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Reporting radiographers in Europe survey: An overview of the role within the European Federation of Radiographer Society (EFRS) member countries

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ABSTRACT

Introduction: Reporting radiographers undertake an important role in healthcare and for the radiographer profession in general. First introduced in the United Kingdom, reporting radiographers are now practicing in several other European countries. Our objective was to investigate the workforce of reporting radiographers across the European Federation of Radiographer Societies (EFRS) community.
Method and material: A voluntary anonymous 34 item electronic survey was distributed online using social media accounts such as Twitter, Facebook and LinkedIn covering a wide range of topics relating to professional role, advanced practice, education, and seniority. The questionnaire was distributed during a 12-week period in 2022.
Result: A total of 345 individual responses were received from 15 countries with majorities of respondent from United Kingdom (n = 245, 71%) and Denmark (n = 66, 19%). Mean age was 41.9 (S.D 9.8), similar for females, 42.5 (S.D 9.0) and men 40.9 years (S.D 9.7). Most reporting radiographers worked in public hospitals (90%). The vast majority of the respondents (n = 270, n = 94%) authored and signed their own clinical reports while a minority (n = 18, 6%) stated that their reports were checked by radiologists.
Conclusion: The survey highlights the scope of practice of reporting radiographers working in Europe. Reporting is becoming a career path for an increasing number of radiographers across Europe and there is assess to academic education and clinical support.
Implication for practice: Reporting radiographers fulfil an important role within the current demands of healthcare. This demand is likely to increase in the future, and therefore it is vital that there is some form of standardisation in the level of education that this group of healthcare professionals receive.

Introduction

Over the past 25 years the radiographer's role has widely expanded with new roles and opportunities available. Advanced roles for radiographers were developed in the United Kingdom (UK)[1] and slowly followed across the rest of Europe. Today the prospect of becoming a reporting radiographer is an option in many countries and includes reporting within multiple modalities such as digital radiography (DR), computed tomography (CT), magnetic resonance imaging (MRI), dual energy X-ray absorptiometry (DXA), fluoroscopy, interventional and more. Despite this, limited opportunities for radiographers to expand their role into reporting are still being experienced in some European countries often caused by

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national legislation and regulation.[2] Resistance from radiologists is also thought to be having an obstructive effect.[3] Nevertheless, increasing reporting radiographer numbers has shown to be a cost-effective approach to provide timely clinical reports[4–6] especially as imaging activities continue to grow due to technological advances and an aging population. Furthermore, the number of reporting radiographers has continuously increased and is expected to continue to rise due to shortages of radiologists, high demand of imaging services, and recognition of the important role of imaging in many patient pathways.

Accredited postgraduate education and clinical mentorship are an essential prequisite to practicing as a reporting radiographer. Reporting radiographers require formal education and continuous professional development to maintain the high-level skills needed to make an accurate diagnosis. As a result, audits are a part of everyday life in many clinical departments. Research suggests that appropriately educated reporting radiographers, working as part of a multidisciplinary team, have a diagnostic accuracy comparable to consultant radiologists.[7–21] However, despite this evidence there is still some resistance from other professional groups, which can limit professional development.[20,22] A future potential support function for reporting could be artificial intelligence, eye tracking or simulation training.[23–25]

Radiographer reporting practice has been investigated in previous questionnaire studies, for example, finding that many reporting radiographers can request or recommend further investigations within their scope of practice.[26] The role of reporting radiographers will, in many cases, also include communicating findings to clinicians.[1] A recent survey found a lack of uptake in chest X-ray reporting training by radiographers, mostly due to a lack of confidence in the skill required.[22]

Time allocated to reporting by an individual reporting radiographer varies between practitioner and departments, with many reporting radiographers having a range of other clinical roles. Milner et al. found an average of 42% of working hours was spent on reporting (mean 14.5 h per week).[27]

In general, there is limited data and knowledge regarding the European reporting radiographer workforce. The aim of this survey study was to explore reporting radiographer workforce and role in Europe.

