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REVIEW

Factors relating to working hours restriction that have impacted the professional identity of trainees in the last decade

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Abstract

Ever-developing changes to the working hours of junior doctors by the European Working Time Directive, the junior doctor contract of 2019 and most recently the COVID-19 pandemic have impacted the professional identity of doctors. There has been little investigation into its influence on the multifaceted aspects of postgraduate medical training, which feeds into how trainees consider themselves professionally and the concept of professional identity or 'being a doctor'. A review of the medical, socio-political and educational literature reveals that the impact on the professional identity development of trainees is influenced by several perspectives from the trainee, trainer and the public. Gross reduction in working hours has no doubt decreased the raw volume of clinical experiences. However, to counteract this, smarter learning processes have evolved, including narrative reflection, supervised learning events, and a greater awareness of coaching and training among trainers.

Key words: COVID-19, European Working Time Directive, Junior doctor contract, Professional identity, Trainee, Training

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Introduction

The European Working Time Directive is a European Union initiative introduced to prevent the medical workforce from working excessively long hours, with implications for health and safety. It was introduced following unregulated 100-hour working weeks of previous generations, where often the trainee would be working a continuous on-call period of 72 hours without a designated rest period. It was proposed that restricting the number of working hours would reduce junior doctors' fatigue, improve their rest and therefore improve the quality of service they could deliver to patients. The European Working Time Directive was adopted in 1993 and implemented in UK law in 1998. It was fully implemented for junior doctors in August 2009 – reducing the maximum hours worked from an average of 56 per week to 48. Doctors have been entitled to choose to work additional hours if they wish, but they are required to have a period of 11 hours continuous rest a day, 1 day off each week or 2 days off every fortnight, and a 20-minute rest break every 6 hours. There have been further amendments to junior doctors' working hours with the introduction of the new junior doctor contract in 2016 and then in 2019, including mandatory restriction of duties the day after being on-call, a 1-hour rest period during any shift greater than 9 hours, and a maximum restriction of 72 hours of working during any given week (NHS Employers, 2016) (Table 1). There are many reports that trainees are not happy with the European Working Time Directive and the junior doctor contract, citing that it is less safe for patients and doctors, and the inflexibility of working patterns introduced by the new junior doctor contract is a barrier to annual and study leave (Maisonneuve et al, 2014; Kirwan et al, 2018).

The development of professional identity among trainees involves several aspects including competency development and its interaction with identity formation; the development of 'thinking', 'feeling' and 'being' resulting from personal reflections and negotiations with self; and key influences from social interactions in the workplace as well as the wider society. These can all be considered from the perspective of the trainee, trainer and wider society. By assessing professional identity from each of these three viewpoints, the overall

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Table 1. Junior Doctor Contract changes to trainees work schedule in 2016 and 2019

Rota rules	
2016	**2019**
Maximum 48-hour average working week	Maximum 48-hour average working week
Maximum 72 hours work in any 7 consecutive days	Maximum 72 hours work in any 7 consecutive days
Maximum 13-hour shift length	Maximum 13-hour shift length
Maximum 5 consecutive long shifts (>10 hours)	Maximum 4 consecutive long shifts (>10 hours)
At least 48 hours rest after 5 long days	At least 48 hours rest after 4 long days
Maximum 8 consecutive standard shifts (9 hours)	Maximum 7 consecutive standard shifts
Maximum frequency of 1 in 2 weekends can be worked	Maximum frequency of 1 in 3 weekends can be worked
At least 12 hours of continuous rest between rostered shifts	At least 11 hours of continuous rest between rostered shifts
30 minutes break for 5 hours work Second 30-minute break for >9 hours work	30 minutes break for 5 hours work Second 30-minute break for >9 hours work A third 30-minute paid break for shifts >12 hours
Expected rest while on-call is 8 hours per 24-hour period, of which at least 5 hours should be continuous between 22:00 and 07:00	Expected rest while on-call is 8 hours per 24-hour period, of which at least 5 hours should be continuous between 22:00 and 07:00
Day after on-call should not exceed 10 hours	Day after on-call should not exceed 10 hours

From NHS Employers (2016); Mehlmann-Wicks (2020).

impact of the European Working Time Directive on the professional identity development of trainees can be evaluated. The introduction of the junior doctor contract since 2016 has only further compounded the impact of the European Working Time Directive.

As well as the impact of the junior doctor contract on trainees, the contract itself has been impacted by the COVID-19 pandemic. There have been rota changes that are incompatible with the hours and rest requirements of the 2016 terms and conditions of the junior doctor contract, reverting back to working time regulations of 1998. This is interesting, as while there has been an increased number of hours worked, there has been reduced immersion in subspecialty training experience reflective of increased elective cancellation, outpatient workload reduction and redeployment of staff (Dyson, 2020).

