the 24
196 countries, 18 reported having dedicated professorships for addiction medicine. For four of these we
197 did not receive an indication of number. Of the remaining 14, the numbers varied from 1 fulltime
198 professorship in Denmark and Norway to 23 in France. The number of dedicated addiction units for
199 addiction medicine was highest in France with 10 units. Germany tops the list for number of
200 specialists in addiction medicine per capita, followed by Denmark, Finland, France, and Norway.

201 *Addiction psychology*

202 Nineteen countries reported on addiction psychology specialist training. Fourteen of these countries
203 indicated having some specialist training and 12 reported on length of training ranging from 2-4
204 months (Spain) to 5 years (Croatia, Norway, Sweden) (Table 3). The amount of content of training
205 varied between the countries: in 10 of 14 countries theoretical learning is an element within the
206 specialist addiction training, while clinical supervision (6 of 14), tutorials or interactive learning (7 of
207 14) and practical courses (6 of 14) are further elements of specialist training. Of the 14 countries
208 reported having a specialist training, an authorization or approval was given by the government in
209 two countries (Luxembourg, Spain), by a professional society in four countries (Austria, Norway,
210 Portugal, Sweden), and by universities in four countries (Czech Republic, Greece, Hungary, Lithuania).
211 The approval/authorization was given after an examination in six of the countries, oral examinations

212 in three cases. Five countries included a written task on their final approval and four countries
213 included an evaluation of the course work.

214 Table 4 shows the number of professorships dedicated to addiction psychology in the 16 different
215 countries that responded to this part of the survey. Additionally, the number of specialists dedicated
216 to addiction psychology is shown, together with the number of new specialists qualifying each year.
217 Of the 16 countries, 12 reported to have dedicated professorships for addiction psychology. For two
218 of these we have not received an indication of a number, but among the remaining 10, numbers
219 varied from one part-time professorship (Italy) to ten full time professorships and one part-time
220 professorships dedicated to addiction psychology in the Czech Republic, followed by six part-time
221 professorships in Austria. These figures are in some ways reflected in the number of dedicated units
222 for addiction psychology and the number of specialists, with Germany topping the list. Norway and
223 Portugal top the list for number of specialists in addiction psychology.

224

225 4. Discussion

226 Training in addiction medicine and psychology showed a large heterogeneity across 24 European
227 countries, both in training procedures and the magnitude of academic staff. For *addiction medicine*
228 17 of 24 countries reported a specialized training, with a length varying from a short addition to
229 psychiatric training, to a fully independent speciality of up to five years. Belgium, Denmark, Ireland,
230 Italy, Poland, and Romania did not report specialized training in addiction medicine. Most training
231 programs required some form of examination before authorization. The large variation in the
232 number of academic positions dedicated to addiction medicine ranged from 23 in France to none in
233 five countries. Lastly, the number of medical doctors authorized as specialist in addiction medicine
234 varied greatly, with higher numbers reported in Germany having a shorter training duration, but with
235 quite high numbers even in Denmark, Finland, France, and Norway that all had longer specialized
236 training.

237 Similarly, for *addiction psychology*, 14 of 19 countries reported having specialized training. Belgium,
238 France, Ireland, Italy, Russia, Switzerland, and The Netherlands did not report specialized addiction
239 psychology training. The length of the training varied from one to five years, most with some form of
240 examination before authorization. Professorships were less common compared to addiction
241 medicine, and were mostly found in the Czech Republic, Germany, and Austria. Also, the number of
242 addiction psychology specialists was low compared to addiction medicine, with Portugal and Norway
243 topping the list.

244 The large heterogeneity observed in our study is discordant with the growing need for harmonization
245 in health care within Europe (25). The great variability in the training offered and the number of
246 positions dedicated to addiction training may lead to inequalities in the provided treatments across
247 Europe, and probably indicates that not all patients are receiving treatment that fulfill the criteria of
248 qualified specialist practice (18-20). Most worrisome is that quite a few countries lack any formal
249 training in the addiction medicine and psychology fields.

250 Further research should analyze how differences in training correlate with differences in treatment
251 provision and treatment facilities for the same addiction problems across Europe. In addition, varying
252 structures and funding systems of addiction services may promote a different composition of the
253 workforce of addiction professionals an affected individual may encounter at various stages of
254 disease and recovery. Therefore, training of other professional groups including social workers and
255 nursing practitioners, should be investigated. The known wide treatment gap between need and
256 provision for people suffering from addictions receiving specialized treatment also calls for the
257 analysis of addiction education that is included in the training of other health care professionals (26).

