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An European overview of genetic counselling supervision provision

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ABSTRACT

Genetic testing is becoming more commonplace in general and specialist health care, and should always be accompanied by genetic counselling, according to legislation in many European countries and recommendations by professional bodies.

Personal and professional competence is necessary to provide safe and effective genetic counselling. Clinical and counselling supervision of genetics healthcare practitioners plays a key role in quality assurance, providing a safe environment not only for patients but for professionals too. However, in many European countries, genetic counsellors are still an emerging professional group and counselling supervision is not routinely offered and there are no enough evidences on the impact of these insufficiencies. This study aimed to explore the current status of genetic counselling supervision provision across Europe and to ascertain factors that might be relevant for the successful implementation of counselling supervision.

A total of 100 practitioners responded to an online survey; respondents were from 18 countries, with the majority working in France (27%) and Spain (17%). Only 34 participants reported having access to genetic counselling supervision. Country of origin, the existence of a regulation system and years of experience were factors identified as relevant, influencing access and characteristics of counselling supervision.

Although there is a growing number of genetic counsellors trained at European level, just a few countries have implemented and required as mandatory the access to genetic counselling supervision. Nevertheless, this is essential to ensure a safe and effective genetic counselling and should be regulated at the European genetic healthcare services.

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1. Introduction

Genetic counselling is a communication process centered around patients' experiences of how to live affected or at risk of being affected by a genetic condition. Genetic counselling aims to provide them and their families with the help to understand the disease and the support to cope with its implications (Resta et al., 2006). Advances in genomics has led to a steep rise of genetic counselling consultations being requested (Borry et al., 2018). This has also contributed to the gradual incorporation of non-medical staff into genetic services teams (Abacan et al., 2019; Paneque et al., 2017; Skirton et al., 2013). This team model has had very positive results (Battista et al., 2012), assuring an effective and multidisciplinary management of patients while offering a holistic approach to the care of individuals with genetic conditions and their families (Paneque et al., 2017; Skirton et al., 2013).

Despite its advances, the genetic counselling profession is not yet worldwide recognized (Abacan et al., 2019). Several professionals, having various training backgrounds and roles, may still lead genetic counselling consultations (Skirton et al., 2013b; Pestoff et al., 2018; Cordier et al., 2018). Additionally, key factors associated with an effective genetic counselling service as well as the most adequate instruments to assess its impact are still understudied (Guimaraes et al., 2013; Paneque et al., 2012; McAllister et al., 2007).

The practice of genetic counselling in Europe is highly heterogeneous; while the first Master degree programmes for genetic counsellors started in the UK in 1992, there are countries that have none yet. Provision of genetic counselling across European countries is disparate, regarding education and training required for genetic counsellors, as well as professional practice and recognition of the profession (Skirton et al., 2013b; Pestoff et al., 2018). Additionally, genetic counselling practice has evolved greatly in the last 20 years. The genomic era has been a revolution not only considering the technical aspects of diagnosis. New challenges and experiences for practitioners has been described such as coping with uncertainty or unexpected results while genetic counsellors try to effectively communicate genomic variants (Merrill and Guthrie, 2015).

The psychotherapeutic nature of the genetic counselling process has been increasingly acknowledged (Biesecker et al., 2017). Genetic counselling has consistently been shown to impact patients and families (Edwards et al., 2008) and, understandingly, counsellors too (Kessler, 1992; Schema et al., 2015; Reeder et al., 2017). Indeed, the supportive or emotional elements of counselling have been recognized as providing more benefits to users than the informational or educational elements (Edwards et al., 2008).

Based on these premises counselling supervision has emerged as a service to enable genetic counsellors to acknowledge whether and how their own experiences, thoughts or feelings could impact their work with patients, and to explore and manage the impact the genetic counselling process could have for them (Middleton et al., 2007; Clarke et al., 2007).

Genetic counselling supervision has been defined as a formal and contractual arrangement, whereby genetic counsellors meet with a suitably trained and experienced supervisor to engage in purposeful, guided reflection of their work (www.ebmg.eu, accessed on September 2021). Focusing on the dynamics between patient and genetic counsellor, the aim of this process is to explore the interactions between counsellors and their patients, thus enabling the professional to learn from experience, improve their practice and maintain competence. The overall intention is to enhance the quality and safety of patient care and to promote the ongoing professional development of the genetic counsellor, as well as their psychological wellbeing (Clarke et al., 2007). A distinction must be made between this kind of peer supervision for the purposes of professional development and support in practice from the student supervision that enclosed students' supervised experiences during their training for becoming genetic counselors.