Methods

Survey

Over a 12-week period from September to November 2022, reporting radiographers, excluding ultrasonographers, from a range of European countries were invited to participate in a questionnaire survey, focusing on education, working conditions, legal responsibility, level of report writing, type of hospital, employment, motivation and working hours spent reporting. Background data included gender, age, and country of work. Only reporting radiographers, excluding ultrasonographers, were eligible to participate.

The questionnaire was developed from three themes identified in existing literature about reporting radiographers and consisted of 34 items. Items and scales were discussed and agreed upon by the authors. Scales included a combination of Likert formatting (strongly agree, agree, partly agree, disagree, and strongly disagree), dichotomy scale (yes/no) and a scale from 1 to 10, where 1 was not important and 10 extremely important. When applicable, the option to specify “other” response was available. Free text was available at the end of the questionnaire to capture comments or perspectives of respondents not included elsewhere. A pilot test was conducted to assess the comprehensiveness and item relevance. The pilot survey included a mix of 7 reporting radiographers and a medical doctor to avoid information bias related to a specific healthcare group. Only minor changes (e.g., spelling mistakes, extra or deleting of response options) were made based on the pilot test. It was not mandatory to answer all questions, so some data gaps occurred as a result.

Study data was collected and managed using Research Electronic Data Capture (REDCap) managed by the Danish Open Patient Data Explorative Network (OPEN). REDCap is a secure web-based system designed for managing online questionnaires.

Statistical analysis

Descriptive statistics were used combined with a chi square test, comparing reporting radiographers responses with the following six variables; type of hospital, qualifications, report signed by radiologist, hours working as reporting radiographer, hours working in clinical practice and age. Ratio scales were presented as frequency tables with percentage, while other items such as age and gender were reported as median and standard deviation (S.D). All analyses were performed in Stata version 17 (College Station, TX, USA). P-values of ≤ 0.05 were considered statistically significant.

Ethics approval

The study was approved by the Research Ethics Committee at the University of Southern Denmark (ID number 22/29639) and local National Data Protection Agency. All data was anonymized. All respondents were asked in the beginning of the survey to provide informed consent.

Results

A total of 345 reporting radiographers participated from 15 European countries.

Table 1 presents characteristics of the respondents. Responses were received from 203 (59%) females and 121 (35%) males with 21 (6%) preferring not to say or not answering the question. The overall mean age was 41.9 years (S.D 9.8) with little difference between females (mean 42.5 years; S.D 9.0) and males (mean 40.9 years; S.D 9.7).

Reporting radiographers work most often in large public hospitals (>400 beds) (n = 179, 52%), medium public hospitals (150–400 beds) (n = 109, 32%) and rarely in small public hospitals (<150 beds) (n = 22, 6%). Reporting radiographers tended to have postgraduate education (n = 265, 77%), with a postgraduate certificate (n = 124, 36%) being the most frequent (Fig. 1).

The vast majority of respondents (n = 270, 94%) provided an independent clinical report, with a small minority (n = 18, 6%) stating that their reports were checked and then verified by a radiologist. There was a broad range of practice within the respondents, with many reporting radiographers having more than one area of practice, although musculoskeletal reporting was most commonly part of the scope of practice, along with clinical governance (n = 210, 60.3%, Fig. 2). Half of the reporting radiographers had access to a mentor or supervisor (n = 184, 53.3%), and newly qualified reporting radiographers had access to a preceptorship period and mentorship to support transition to practice (n = 199, 58%). Peer review and audit was in place as part of governance for 216 (63%) respondents with UK reporting being more involved in audits compared to non-UK ($p < 0.01$).

Table 2 shows difference between female and male reporting radiographers working hours per week. In general, more females than males participated in the survey. We found a statistically significant difference between the reporting time allocated each week to be higher for males compared to females ($p = 0.022$), and

Table 1
Shows characteristics of Survey respondents (n = 345).

