

English summary  
of Fafo-rapport 2020:06

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## Work intensity and pressure among radiographers

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The purpose of this report is to examine work intensity and pressure among radiographers and whether these are perceived to have increased in recent years. The following research questions were formulated:

- What characterises radiographers' organisation of work and working hours?
- What are radiographers' perceptions of the intensity in their daily work? And how has this changed over time?
- How do various factors impact on radiographers' daily work and perceptions of work intensity and pressure?

We focus on three specific factors or trends that are assumed to impact on radiographers' experiences in their daily work: new technology, patient pathways for cancer and other diagnoses, and changes in patient composition.

The empirical basis consists of the following: qualitative interviews with a total of 12 radiographers, 8 of whom are affiliated with two different health trusts/hospitals and 4 are affiliated with private institutes/clinics; a survey of currently employed members of the Norwegian Society of Radiographers, with 1038 responses received (37% response rate); and collective wage agreements and special agreements from 24 health trusts/hospitals and private institutes/clinics over a period of about 10 years – a total of just over 200 documents.

This summary is based on the chapter summaries in the report.

## Chapter 2 Theoretical framework and earlier research

Chapter 2 provides a brief presentation of the theoretical framework for understanding work intensity and pressure. The main elements are as follows:

- A distinction can be made between two potential sources of time pressure that staff may experience: 'external time pressure' associated with working time arrangements and the length and positioning of the working day; and 'internal time pressure' associated with the content of the working day and a high work intensity. The main focus of this study is the qualitative aspects of the working hours and perceptions of 'internal time pressure'.
- Time pressure can be understood as a fast pace of work and a large workload. Work intensity will be largely based on subjective perceptions and can therefore be difficult to measure.

- Earlier surveys of radiographers indicate that the level of negative stress as a result of a high work intensity is much higher among this occupational group than other groups.

### **Chapter 3 Organisation of work**

This chapter examines how the work is organised and the framework this creates for perceived work intensity. The main findings are as follows:

- In the survey, 92 per cent reported that they were employed in a permanent position. Eighty-four per cent work at a health trust and 11 per cent at a private clinic/institute.
- Working time arrangements: 59 per cent work shifts, while 32 per cent work the same hours every day, including flexi-time (day work).
- 56 per cent work overtime at least once a month.
- 36 per cent consider the department to be understaffed. This is more frequently indicated by radiographers in health trusts/hospitals than those from private clinics/institutes.
- Organisational and market framework conditions, with tenders and uncertainty, characterise private institutes. This may impact on radiographers' perceptions of work intensity and pressure in their daily work.

### **Chapter 4 How busy are the radiographers?**

In this chapter, we move on to the factors that form the core of radiographers' perceptions of work intensity, and the issue of how busy they are. The main findings are as follows:

- 67 per cent of radiographers indicated that they cannot, for the most part, determine their own pace of work. This applies to just 17 per cent of the labour force as a whole (LKU 2016).
- The working day is largely dictated by the patient appointment schedule set up in the various labs, and the individual radiographers have little say in this.
- 48 per cent of the radiographers indicated that they have to work at a fast pace either most of the time or all the time. This applies to 22 per cent of the labour force as a whole (LKU 2016).
- In response to the question of how often they feel they have too much to do, 71 per cent of radiographers indicated that this is often the case. The corresponding share among the labour force as a whole is 45 per cent.
- When asked if they have to skip lunch or work late because they have so much to do, the radiographers' responses are similar to the labour force as a whole. Just over 40 per cent indicated that this is often the case.

- Broadly speaking, the radiographers believe that their busy working day, consisting of a full schedule and challenging tasks, does not compromise the quality of the services they provide. Nevertheless, one in three indicated that they do not have enough time to quality assure their own work.
- The survey shows some indications that radiographers in private clinics/institutes have a more intensive working day than radiographers in health trusts/hospitals, in terms of autonomy, pace of work, workload and time to quality assure their own work. However, the number of private sector radiographers who responded to the survey is limited (N = 106), and the findings must be interpreted with caution.