Awareness of the valuable role of counselling supervision has reveal itself at the European system for professional registration of genetic

nurses and counsellors by the European Board of Medical Genetics. Receive counselling supervision is a registration requirement for those professionals. In their Code of Practice, EBMG regards counselling supervision as essential for safe practice and it should contribute to the ongoing development and support of every genetic counsellor (www.ebmg.eu, accessed on May 2022).

Despite the growing awareness about the relevance of genetic counselling supervision, there is insufficient empirical data to document its role. Literature and empirical data exploring genetic counselling supervision is very limited, but the overall experience and outcome seems to be positive (Clarke et al., 2007). One study, in the context of students supervision, concluded that supervisors lack guidelines to help them support the supervision process, highlighting the need for more resources such as written material and workshops (Hendrickson et al., 2002) and this may be the situation of peer supervision provision as well.

There is an urgent need to understand how genetic counselling supervision is being provided in Europe and to explore deeply the effects in counselees and/or counsellors of the absence of access to those services as a routine for professionals providing genetic counselling. As a clear pathway for quality assurance and a safe space for counsellors reflective practice, it may be questioned if even when facing other greater challenges in genetics healthcare, it could be possible to organize current existent human resources and make possible this relevant service. In order to fulfill the gaps on this knowledge we have designed the present study with two objectives (1) to map the provision of genetic counselling supervision across Europe and (2) to identify factors that might be relevant for the successful implementation of counselling supervision.

2. Method

2.1. Participants

Our study aimed healthcare professionals practicing genetic counselling in Europe (e.g. genetic counsellors, geneticists, oncologists, pediatricians, and others).

2.2. Procedures

An invitation letter was sent electronically to all potential participants, explaining the rationale of the research and underlining the anonymous and voluntary participation in the study. The letter included a link to the on-line survey. Reminder emails were sent after three and six months from the first contact.

Potential participants were contacted through national and international associations and through the European Network for Genetic Counsellors and Nurses (ENGNC) in all European Countries were genetic counselling is offered Geneticists and genetic counselors enrolled in the Human Genetics European Society were also contacted. A snowball technique was adopted and all participating professionals were asked to forward the survey to other colleagues between September 2018 and December 2020.

2.3. Measures

The survey consisted of a list of open and closed questions, aimed at characterizing participants' sociodemographic data (i.e. gender, age, country, core training) and the access to genetic counselling supervision, along with questions about their opinions and experiences on this topic. We wanted to know if participants had access to supervision, for how long they have had access, which therapeutic model this supervision was based on, the frequency of supervision sessions and location amongst other data. Participants' perceptions about the possible effects of supervision on their practice were also explored.

2.4. Data analysis

The following variables were analyzed: country of origin, place of work, professional background, years of experience in genetic counselling, professional registration status, access to genetic counselling supervision, model of counselling supervision, funding source for counselling supervision, counselling supervision location, length of counselling supervision sessions, existence of a national agency or a professional body regulating genetic counselling practice in the country of origin, existence of national regulation/recommendation/law supporting it. Categorical variables were created to study their association and were analyzed using Chi-Square or Fisher exact-tests as appropriated. Statistical analysis was performed using SPSS for Windows version 27.

Two of the survey questions were open-ended and qualitative data was collected. We used grounded theory to explore key themes and identify patterns (Strauss and Corbin, 1990).

3. Results

3.1. Demographics

Participants' demographic and professional details are presented in Table 1.

A total of 100 practitioners responded to the online survey. The majority of respondents were female (85%), and almost 40% were within the 31–40 years age range category. The most widely held professional qualification was the Master's degree in genetic counselling (34.9%). From the ones with a Master's degree in genetic counselling, 36.2% stated that genetic counselling supervision was included as a subject to learn/discuss about in the academic content of the program. 57% of the participants had been working in genetic counselling for less

Table 1 Participant demographics.

Demographic	n	%	
Gender, n = 100	Male	15	15
	Female	85	85
Age, n = 100	20–25	1	1
	26–30	9	9
	31–35	21	21
	36–40	19	19
	41–45	13	13
	46–50	13	13
	51–55	8	8
	56–60	10	10
Professional Background, n = 166 (more than one indicated)	Over 60	6	6
	Bachelor of science/genetics	24	14.5
	Bachelor of nursing/midwifery	17	10.2
	Bachelor of psychology	4	2.4
	Other Bachelor degree	3	1.8
	Master's degree in genetic counselling	58	34.9
	Master's degree in genetic nursing	1	0.6
	Other master's degree	24	14.5
	PhD	27	16.3
	Medical geneticist	8	4.8
Years of experience, n=100	Less than 1 year	1	1
	Between 1 and 5 years	21	21
	Between 6 and 10 years	36	36
	Between 11 and 15 years	27	27
	Between 16 and 20 years	5	5
	Between 21 and 25 years	3	3
Place of work, n = 100	Over 25 years	7	7
	Hospital	78	78
	Research center	6	6
	Both	11	11
	Other (ex. private clinic)	5	5

than 10 years. The vast majority of them are working in a hospital setting (78%). 57% of the respondents said that they have registered as genetic counsellors or nurses via the European Board of Medical Genetics. Overall, respondents were from 18 countries, with the majority working in France (27%) and Spain (17%) (see Fig. 1).