Sex	
Females	203 (58.8)
Males	121 (35.1)
Not stated[a]	21 (6.1)
Total	345 (100)
Country	
Albania	1 (0.3)
Andorra	1 (0.3)
Belgium	3 (0.8)
Bulgaria	2 (0.6)
Denmark	66 (19.1)
Finland	1 (0.3)
France	1 (0.3)
Ireland	4 (1.2)
Malta	2 (0.6)
Netherlands	2 (0.6)
Norway	6 (1.7)
Portugal	1 (0.3)
Russia	1 (0.3)
Sweden	2 (0.6)
United Kingdom	245 (71.0)
Not stated	7 (2.0)
Total	345 (100)
Years of experience in radiography	
Less than a year	4 (1.2)
1–3 years	8 (2.3)
4–6 years	30 (8.7)
7–9 years	41 (11.9)
10–14 years	87 (25.2)
15–19 years	50 (14.5)
20–24 years	44 (12.8)
25+	62 (17.9)
Not stated	92 (5.5)
Total	345 (100)
Years as a reporting radiographer	
Less than a year	31 (9.0)
1–3 years	96 (27.8)
4–6 years	66 (19.1)
7–9 years	40 (11.6)
10–14 years	48 (13.9)
15–19 years	29 (8.4)
20–24 years	9 (2.6)
25+	6 (1.7)
Not stated	20 (5.8)
Total	345 (100)
Employment	
Teaching Hospital	243 (70.4)
Non-teaching Hospital	73 (21.2)
Not stated	29 (8.4)
Total	245 (100)

[a] Included responses of prefer not to say and unreported.

males were more likely to report digital radiography chest imaging compared to females ($p < 0.001$), and females reported more often DXA imaging compared to males ($p = 0.047$)

Table 3 shows the format the reporting radiographers can provide, ranging from checklist to full interpretative report, with the opportunity to suggest advice and order further investigations. UK reporting radiographers are more likely to take legal responsibility for the report compared to non-UK reporting radiographers. A total of 216 (77.7%; UK = 169, Denmark = 37, Norway = 4, Ireland = 3, Sweden 2 and The Netherlands = 1) of the respondents were allowed to provide advice or recommendations in their reports, eleven (4%; UK 35, Denmark = 2, Belgium = 1 and the Netherlands = 1) were not allowed to provide any form of advice, 19.4% (n = 54 including UK = 35, Denmark = 14, Norway = 4 and Ireland = 1) could recommend imaging with contrast, and 27.7% (n = 77 including UK = 60, Denmark = 13, Ireland = 1, Malta = 1, The Netherlands = 1 and Sweden = 1) could recommend non-contrast imaging, 4.7% (n = 13; including UK = 6, Denmark = 6 and Norway = 1) could recommend follow-up investigations, and 38 (13.7%) from UK = 32 and Denmark = 5 and France = 1 could recommend follow-up including contrast investigations.

Reporting radiographers' opportunities to further investigation divided between UK and non-UK where UK reporting radiographers are more involved in audits compared to non-UK ($p < 0.01$). Reporting radiographers in the UK communicated their findings to the patients less frequently compared to non-UK ($p = 0.005$). No statistically significant differences were found between UK reporting radiographers communication of findings to the referral doctor compared with non-UK ($p = 0.552$).

Table 4 shows area of practice of reporting radiographer, where reporting digital radiography musculoskeletal was the most common (n = 210), followed by digital chest radiography (n = 76).