Discussion

Impact from a trainee's perspective

Competence and identity

Since the introduction of the European Working Time Directive, there has been a widespread transition to a shift-based pattern of working with greater periods of on-call commitments dominated by routine service provision. This has resulted in decreased training time during working hours. It has been estimated that a pre-2007 trainee would have spent approximately 30 000 hours training between starting a senior house officer job and qualifying as a consultant, whereas it is now estimated that a post-European Working Time Directive trainee will spend 6000 hours in training within the same period (Chikwe et al, 2004), representing an 80% reduction in training time. Furthermore, to enable full service provision of patient care, there has been a necessary 10–15% increase in the number of trainees (Patel et al, 2015). Therefore, it has been argued that since the implementation of the European Working Time Directive, the considerably reduced training hours and the dilution of clinical 'contact time' and variety because of the greater number of trainees who are competing for opportunities, have together resulted in trainees today with less competence at each level of training than their predecessors in the pre-European Working Time Directive era. This has been well evidenced in the literature interviewing both trainees and trainers (Simpson

et al, 2011; Hartle et al, 2014). There is an interplay between professional competence and identity, as outlined by Jarvis-Selinger et al (2012), who explain that although the initial years of medical training may emphasise competence in basic clinical skills and tasks, as the trainee evolves there is an ever-increasing role for more holistic development of decision making, accountability, acting as a professional and learning to think and feel as an independent physician. In the case of post-European Working Time Directive, the reduced and delayed attainment of clinical competence may in turn delay the trainee's evolution to this holistic development of professional identity.

Continuity of training and continuity of care

Jarvis-Selinger et al (2012) also explained the importance of 'critical incidents' in enabling abrupt opportunities for trainees to challenge their own thinking and beliefs about their work as physicians, incorporate new understandings, and in doing so develop their professional identity and 'become physicians'. The overall reduction in working hours as well as discrete shift-based working may have resulted in significantly fewer opportunities for trainees to immerse themselves in their professional work and experience these critical incidents from which to develop professional identity. Furthermore, continuity of care – the patient's seamless experience of being cared for by a constant team of physicians who attend from diagnosis throughout treatment along critical phases of hospitalisation until discharge – is likely to be compromised as a result of the European Working Time Directive, with shift-based doctors each being less familiar with patients as a result of replacing each other at various rota-dependent time-points. This is well supported by virtually all studies surveying consultant physicians and trainees (Clarke et al, 2014; Lambert et al, 2016).

From the trainee's point of view, fragmented involvement in clinical care is not as beneficial for fostering a sense of accountability and responsibility as is continuous involvement in a patient's care. This is important because of its impact on the trainee's opportunity to develop his or her professionalism, which in turn serves as a means to achieve professional identity formation (Cruess et al, 2014) through a process called socialisation (Hafferty, 2008). Continuous engagement in critical phases of a patient's care – whether this is directly interacting with patients and their families, closely communicating with colleagues, or organising or performing interventions – is a potent stimulus for learning, developing and consolidating the kind of 'values, behaviours and relationships that underpin the trust the public has in doctors'. This is the definition of 'professionalism' used by the Royal College of Physicians of London (Working Party of the Royal College of Physicians, 2005). Socialisation consists of a complex intertwining of a trainee's behaviours, social interactions and feedback experiences generated from his or her interactions with the external environment of people (Cochran-Smith et al, 2008). The internal reflections, adjustments and negotiations the trainee makes from all of these personal experiences summate to define and refine his or her sense of professional self (Cochran-Smith et al, 2008). The opportunities to develop professionalism and forge self-identity through socialisation is therefore vulnerable to the European Working Time Directive and junior doctor contract restriction of working hours.

Trainees' access to mentorship and role models

It is widely accepted among the postgraduate medical community that mentors exert an influence on the development of a trainee's professional identity (McCord et al, 2009; White et al, 2011). Indeed, Baernstein et al (2009) demonstrated in a qualitative study of medical students that positive mentors may be one of the most important factors in shaping the professional identity of doctors in training. Many senior physicians acting as mentors for trainees have seen a gross deviation in training experience – they trained in a previous era of long hours and shifts lasting several days at a stretch. The introduction of the European Working Time Directive may have made it difficult for senior physicians to relate to their trainees training; senior physicians have not experienced the European Working Time Directive as a trainee themselves. With more trainees deemed necessary to meet the service requirements of the directive, there is also the risk of shorter availability of time spent between senior physician acting as a mentor and trainee. Furthermore with the fragmented work patterns of night shifts, rest days and on-call daytime service requirements, all of

these factors may contribute to creating a loss of continuity between trainees and mentors (Patel et al, 2015). As a result, trainees may have had weaker opportunities to observe, assimilate and incorporate behaviours, attitudes and mindsets from senior physicians and mentors as part of their development of professional identity.