3.2. Characteristics of genetic counselling supervision in Europe

From our sample, only 34 participants reported having access to genetic counselling supervision (Table 2). Professionals with access to counselling supervision were mainly from UK (23.5%) and Spain (20.5%). The institutions of 58.8% of the participants subsidize this access.

Regarding the supervision model in use, 21 professionals (61.8%) accessed a form of group supervision. From them, 6 (17.6%) used a family system approach, 15 (38.2%) other group models. Amongst them, one professional described specifically to engage group sessions following the Consultative Supervision Model of Alan Phillips and one other described group sessions of 3–5 genetic counsellors who have non-religious discussions with hospital priest.

Seven professionals (20.6%) used more than one method of counselling supervision, combining one-to one with a form of group supervision while 10 professionals (29.4%) have arranged only one-to-one supervision.

The frequency of supervision sessions varied from weekly to three times a year, with most respondents having monthly supervision. 29.4% of participants stated that their genetic counselling supervision sessions lasted 1 h.

For 64.7% of the participants, supervision sessions take place in their own department/hospital. The rest of the participants access the services externally.

Twenty-four professionals (70.6%) with access to counselling supervision are registered in a certification board, the GCRB from UK or the European Board of Medical Genetics.

Among the sixty-six respondents without access, a half stated they have no access to any form of counselling supervision.

3.3. Potential factors influencing counselling supervision access

We tried to understand if there were significant differences regarding access and characteristics of the supervision among the different European countries.

All participants from countries such as UK reported full access to counselling supervision while all professionals from other countries

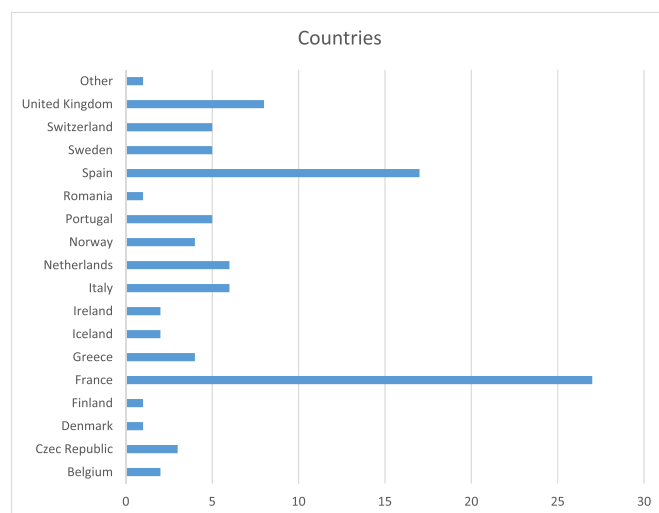


Fig. 1. Percentage of participants by country, n = 100.

Table 2
Description of supervision access among participants.

Characteristics of GC Supervision access	n = 34	%
Years of experience as Genetic counsellor		
less than 5 years	5	14.7
5–10 yrs	14	41.2
11–15 yrs	6	17.6
16–20 yrs	4	11.8
over 20 yrs	5	14.7
Years accessing to supervision		
less than 5 years	12	35.3
5–10 yrs	7	20.6
11–15 yrs	8	23.5
16–20 yrs	3	8.8
over 20 yrs	3	8.8
How supervision is funded		
the own professional	14	41.2
the institution	20	58.8
Where GC supervision takes place		
own place of work	22	64.7
external entity	11	32.3
Frequency of GC sessions		
Weekly	8	23.5
Every 3 weeks	3	8.8
Monthly	15	44.1
Bi-monthly	3	8.8
Trimestral	2	5.9
Three times per year	2	5.9
As needed	1	2.9
Duration		
10–20 min	5	14.7
30 min	2	5.9
1 h	10	29.4
2 h	9	26.5
1–2 h	7	20.6
4 h	1	2.9
Model in use		
One-to-one supervision	18	52.9
Group supervision:	21	61.8
Family-system approach	6	
Other models	15	

referred not having access at all (Denmark, Greece, Finland, Norway or Romania, among others).