Discussion

Main findings

Of the 345 respondents a total of 203 females and 121 males participated in the survey study. This is a ratio below 2 females to 1 male. In the UK for example, according to the most recently published data in 2019 for numbers of registered radiographers, the ratio of females to males is 3 to1, suggesting in the UK at least, a differential career pathway for male and female radiographers.[28] There is currently no public record on this in Denmark, however the Ministry of Health states a ratio of 2.7 females to 1 male student radiographer starting radiography education in 2022[29] and in Norway 2.8 females to 1 male student radiographer in 2021.[30]

Whilst the majority held postgraduate qualifications (Fig. 1), 11.3% (n = 39) have indicated that they only hold Level 5 and Level 6 qualifications. This raises questions as there is generally an expectation of post-graduate/post-qualification education in order to perform autonomously as a reporting radiographer. In the UK, for example, whilst there has historically been variation[31] in the type and length of training to underpin radiographer reporting, there is a move toward standardization of education and training. Examples are recent standards that have been published to support musculoskeletal and chest radiographs,[32,33] both of which stipulate postgraduate education. In addition, there is the possibility that some respondents may not be truly autonomous reporters, and it may also be that some individuals are in training to become reporting radiographers and have yet to achieve a higher award. Nevertheless, a degree of caution does need to be taken in terms of interpreting these data.

The overwhelming majority of reporting radiographers completed reports as an independent practitioner (n = 270, 93.8%) and provided independent clinical reports without routine review and authorisation by a radiologist or other healthcare professional. That this was not 100% could represent variations in practice or could be indicative of some radiographers still being in training. Two of the respondents also provide a checklist and 12 of the respondents a structured descriptive report which may also explain the difference in qualifications of the survey respondents, as previously discussed, and may relate to their scope of practice (Table 4).

There are variations in terms of onward referral, with some participants being able to make suggestions for follow-up imaging using contrast agents. We found a higher difference between recommendation for further examination including contrast between UK and non-UK (including Andorra, Denmark, Ireland,

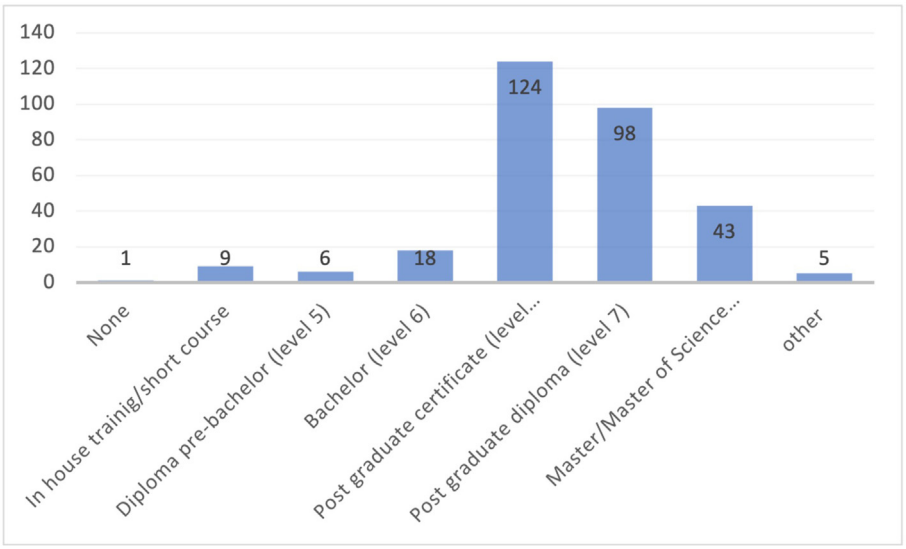

Figure 1. Shows qualifications the reporting radiographers holds.
Note: Response rate was n = 304.