258 The European Union of Medical Specialists (UEMS) aims to promote the highest standard of training
259 at European level and to define standards for each medical speciality (27), but does not have
260 addiction medicine as one of the specialities. Addiction is only mentioned as a subspeciality of
261 psychiatry.

262 There is a huge variation in addiction medicine and psychology specialist provision per capita ranging
263 from zero to around 100 per million inhabitants. It is not easy to determine what would be an
264 optimal level as this depends on many factors inherent in the health care provisions in each country.
265 But decreasing this cross-country heterogeneity, mostly by introducing specialization in countries
266 where such specialization is not provided, could ensure better health care for these patients, also
267 through reduction of stigma. Furthermore, the harmonisation of the quality of addiction specialities
268 across Europe would also contribute to an improved cross-country exchange regarding student
269 mobility and knowledge. Thus, there is a need to ensure good quality education of both general
270 health care and addiction professionals across Europe to decrease the burden of disease caused by
271 addictions (21).

272 *Limitations*

273 The survey did not reach all the countries and country representatives. The information presented
274 only includes those responding. Also, responses were not supported by official documents or
275 regulations. The information was based on personal declarations by the respondents, which might be
276 subject to error. However, respondents were identified as key stakeholders of the field, including
277 leaders of national associations or scientific societies of addiction medicine or psychology, reducing
278 the risk of information bias. Overall, taking these limitations into account, we consider this survey as
279 a first baseline measurement of the current state that needs to be expanded and repeated in view of
280 following-up future developments in the field of addiction training throughout Europe.

281 *Conclusion*

282 Some European countries have local trainings for addiction medicine and psychology, some
283 incorporate this training in other specializations, quite countries lack formal training. The
284 heterogeneity in training and especially the lack of training in some countries are of great concern.
285 Like other health care disciplines, a harmonized (minimum) curriculum for addiction medicine and
286 psychology training in Europe should be urgently set up.

287

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293 **Author contributions:** Author 1, Author 9, Author 6 and Author 15 had the idea for the paper. Author
294 1 and Author 2 headed the Delphi process, including all the co-authors. Author 6, Author 14, Author
295 4 and Author 1 wrote the first draft of the paper, with Author 2 writing the methods section and
296 Author 10 and Author 11 writing a first critical revision. All the authors revised the information from
297 their own country and contributed to the final wording of the document. All authors read,
298 commented on, and approved the final draft of the manuscript before submission.

299 **Data availability statement:** The data included in this survey can forwarded after contact with the
300 first or second authors

301

302 **5. References**

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373 [us/presentation/aims-and-objectives](https://www.uems.eu/about-us/presentation/aims-and-objectives).

Table 1. Training for addiction medicine in Europe

Country	Length of training (months)	Training										Who certifies?	Certificate/Diploma/Degree	Comment
		Type		Content										
		Theoretical learning	Clinical supervision	Tut./ Intra. learning	Practical courses	Non-pharmacological	Pharmaco-therapy	Basic procedures	Medical emergencies	Med. complications	Dual diagnosis			
Austria	6-48	x	x	x	x	x	x	x	x	x	x	Professional society	Oral theoretical examination, written master thesis, and course work evaluation	
Belgium	No specific training													
Croatia	24	x	x	x	x	x	x	x	x	x	x	Government	Oral theoretical examination, written thesis, and course work evaluation	
Czech Republic	12-24					x	x	x			x	University	Oral theoretical examination and master thesis	Recertification every 3 years
Denmark	No specific training													
Finland	24-36	x	x	x	x	x	x	x	x	x	x	Professional society	Theoretical examination	
France	12-24	x	x	x	x	x	x	x			x	University	Oral theoretical examination, written thesis, and course work evaluation	
Germany	0,5	x			x	x	x	x	x	x	x	Professional society	Oral examination	5-6 weekend courses in addition to other medical speciality
Greece	12-24	x	x	x	x	x	x	x	x	x	x	University	Oral theoretical examination and written thesis	Part of psychiatric training
Hungary	24	x	x									University	Theoretical examination and course work evaluation	Some part of psychiatric training
Ireland	No specific training													
Italy	No specific training													Some training in psychiatry or gastroenterology
Lithuania	Some <i>ad hoc</i> training	x		x	x	x	x	x						Some training in psychiatry or toxicology
Luxembourg	No information	x										Government	Theoretical examination	
Norway	60	x	x	x	x	x	x	x	x	x	x	Government	Theoretical examination, written thesis, and course work evaluation	
Poland	No specific training													Part of psychiatric training
Portugal	3	x	x	x	x	x	x	x	x	x	x	Professional society	Theoretical examination	
Romania	No specific training													
Russia	24	x	x		x	x	x	x	x	x	x	Government	Oral theoretical examination, written thesis, and course work evaluation	Part of "Narcology"
Spain	12	x	x	x	x	x	x	x	x	x	x	Government	Course work evaluation	Can be chosen as part of psychiatric training
Sweden	30	x	x			x	x	x	x	x	x	Government	Theoretical examination	
Switzerland	12-24	x	x	x	x	x	x	x			x	Professional society	Oral theoretical examination and master thesis	Recertification every 3 years
The Netherlands	24	x	x	x	x	x	x	x	x	x	x	Government	Theoretical examination and course work evaluation	Master class
United Kingdom	12		x	x	x	x	x	x	x	x	x	Professional society	Course work evaluation	Recertification every 5 years