Additionally, our results pointed out a correlation between counselling supervision access and the existence of a national registration system. Higher access to counselling supervision was described in countries where a system for professional registration is well established. One of the clearest example is the one of UK - all UK professionals that participate in our study have access to counselling supervision (P-value = ,023). Also, the existence of a specific regulation for the profession is associated with a higher adherence to supervision (P-value<0,001). Differences according to the therapeutic model that is followed (P-value = ,026) were observed between countries included in the study, while the place where genetic counselling supervision is done is not (P-value = ,136). There were no statistically significant results for the comparisons of the type of professional background (P-value = ,797) nor the place of work (P-value = ,790) with the access to peer counselling supervision.

If we analyze only the answers of those who have access to genetic counselling supervision, we can verify that there is not a significant difference between the counselling supervision model in use and the amount of time professionals are undergoing this service (P-value = 0,112), and with the location where they have supervision (P-value = 0,055). However, we observed a higher frequency of the own place of work being the location where they have supervision.

Results show that group co-supervision is used by the professionals who have less than 5 years of experience (75%), while the professionals with over 11 years of experience prefer the one-to-one supervision (58,8%) and the group supervision using “family systems approach” (80%).

Data showed as well an association between years of experience and frequency (P-value= <0,001) but not with duration (P-value = 0,348) of genetic counselling supervision – higher years of experience corresponding to a higher frequency but not to longer sessions. We also did not found an association between age and frequency of supervision (P-value = 0,934) while a significant difference was found between years of experience in genetic counselling practice and years using counselling supervision (P-value< 0,001).

The qualitative analysis of the open question about why some of the professionals do not have access to genetic counselling supervision offered some relevant insights that emerged inductively and described in Table 3.

From those that do not have access to genetic counselling supervision, 21 stated that this service did not exist/was not available in the country or that the genetic counselling profession is not yet recognized in the country (n = 8) (see Fig. 2). It was also emphasized (n = 8) that some of them have organized informal supervision - “I am lucky to have informal access to peer supervision with GC and therapist ex-colleagues as won't be available otherwise”. Fewer professionals said that they did not know that genetic counselling supervision existed (n = 6) or considered this not important (n = 2) and 4 said that employers do not recognize the need of GCS - “Employers' opinion is however that reflection/supervision is of low priority and might even be cancelled.”

We also collected information on which factors might be relevant for the successful implementation of genetic counselling supervision (see Fig. 3). Respondents consider that different stakeholders need to be involved. This includes (1) the Government and regulatory bodies (recognizing the profession in every country in Europe as a first and necessary step); (2) each different department that hires genetic counsellors (having an awareness of the profession and offering logistic support for supervision), and (3) genetic professionals, including genetic counsellors and colleagues, gaining knowledge regarding the psychosocial aspects of genetic counselling and the benefits of genetic counselling supervision. All this should be supported by (4) scientific societies, for example providing guidelines that would help with the implementation of GCS.

3.4. Views on the relevance of genetic counselling supervision

From the participants who do have access to counselling supervision, 28 answered the open-ended questions focused on the importance of counselling supervision for their practice and professional development. The answers to those questions were subjected to qualitative analysis and are summarized on Table 3. They are organized in 3 areas: gain of reflection and self-awareness (e.g. time to stimulate self-awareness and a better understanding about their reactions and own behaviors), development of skills and improve professional practice (e.g. enhance counselling skills and communication with patients and colleagues and explore situations and ways of handling them differently in order to achieve a more acceptable result), and sharing support and feedback (e.g. enable discussion of difficult and challenging cases, in a safe environment).

4. Discussion

The implementation of peer counselling supervision seems to be very low, according to the results here described where only 34% of the respondents had access to it. This heterogeneity concurs with the disparity in the implementation and recognition of the profession in different European countries; while in the UK there have been a specific training for genetic counsellors for almost 30 years, there are still a lot of countries without a proper training for these professionals. And, although peer counselling supervision is considered a valuable and essential tool for the safe practice of genetic counsellors, its implementation probably requires an entrenched profession, with a well-rooted base. It's obvious that genetic counselling, as a profession, has

Table 3

Major themes and sub-themes that emerged from qualitative assessment.