Several authors suggest that the impact of role models on the formation of professional identity among trainees may be overestimated. Cruess et al (2014) for example opined that the mentor and mentee relationship is not effective without the pre-existence of shared values between trainee and mentor, highlighting the importance of a multitude of other factors such as the educational environment, the curriculum delivered, and the trainee's and mentor's personal values.

Effects of working hours restriction implementation

When considering the impact of the working hours restriction, one should be mindful of its practical implementation. Several studies have shown a frequent and significant discord between trainees' rota hours and the actual hours worked given the demands of the job; lowering of morale with fragmented shift patterns, sleep disturbance and increased sickness rates; and attempts by some hospitals to persuade junior doctors to collude in inaccurate reporting of compliance (Clarke et al, 2014). In comparison, a survey of junior doctors in Europe found that 90% thought working reduced hours has benefits such as better mental and physical health with more time for research and reflection. In addition, 42% of junior doctors thought reduced working times had a positive effect on their ability to make 'sound decisions' (Maybury, 2014). This variation in opinion could be on a speciality basis, for example surgical trainees tend to believe that the 48-hour week is a barrier to receiving sufficient training, with 71% of surgical trainees believing that the European Working Time Directive had a negative impact on their training (Leahy, 2017). However, the junior doctor contract stated that from October 2019 a maximum of 72 hours can be worked within 7 days, with 46 hours of rest required after any run of night shifts (Mehlmann-Wicks, 2020). This clear guidance allows juniors to know the hours they are limited to and, along with further improvements in rest and safety entitlements, has the hope of lowering the risk of fragmented and disturbed sleep and reducing sick rates.

All of these data suggest that negative effects of the European Working Time Directive on the development of professional identity among trainees may not simply be the result of the hours restriction itself, but also a result of additional complex effects relating to how it has been implemented.

Impact of the COVID-19 pandemic

It is hard to ignore the evolving impact of the global COVID-19 pandemic on trainees' professional identity. In the context of medical students, by mid-March 2020 the majority of medical schools across the country decided it was unsafe for their students to continue with placement. Medical students in their clinical years have faced cancelled objective structured clinical examinations and written exams with several months delay in their courses progress up to the current time of writing. This may pose many challenges, frustrations and doubts perceived by medical students in their pursuit of becoming doctors (Adams, 2020). Some have dealt with this by beginning alternative healthcare jobs to gain the clinical exposure they crave. One example is the healthcare assistant role, a role that many medical students will have undertaken to gain work experience before entering medical school and gives some responsibility in preparation to becoming a doctor. In contrast, final year medical students have seen their courses truncated by several months to become expedited doctors in an attempt by the government to increase the medical workforce to deal with the COVID-19 crisis. Interestingly, despite the accelerated medical degree for these students their competencies, which interplay with professional identity, may not be negatively impacted (Garrud and McManus, 2018). At the other end of training, senior trainees have seen their exit fellowship exams cancelled or postponed, deferring what would otherwise had been a major transition from trainee to an independent expert.

As a result of the need for increased service provision to treat COVID-19 patients there has been reduced elective activity and traditional training opportunities for medical and

surgical trainees. This has been reflected in the reduction in the number of workplace-based assessments required for trainee progression (Joint Committee on Surgical Training, 2020; UK Foundation Programme, 2020).

While this may weaken the professional identity in their chosen subspecialty in the short term, the reallocation of an overwhelming proportion of trainees (as reflected by hospital rotas nationally) to work fundamentally as a basic doctor treating acutely unwell COVID-19 patients and 'saving lives' may have the effect of strengthening their shared professional identity as medical professionals. At the same time, this offers opportunities for a flattened hierarchy, allowing, for example, consultants to perform ward-based administrative duties (normally performed by junior trainees) in an effort to balance workload (Dhillon, 2020). Furthermore, in anaesthetics, trainees have stepped up in their role not simply as a learner but as a trainer of non-anaesthetic senior doctors (consultants) with regards to respiratory management of patients with COVID-19 (Hammond, 2020).