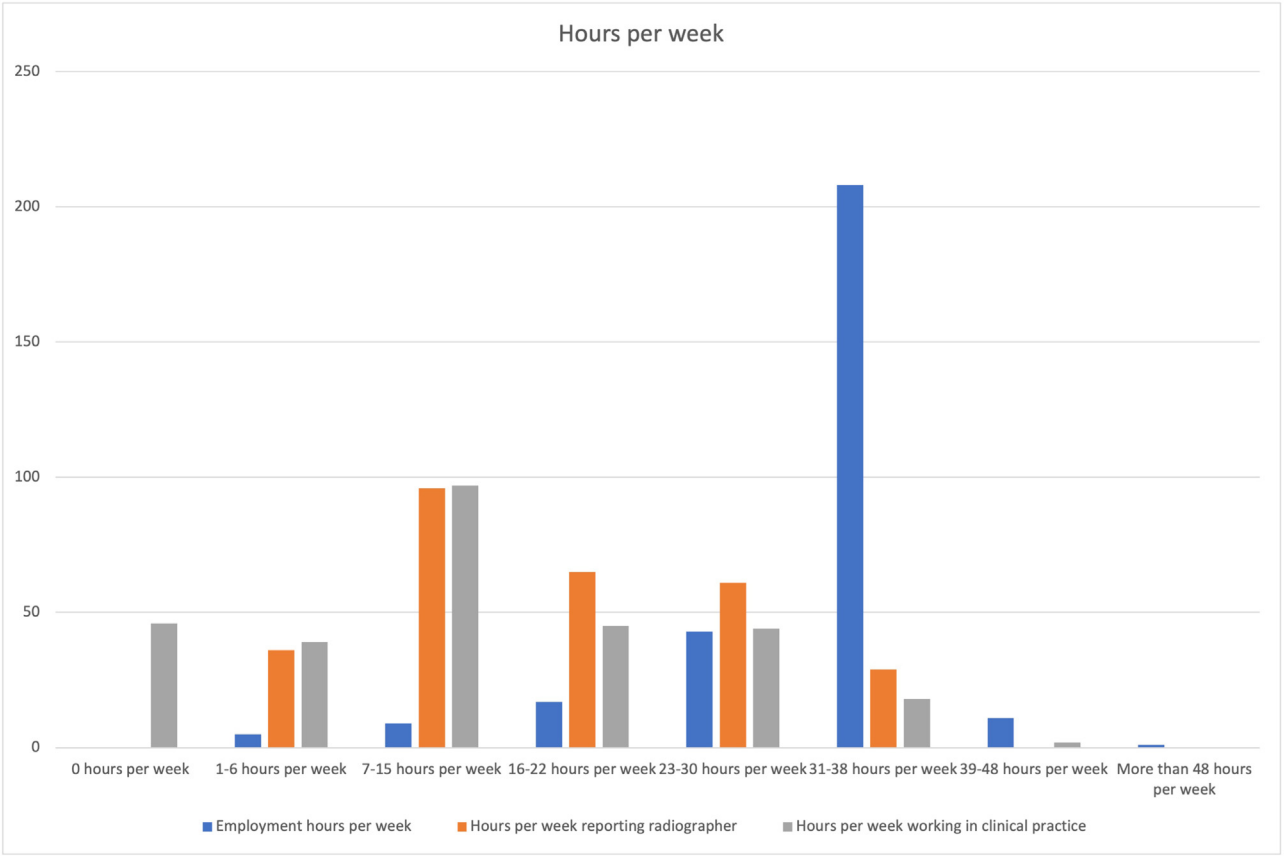

Figure 2. Shows reporting radiographers working hours per week.

Malta, the Netherlands, Sweden), p = 0.224. In the UK for example, contrast agents are prescription only medicines and so their user can only be authorized by a registered doctor or independent prescriber.[34] The fact that some reporting radiographers are able to do this suggest there are processes in place which ensures a medic (typically a radiologist) subsequently approves the referral for the contrast enhanced examination. Exploring the structures and processes that support radiographer reporting is beyond this scope of this survey but would warrant further exploration to enable the sharing of practice.[33]

Whilst the majority of reporting radiographers worked in larger hospitals, as the funding and nature of healthcare varies across

Table 2
Shows reporting radiographers qualification, working hours age and scope of practice between female and male.