Can you please comment on how genetic counselling supervision (GCS) helps/helped you?	
(1) Reflection & self-awareness	<ul style="list-style-type: none"> - time to stimulate self-awareness - a space and a time to stop daily work - a better understanding about their reactions and own behaviors - helps to reframe challenging situations and specific behaviors
(2) Development of skills & improve professional practice.	<ul style="list-style-type: none"> - useful resource to improve their performance of their duties - gaining, enhancing, learning more, adding skills and tools (counselling skills; communication; how to handle a situation differently; strategies to cope; maintaining boundaries. - enhance counselling skills and communication with patients and colleagues - explore situations and explore ways of handling them differently in order to achieve a more acceptable result. - learning to protect themselves emotionally and to learn establishing boundaries
(3) Sharing Support & Feedback	<ul style="list-style-type: none"> - openly discuss out loud and communicate either with just one person (colleague or a therapist) or with a group. - enable discussion of difficult and challenging cases, in a safe environment, - express feelings - stress relief, ability to let go - personal balance - feedback gives confidence, creates trust and bonding
If you do not have access to genetic counselling supervision, could you tell us why?	
(1) Internal reasons	<ul style="list-style-type: none"> - did not know GCS existed - did not consider GCS necessary
(2) external reasons	<ul style="list-style-type: none"> - profession not recognized - GCS not available in the country - employers do not recognize GCS profession - not enough genetic counsellors
(3) GCS is informally organized by genetic counsellors	
Which factors might be relevant for the successful implementation of genetic counselling supervision?	
(2) Recognition of the profession	<ul style="list-style-type: none"> - regulation of the profession - implementation of genetic counselling in every European country - join regulatory body for allied health professionals
(3) Awareness of the profession	<ul style="list-style-type: none"> - employers aware of GCS importance - GCS as an investment
(4) Logistic support	<ul style="list-style-type: none"> - funding - time and resources
(5) Genetic counselling: psychological and therapeutic aspects	<ul style="list-style-type: none"> - recognizing the full skills toolkit required including the therapeutical aspects - Recognition of the GC profession as a whole
(6) Counselling supervision: benefits and usefulness	<ul style="list-style-type: none"> - improves work and psychological well-being - learning the meaning of compassionate fatigue - and how to avoid it.
(7) Support from the scientific societies	<ul style="list-style-type: none"> - endorsement by the professional associations (e.g. AGNC, BSGM, EBMG) and registration boards - guidelines on what exactly supervision is and how it could be set up in countries where supervision does not happen - establishing good practices

several battles to fight, regarding the establishment of specific training, its integration in different medical teams or the recognition of the profession which has several legal and administrative connotations; and, probably, some crucial aspects for the professionals (as counselling supervision) are pushed into the background waiting for the profession to be better settled.

4.1. Are we practicing in a safe environment at genetic services?

Although there are several evidences on the emotional and psychotherapeutic component of genetic counselling consultations, this mapping exercise highlights a serious lack of supervision of counselling aspects of our practice. On the contrary, it's very clear in some other fields like Psychology, that supervision is at the core of practice for all health and social care professionals, with a sense of shared responsibility for the effectiveness and safety of practice. There have been links with the provision of effective supervision and an increase in quality of care (Rothwell et al., 2021). Authors believe it is urgent to regulate the implementation of counselling supervision access to all healthcare professionals working at European genetic services.

To our knowledge, this is the first study carried out at the European level on this topic. Only specific reports in the United Kingdom have been published (Middleton et al., 2007) as it was the first European country where the profession emerged, with genetic counselling supervision having a long tradition there and being recognized as instrumental to the practice, training and registration of UK professionals (Clarke et al., 2007).

The heterogeneity in counselling supervision detected in this study does not only refer to access to supervision, as there is also a lot of disparity in frequency, duration and models in use during these sessions. These three aspects correlate with time of experience in genetic counselling; counsellors with more years of experience tend to attend to supervision with a higher frequency, not necessarily at longer sessions, with a clear preference for one-to-one supervision model. These correlations suggest that the more experienced professionals are more aware of genetic counselling supervision usefulness and benefits and are more capable to take advantage of it. More empirical studies are needed to better understand why is beneficial and useful and which are the effects on daily practice of not having access to a form of counselling supervision.

This is relevant if we consider genetic counselling profession is relatively young in Europe and about 57% of respondents have worked as genetic counsellors for less than 10 years. Thus, genetic counselling supervision may be of even more relevance for them as it is more likely to encounter difficult situations that would benefit from supervision during the first few years of practice. In addition, supervision could help them develop a reflective practice from the very beginning.

Very valuable data from counsellors accessing counselling supervision has been also collected in this study. Counselling supervision provides to professionals a space and time to reflect on their own practice; to develop skills and improve professional practice; and to share experiences and receive support. Previous studies reported on the importance of receiving regular and constructive feedback during supervision and spending time to reflect on practice (Rothwell et al., 2021). Clarke proposed that supervision is helpful for genetic counsellors in three domains: formative (developing counselling skills), restorative (confering emotional support) and normative (helping genetic counsellors to feel that their practice is of an acceptable standard) (Clarke, 2001). Respondents in this survey regularly referred to the formative and restorative domains, but less frequently to the normative domain, which may be a less conscious benefit of supervision.