## **Chapter 5 Factors that impact on radiographers' work pressure**

This chapter takes a closer look at the impact of new technology, pathways for new patient groups and the increasing frequency of medical imaging. The findings are as follows:

- Radiographers are exposed to a great deal of new technology and actively use this in their daily work. Nearly nine out of ten indicated in the survey that they have had to learn about new technology or systems within the last three years.
- The new technology has streamlined radiographers' work operations, but also increased their workload – several describe how there almost seems to be an insatiable need for imaging.
- Cancer pathways are designed for patients with a range of cancer diagnoses, and they set out a defined and standardised course with clear responsibilities and deadlines. The deadlines in the pathways have the greatest direct impact on the radiographers' daily work. Sixty-five per cent indicated that the pathways make their working day more hectic. Fifty-four per cent stated that this has raised stress levels, and 46 per cent reported that the department does not have the capacity to carry out the required tasks within the specified deadlines.
- As a result of the pathways arrangement and the increase in cancer patients, the radiographers are experiencing a significant increase in both the number of patients and the number of images per patient (monitoring). Eight out of ten indicated that this has made their working day more hectic. Nearly six out of ten felt that the introduction of new patient groups means that they have insufficient capacity to perform the required tasks within the specified deadlines.

## Chapter 6 Competence: new requirements and opportunities for updating skills

In this chapter, we review the new competence requirements for radiographers and the type of skills development measures they have made use of. The findings are as follows:

- Historically, there have been significant technological advancements in radiography, from the manual development of images to digital imaging. Artificial intelligence is being described as the next big shift in radiography technology.
- • Technological advancements have simplified radiographers' daily work but also led to areas of specialisation, and the human aspects are being increasingly emphasised.
- • 66 per cent indicated that they have received the necessary training in connection with the introduction of new technology. 61Sixty-one per cent have participated in training courses or continuing or further education within the past two years.
- • 39 per cent have not participated in a training course or continuing or further education within the past two years. The most common reason given is that management has not prioritised this.

## Chapter 7 Changes over time

In this chapter, we collate the various findings and discuss whether perceptions of work intensity have changed in recent years in light of the trends described in earlier chapters. This chapter shows that:

- The five areas that are considered to have changed most during the careers of the radiographers who responded to the survey are as follows:
  1. The tasks have become more mentally challenging (79 per cent strongly/somewhat agree)
  2. The work of radiographers has become more stressful (77 per cent strongly/somewhat agree)
  3. New technology has increased the pace of work (75 per cent strongly/somewhat agree)
  4. There is less time to quality assure own work (68 per cent strongly/somewhat agree)
  5. The competence requirements for radiographers are more stringent than previously (66 per cent strongly/somewhat agree)
  6. New patient groups have made the working day more of a challenge (66 per cent strongly/somewhat agree)

- The three greatest challenges that radiographers indicate characterise their working situation today are as follows:
  1. Higher work intensity (67 per cent)
  2. Less time to quality assure own work (49 per cent)
  3. More challenging tasks (40 per cent)

## **Chapter 8 Conclusion**

In this closing chapter, we distinguish between two potential main sources of time pressure for radiographers as presented in Chapter 2: 'external time pressure' and 'internal time pressure'. The main conclusion is that there has been little change in external time pressure in terms of working time arrangements and the organisation, length and positioning of the working day, and the period of rest between shifts.

Internal time pressure is the work intensity that stems from the content of the daily work. It is related to the qualitative aspects of the working hours and subjective perceptions of how busy or intense the working day is. Here, we point to several factors or trends that have led to many radiographers experiencing higher work intensity and pressure in their daily work. A key finding is that new technology seems to have resulted in a larger part of the working day being filled with tasks – i.e. the time between tasks has been reduced. The new technology has increased the pressure on time margins for imaging; what takes most time now are the human aspects and the patient care. It is also in this area that radiographers often find that the challenges are greatest and that the working day has become more mentally challenging than it used to be.