Characteristics	Female (n = 203)	Male (n = 121)	p
	n (%)	n (%)	
Qualifications			0.291
Level 5 & 6	28 (15.2%)	10 (8.9%)	
Level 7	156 (84.8)	102 (91.1%)	
Report checked by radiologist vs no check			0.584
No	165 (93%)	98 (95.1%)	
Yes	13 (7%)	5 (4.9%)	
Working as a reporting radiographer			0.022
Less than 23 h per week	131 (74.4%)	62 (59.6%)	
More than 23 h per week	45 (25.6%)	42 (40.4%)	
Working in clinical practice			0.946
Less than 23 h per week	139 (77.6%)	82 (78.1%)	
More than 23 h per week	40 (22.4%)	23 (21.9%)	
Age			0.133
<40 years old	79 (40.1%)	62 (71.7%)	
More than 40 years old	118 (59.9%)	58 (48.3%)	
Scope of practice[a]			
Digital Radiography MSK	127 (62.6)	79 (65.3)	0.445
Digital Radiography chest/thorax	33 (16.3)	43 (35.5)	<0.001
Computed tomography head	5 (2.5)	5 (4.1)	0.603
Computed tomography other	17 (8.4)	9 (7.4)	0.645
Magnetic resonance imaging MSK	15 (7.4)	12 (9.9)	0.699
Magnetic resonance imaging other	9 (4.4)	7 (5.8)	0.614
DXA	15 (7.4)	4 (3.3)	0.047
Breast imaging	4 (2.0)	–	–
Interventional Radiography	–	1 (0.8)	–
Radionuclide imaging	2 (1.0)	2 (1.7)	0.820

[a] Multiple responses allowed.

Table 3
Shows the difference between UK and non-UK countries in relation to reporting form and legal responsibility and communication.

Reporting	UK	Non-UK	p
	n (%)	n (%)	
Who takes legal responsibility for the report you perform?			<0.01
I do (radiographer)	175 (80.7)	25 (34.2)	
A radiologist does	2 (0.9)	11 (15.0)	
I have joint responsibility with Medical Doctor	12 (5.5)	25 (34.2)	
Unsure	20 (9.2)	7 (9.6)	
Other	8 (3.7)	5 (6.9)	
When you write a report, what format does the report have?			0.040
Checklist	1 (0.5)	1 (1.4)	
Structured report (descriptive only)	8 (3.7)	4 (5.7)	
Structured report (with interpretation)	26 (12.0)	8 (11.4)	
Free form report (descriptive only)	5 (2.3)	7 (10.0)	
Free form report (with interpretation)	16 (7.4)	9 (12.9)	
Full interpretative report	21 (9.7)	8 (11.4)	
Full interpretative report (advice, further investigations)	139 (64.4)	33 (47.1)	
What qualifications is needed in your country			0.017
Course provided by national society	5 (2.5)	3 (4.6)	
Course provided by e.g., university	196 (96.1)	56 (86.2)	
No qualifications	1 (0.5)	2 (3.0)	
Other	2 (1.0)	4 (6.1)	
Further investigation/advise to be included in report[a]			
I am able to provide advice or recommendations	169 (69.0)	47 (50.5)	0.002
I am not permitted to provide any form of advice	7 (2.9%)	4 (4.3)	0.504
I can recommend follow-up imaging (any modality) but only non-contrast	35 (14.3)	19 (20.4)	0.169
I can recommend follow-up imaging (any modality) including contrast investigations	60 (24.5)	17 (18.3)	0.224
I can recommend follow-up imaging (specific modalities) but only non-contrast	6 (2.5)	7 (7.5)	0.030
I can recommend follow-up imaging (specific modalities) including contrast	32 (13.1)	6 (6.5)	0.086
I can recommend follow-up imaging (plain film only)	62 (25.3)	8 (8.6)	0.001

[a] Multiple responses allowed.