Unfortunately, it wasn't properly explored as part of participants' general background, the model of practice of their preference. We may expect that depending on how much they use the educational model of genetic counselling versus the psychotherapeutic model it could influence how much they need and what characteristics could have professional counselling supervision.

Considering the emotional burden of genetic healthcare professions like medical geneticists, genetic nurses and counsellors, it is essential to take care of their own psychological wellbeing and to prevent professional burnout. Even not implemented as a proper service, a safe space for professionals of multidisciplinary teams to talk about the emotional aspects raised in a consultation or a complex feeling that they were not

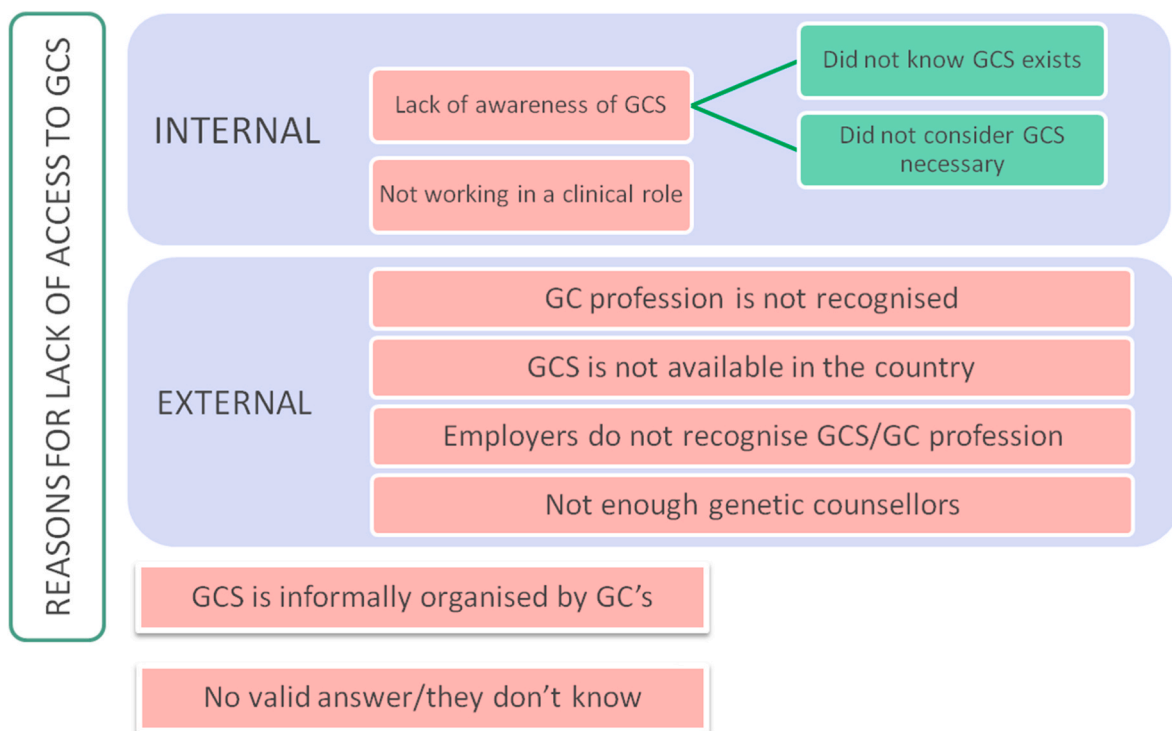


Fig. 2. Reasons for lack of access to genetic counselling supervision.