Table 2. The professional body of addiction medicine (academic and clinical) in Europe. The letter “n” indicates that there are some, but number unknown. Blank cells indicate no information. Zero (“0”) indicates known non-existent. Slash (“/”) indicates more and conflicting responses

Country	Professorships		Addiction specialists		
	Full time	Part time	In total	Per 1 million inhabitants	New per year
Austria	3 ^a	3 ^a			
Belgium		3 ^a			
Croatia		3/20	25	6	3-5
Czech Republic	2		30	3	1-2
Denmark	1		144	25	10-15
Finland	1	1	146	26	10
France	23		1000-2000	15-31	100
Germany	1/2	7	7000	84	200
Greece		3			
Hungary	0	0	160	17	1-2
Ireland	1	1			
Italy	0	0			
Lithuania					
Luxembourg					
Norway	1		150	28	20
Poland	0 ^a		0	0	
Portugal	n		70	7	
Romania	0	0	0	0	
Russia	n		N		
Spain	0 ^a	0	0	0	0
Sweden	3		60	6	
Switzerland	2	2			
The Netherlands	n	n	100-200	6-12	30
United Kingdom	9		81	1	20-25

a) addiction medicine is taught by other professorships, like psychiatry

Table 3. Training for addiction psychology in Europe

Country	Length of training (months)	Training Type				Who certifies?	Certificate/Diploma/Degree	Comment
		Theoretical learning	Clinical supervision	Tut./ intera. learning	Practical courses			
Austria	6-48	x	x	x	x	Professional society	Oral theoretical examination, written master thesis, and course work evaluation	
Belgium	No specific training							
Croatia	60	x		x	x		Oral theoretical examination, written master thesis, and course work evaluation	
Czech Republic	12-24					University		Several ways into specialization
France	No specific training							
Germany							The 3-5 years psychotherapy courses following a master degree, end with a certificate that allows for publicly funded treatment of all mental disorders, including Addiction	
Greece	24	x	x	x	x	University	Oral theoretical examination, written master thesis, and course work evaluation	
Hungary	24	x	x			University	Theoretical examination and written thesis	
Ireland	No specific training							
Italy	No specific training							
Lithuania	24	x		x	x	University		Master program, no certification
Luxembourg	No information	x				Government	Theoretical examination	
Norway	60	x	x	x		Professional society	Written thesis	
Portugal	No information	x	x	x	x	Professional society		
Russia	No specific training							
Spain	2-4	x	x	x	x	Government	Course work evaluation	
Sweden	60	x				Professional society	Theoretical examination and written thesis	
Switzerland	No specific training							
The Netherlands	No specific training							

Table 4. The professional body of addiction psychology (academic and clinical) in Europe. The letter “n” indicates that there are some, but number unknown. Blank cells indicate no information. Zero (“0”) indicates known non-existent. Slash (“/”) indicates more and conflicting responses

Country	Professorships		Addiction specialists		
	Full time	Part time	In total	Per 1 million inhabitants	New per year
Austria		6			
Belgium	1 ^a				
Croatia	10	1	20	5	
Czech Republic	1		20	2	1-2
Germany	2/3	5			
Greece		3			
Hungary	1		10	1	0-1
Ireland	1	1			
Italy		1			
Lithuania					
Luxembourg					
Norway	n		100	19	
Portugal		n	100	10	
Spain	0 ^a	0	0	0	0
Sweden	n		30	3	
Switzerland	2	1			

a) addiction psychology is taught by other professorships

Supplementary material: Survey (separate file)