Europe it is not possible to draw further conclusions from these data. It may be that as larger hospitals employ more radiographers a greater number are likely to be reporting radiographers. Suggesting that large hospitals, which likely have more funding, are able to employ more radiographers, and therefore are more likely to have a greater number of radiographers who have an interest in becoming a reporting radiographer. However, specific conclusions about this relationship between funding and the distribution of radiographers cannot be drawn from the data.

There were differences in the time spent reporting, with males having more reporting times than females. This may be reflective of the particular scope of practice, for example the UK's guidance for

Table 4
Shows how reporting radiographers area of practice.

Area of practice	Checklist	Structured descriptive report	Structured interpretation report	Free form report (descriptive)	Free form report (interpretation)	Full interpretative report	Full interpretative report including advice further investigations	Unreported	Total
Digital Radiography MSK	0	7	14	10	22	26	124	7	210
Digital Radiography chest	0	0	9	1	1	4	60	1	76
Computed tomography head	0	1	1	0	0	0	8	0	10
Computed tomography other	0	0	6	2	0	4	14	0	26
Magnetic resonance imaging MSK	0	2	3	0	0	2	19	2	28
Magnetic resonance imaging other	0	1	3	0	0	0	11	2	17
DXA	0	0	8	1	2	1	8	1	21
Breast imaging	1	1	1	0	1	0	1	0	5
Interventional Radiography	0	0	0	0	0	0	1	0	1
Radionuclide imaging	0	0	2	1	0	0	1	0	4
Other	1	0	1	0	1	1	17	0	21
Total	2	12	48	15	27	38	264	13	419

Notice multiple answers allowed.

reporting chest radiographs suggest that reporting practitioners undertake at least two sessions a week[33] to maintain competency or may reflect local guidance on the amount of reporting to be undertaken to maintain competency or the logistics of meeting service needs. This practice with at least two sessions a week may be practiced in some non-UK countries. It is possible that a higher number of males may have dual reporting qualifications e.g., MSK and chest, and therefore be allocated more reporting time.

Initially focused on the UK, where the largest number of respondents practice (n = 245, 71%), radiographer reporting has been embedded across many European countries, with n = 66, 19% from Denmark and responses from reporting radiographers in 13 other European countries. We received emails from Portugal, Spain, and Austria with information stating that reporting radiographer practice was not allowed in their county based on either level of radiography or imposed by national legislation. We have no information on the other non-response European countries, but it is likely that this also applies. Due to the low numbers of European radiologists this practice may change over time.

There is a small risk that the term “reporting” may be misinterpreted as the survey was conducted in English. There may also be a lack of consensus as to what the term “reporting” means; for example, some imaging procedures such as DXA yield data which provides a “result” and radiographers may also provide written preliminary clinical evaluations which does not constitute full reporting. However, this risk should be insignificant as the term reporting is very well known within radiology/radiography and understood by non-UK countries in general. In general, a report refers to a formal legal document containing interpretations and findings and serves as a communication instrument between the referring physician and the reporting radiographer. This applies to all countries, and therefore it is felt that there should be universal understanding of the term.

A total of 66 Danish reporting radiographers responded and this number encompassess more than 50% of all Danish reporting radiographers. According to Berntsen et al.[35] there are between 20 and 30 reporting radiographers in Norway, meaning we had a response rate between 20 and 30% of available Norwegian reporting radiographers. Unfortunately, limited studies are published about the other participating counties (Albania, Andorra, Belgium, Bulgaria, Finland, France, Ireland, Malta, Netherlands, Portugal, Russia, and Sweden). We can speculate that we have included most of the reporting radiographers in Albania, as the country only has 30 radiologists.[36] Information about numbers of reporting radiographers is unknown in the rest of the participating countries.

Comparison with the literature

The study sample size was comparable with previous literature regarding European sonography practice.[37] There is no national or international registry for reporting radiographers in each country therefore it is impossible to determine an accurate response rate; this issue has been highlighted even in single country research projects.[38] The sample size was considered sufficient to draw insights into radiographer reporting practice.