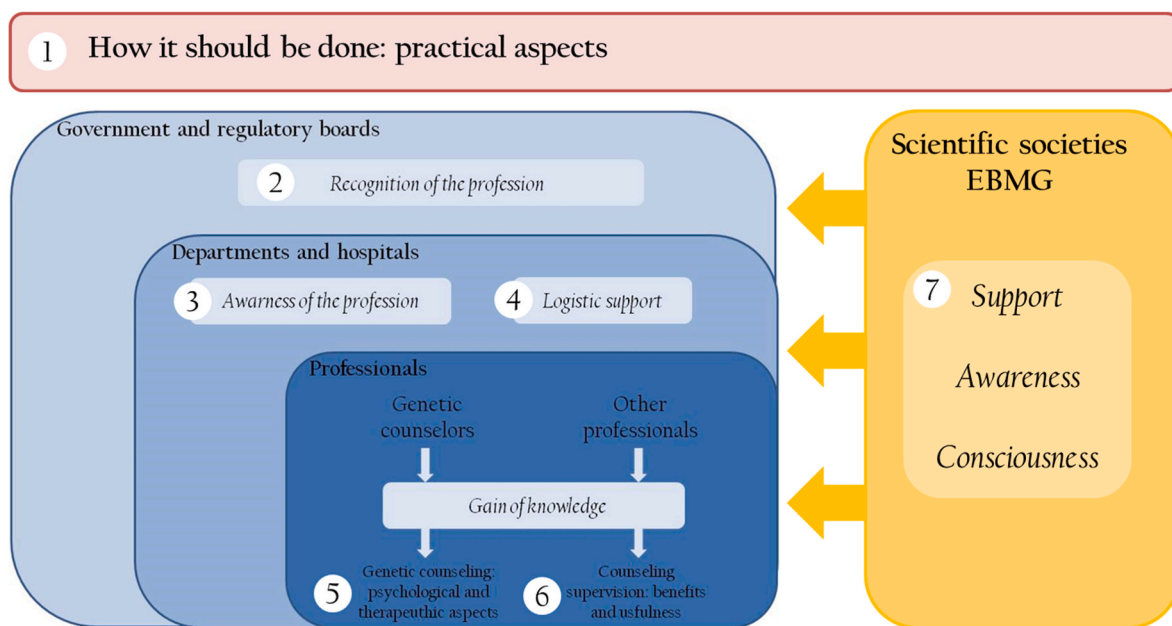


Fig. 3. Factors relevant for the successful implementation of genetic counselling supervision in services, region or countries.

completely satisfied while addressing, would be beneficial to counsellors and counsellors and overall, of great value for practice improvement. Additionally, counselling supervision is not only a matter of professional well-being, but also of patient safety, as supervision may help the professional to reflect about past challenging situations and may also provide resources to face future difficult consultations. In a profession where communication skills and interpersonal abilities are so relevant, counselling supervision provides an opportunity to improve them.

Although scarce, the existing studies are also favourable to having genetic counselling supervision and describes that discussing strategies,

ethical dilemmas, family dynamics and the thoughts and feelings of the genetic counsellors are the main areas where professionals need more support and supervision (Zahm et al., 2008). Similarly, studies at the context of students supervision have provided some insights of training models to supervisors; supervision competencies to supervisors (Hendrickson et al., 2002) (Eubanks Higgins et al., 2013).

Similar to our findings, benefits of counselling supervision have been described in the management of angry, transference and countertransference processes (Reeder et al., 2017). Other previous research supports the effectiveness of group supervision for improving self-awareness and

self-reflective practice (Zahm et al., 2008).

4.2. What has worked well and what not

It is no coincidence that 100% of respondents from UK, the pioneer country in Europe regarding genetic counselling, have access to counselling supervision. Nevertheless, we should not overlook the need to ensure a safe practice for counsellors and counsees. In this direction, EBMG as a reference entity for those professionals, might be of great support for the implementation of counselling supervision across Europe. In our study, we have identified internal and external reasons regarding the lack of access to counselling supervision and, in both, EBMG may have a relevant role. As internal reasons, we have shown a lack of awareness of counselling supervision among genetic counsellors. In some cases, the professionals did not even know that counselling supervision exists; in other cases, they knew about its existence but were not conscious about its relevance. EBMG, in collaboration with national scientific societies, might continue awareness actions on what is counselling supervision and how might benefit professionals and counsees. In addition, only 36% of respondents stated that genetic counselling supervision was discussed during their training. EBMG, as part of the assessment of eligibility of masters programs, could reinforce the importance of this subject during professionals' training. As external reasons, we have detected that, in several levels (head of the department, employee, administration), there is a complete lack of knowledge about the therapeutic component of genetic counselling, and therefore, a complete ignorance about the utility of counselling supervision. To reach and aware these different levels, documents elaborated and approved at European level might have a positive effect. As a positive note, 24 out of 34 respondents that receive genetic counselling supervision are registered with a certification board. Both the GCRB and the EBMG have genetic counselling supervision as a requirement for registration, which may be raising awareness and giving genetic counsellors tools to claim genetic counselling supervision at their departments or find other ways of accessing supervision. But surprisingly, half of professionals without proper access to counselling supervision have got the EBMG accreditation. We may hypothesize it can be due to the later establishment of this criteria as a pre-requisite for registration, also associated with the slow evolution on GC profession in many European countries.

Furthermore, it is a revealing fact that more than 40% of counselors who have access to counselling supervision funds the supervision themselves. Thus, there are no institutional support nor policies for funding this relevant activity to genetic counsellors.

There are indeed, good examples, of how the collaboration between European bodies and national scientific societies may have very positive results in promoting the proper access this form of supervision. This is the case of the Spanish Society of Genetic Counselling (SEAGen) promoted the creation of the first group of counselling supervision for genetic counsellors based on the recommendations and documents elaborated by the EBMG (Codina et al., 2019); the satisfaction among genetic counselors regarding the usefulness of supervision is high, as well as the continuity in the group. These initiatives may encourage countries with short history of genetic counselling and little tradition in counselling supervision, unfortunately they are not enough disseminate among the professionals groups of genetic counsellors in Europe.

Regarding the facilitators and barriers to supervision it has been shown that facilitators could be initiated individually or initiated organisationally. For example, individually -developing/maintaining a supportive network of clinical supervisors and documenting goals, not taking too many supervisees on, creating enough time for supervision. Organisationally – providing funding, support and appropriate technology for supervision, having flexibility to meet the needs of all supervisees). Similarly, barriers can also be individual or organizational. For example, individually – professional isolation, lack of commitment from supervisor, lack of skills and competence of the supervisor.

Organisationally – cultural resistance, time, lack of access, frequency). An extensive review of Rothwell et al. (2021) highlighted some of the above mentioned factors as enablers and barriers, but overall the clear benefits of effective clinical supervision in a healthcare setting (Rothwell et al., 2021).

Following this first attempt for an European view on how counselling supervision has been implemented and the perceived factors that have helped in accessing to this service, there are further studies that will provide relevant evidences. There is a need to have a deeper understanding on its effects on patients and professionals, a clearer definition of its models of supervision and how they work in different healthcare settings, so that recommendations and requisites of Code of Practice can be of more helpful to the wider community of genetic services professionals. Also, more information is needed on the modes of engagement in supervision, that is how the supervision takes place (e.g. face to face, at a distance or a combination of both); attributes of the supervisor (e.g. warmth, caring/empathic, motivated to be a supervisor) or supervisory (organisational skills, awareness of safe levels of practice, knowledge of the policies and organisation, ability to provide and receive constructive feedback).

We believe that the definition of responsibilities of the supervisor like the awareness of and up to date on policies, procedures and practices of the supervisees' and supervisors' workplace; maintenance of up to date records of supervision sessions and confidentiality; outcomes of supervision as measurable indicators around managerial/professional accountability such as improved patient relationships, improved confidence and competence in practice, are among other factors that can be better described. It is equally relevant to explore the influence of models of practice and both the use of and need for professional counselling supervision.

As previously stated, the skills that help to increase effectiveness of supervision and, consequently, to improve the genetic counselling given to the patients should be defined empirically (Eubanks Higgins et al., 2013). Finally, other future studies might elucidate insights regarding additional factors that contribute to implementing and benefit from counselling supervision.

Noticing that supervision isn't seen as a priority by most of the participants of this study and that a great part of them are registered professionals, we may wonder how insufficient is the awareness on the field overall. Recommendations of Professional bodies, position statements as well as the Code of Practice itself can be of improved concerning counselling supervision perhaps suggesting the integration of other non-medical healthcare professionals at genetic services who can guarantee access to supervision, but also indicating the need on investing in this matter.

5. Conclusions

This paper describes an insufficient access to counselling supervision in a sample of professionals from several European countries. It also offers some evidences from the participants point of view of how relevant genetic counselling supervision can be in spite of limitations in accessing to this valuable resource professional development. Although there is a growing number of genetic counsellors trained at European level, just a few countries have implemented and required as mandatory the access to genetic counselling supervision. Consequently, only one third of the respondents have access to counselling supervision and a relevant fraction of them, have access to this service funded by themselves. This study may also contribute to strengthening the professional role and standards of genetic counsellors in many countries, as well as identifying the necessary mechanisms for the successful implementation of counselling supervision in other European countries.

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Ethical approval

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CRedit authorship contribution statement

Milena Paneque: Conceptualization, Project administration, Formal analysis, Writing – review & editing. **Lídia Guimarães:** Investigation, Formal analysis, Data curation, Writing – original draft. **Joana Bengoa:** Formal analysis. **Sara Pasalodos:** Formal analysis. **Christophe Cordier:** Formal analysis. **Irene Esteban:** Formal analysis. **Carolina Lemos:** Formal analysis. **Ramona Moldovan:** Conceptualization, Formal analysis. **Clara Serra-Juhé:** Formal analysis, Supervision.

Declaration of competing interest

All authors declare that they have no conflicts of interest.

Data availability

The data that has been used is confidential.

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