The majority of respondents also participated in clinical governance and related activities, such as audit. Clinical governance focuses on quality assurance and within the UK the requirement to participate in clinical governance is incorporated within all published standards relating to reporting, so this is arguably to be expected.[31–33] Only half of respondents had access to mentor or supervisor with 58% having a period of preceptorship (UK = 147, non-UK = 47). This again is part of the UK's standard for reporting but is not particularly widespread in non-UK countries.

Peer review and audits of practice are important tools. Lockwood reporting that 98.1% of CT head reporting radiographers participated in routine audits,[39] another study reported that 89% expected MRI reporting radiographers to take part in audit after qualification.[40] Audits present a learning environment where discrepant reporting can be identified and be turned into a leaning objective. Studies have reported high agreement in audit with up to 96%.[14,18,41] A total of 63% reported performing regular audits, which may be considered the best practice in many hospitals, still there is no established consensus of the frequency and number of peer review cases. For example, marked heterogeneity in systems and frequency of radiographer reporting peer review was reported across London.[42] Various authors have suggested a number of 100 cases with a minimum of 95% accuracy as a suitable number to be included in yearly audit,[41,43] however this will depend on individual annual report volume. Number of cases may differ from trust to trust.[19] A study found that approximately half of reporting radiographers do not participate in audits.[1] Audits contribute to a culture of learning and development and should be encouraged. Identifying error not only helps individuals to improve their reporting skills, but can improve the standards of entire reporting teams. A large proportion of the respondents (63%) reported engaging in audits, suggesting that reporting radiographers across Europe prioritize quality assurance.

A recent review from England found that radiographer reporting covered the breadth of imaging modalities.[44] The results of this study align with the reported literature, the most common area of

reporting was MSK with 60.8% (n = 210) and chest imaging with 22% (n = 76). Less common was e.g., CT with 10.44% (n = 36) and MRI 13% (n = 45). A total of 36 of the respondents performed reporting in relation to CT, this number reflects a recent survey that received responses from 54 CT reporting radiographer respondents.[39] The same applies to MRI, as a recent MRI survey included 46 MRI reporting radiographers in the UK.[40] The variation seen in this study in reporting areas may be related to capacity and to local department demand and radiologist shortages.

Strengths and limitations

This questionnaire is the largest to date (n = 345) that includes reporting radiographers and provides a unique overview regarding reporting in Europe. Another major strength is the participation rate. The participation rate could have been higher if we had included reporting radiographers in ultrasound, however we choose to exclude this groups to have a more comparable cohort.

There were 245 responses from the UK, which is similar to Milner et al.[27] who had 259 respondents participating in an online survey including UK reporting radiographers, and another study from 2015 including 205 reporting UK radiographers.[1] However, it is possible that there are reporting radiographers in more than the 15 European countries as demonstrated here, and equally, that this study over-represents participation in radiographer reporting. There would, therefore, be a benefit in using this study to underpin a future study using focus groups to elicit more detailed data.

A limitation is that the survey was published in English, so langued may have formed a barrier to participation within non-English speaking countries. The study design of a cross-sectional survey with a self-selecting study population together with the range of topics included has provided a breadth of information. Whilst this has enabled key themes to emerge there would be a benefit from further research, potentially with more targeted recruitment strategies and in-depth questions, and/or focus groups and structured interviews to gain deeper insight into reporting and associated practice across Europe.

Conclusion

This study found that radiographer reporting is practiced across Europe, clustered in the United Kingdom and Denmark. Overall, we found no difference between female and male responders, except that the reporting working hours per week was higher for males. Postgraduate education was a key attribute with 76% of the reporting radiographers having a post graduate certificate, post graduate diploma or master's degree.

Author contribution

MRP led the project. All authors contributed substantially to the design of the questionnaire, progress of the project and manuscript writing. MRP applied for research ethical approval, performed the statically analysis and wrote first article draft. All authors read and approved the final manuscript.

Conflict of interest statement

None.

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