Impact from a trainer's perspective

Trainer–trainee trust

The reduction in trainees' working hours and potential contact time with trainers as a result of the European Working Time Directive may negatively impact trainer–trainee trust, which is so important for trainees to access clinical experiences to develop their competence and professional attributes as thinking, feeling physicians. In a mixed qualitative and quantitative analysis of anaesthetists, Sterkenburg et al (2010) found that entrustment of a trainee by a supervisor is influenced by four key factors: resident communication, supervisor traits, clinical context and the task. Choo et al (2014) interviewed internal medicine physicians and also highlighted communication and language cues as markers of trainee trustworthiness. It has been purported that such close communication between trainee and trainer has been jeopardised by the European Working Time Directive (Kirwan et al, 2018), with implications for trainees' professional identity development as well as competence.

Emerging importance of narrative reflection

The formation of professional identity relies on the individual's active participation in constructing their sense of self, as well as on key influences from his or her professional community. One pedagogical approach that has been demonstrated to foster the active participation of the individual in professional identity formation is narrative reflection. Through this technique, an individual constructs an internal and evolving story of the self to make sense and meaning out of their life. From an educational viewpoint narratives can be externalised, allowing trainees to 'tell and retell, through narrative enquiry, the story of their experiences' (Clandinin and Cave, 2008). Through this discussion of an individual's thoughts, actions and experiences within their medical training the trainee may develop an identity by which to live as physicians. The key to this process is self-reflection (Gleeson, 2010).

Since the introduction of the European Working Time Directive and the acknowledgement of trainees' decreased raw volume of clinical experience, the General Medical Council together with the overarching institutions of medicine and surgery (Royal Colleges) and their associated consultant trainers have placed an emphasis on 'smarter learning' for trainees. One significant manifestation of this has been the drive for self-reflection throughout clinical training (Sandars, 2009). This has been facilitated by Modernising Medical Careers. Modernising Medical Careers was initially discussed in 2005 and then in 2007 fully implemented online trainee portfolios with mandatory sections to be completed on reflective experiences and self-assessment exercises required for annual appraisals and career advancement.

It can be argued therefore that through this shift towards self-reflection endorsed by Modernising Medical Careers, trainees have been stimulated more than ever before to engage in narrative reflection, discussing their clinical experiences with colleagues and seniors, analysing their sense of self in terms of their thoughts and actions, documenting these increasingly as part of their training requirements, and through the whole process developing and refining their professional identity by which to practice.

Workplace-based assessments and learning events

Workplace-based assessments were implemented by the General Medical Council (Nestel et al, 2019), who approve curricula and assessments. The General Medical Council changed workplace-based assessments to supervised learning events in 2011, which were piloted in 2012 and 2013 (Johnson et al, 2011) with an emphasis on patient safety. These are a series of assessments and appraisals for which trainees choose topics and patient cases that they feel have been important to their training, either because they represented core experiences or competencies according to their curriculum, or because they were challenging experiences or involved an important adverse event. Trainees arrange these assessment events with an educational supervisor who discusses the patient cases with the trainee to produce evidence of achievement of curriculum competencies. Included in supervised learning events are mini-clinical evaluation exercises, case-based discussion and an acute care assessment tool, all of which impact the decision process of the annual review of competence progression (Choo et al, 2014). These are trainee-driven encounters and are assessments for learning rather than of learning (Wilkinson et al, 2008). Trainees are empowered to take control of their own continual learning and professional development through the regular use of supervised learning events and therefore they may have fostered a greater sense of accountability and responsibility in trainees of their training. Tilley and Watson (2004) defined 'accountability' as the ability to give a reasoned account for one's own actions or omissions, a process which necessarily involves self-reflection and a sense of responsibility. Over time the engagement of trainees in regular supervised learning events may represent a powerful tool for stimulating trainees to reflect on their own encounters and identify learning opportunities, solicit feedback from colleagues, analyse and incorporate new lessons for themselves and re-engage in their professional environment as thinking, responsible, accountable doctors.

Supervised learning events therefore not only serve to develop trainees' competencies but the trainee-driven nature of supervised learning events also involves the process of experiential learning: having a concrete clinical experience, then reflecting on it, then interpreting and drawing conclusions, then planning adjustment or new approach to a future clinical experience, then having another concrete clinical experience (Kolb, 1984). Kolb's model fosters the development of professional identity, particularly with respect to the development of accountability. Supervised learning events may therefore strengthen the interplay that exists between competency and identity development (Jarvis-Selinger et al, 2012). However, there are reports of varying quality of feedback within supervised learning events. One study found that positive supervised learning events had personal and constructive feedback which could be used to enhance learning, whereas negative supervised learning events had feedback which was non-specific with contradictory verbal and written feedback from the same trainer (Rees et al, 2014). This suggests that trainees have the potential to choose trainers for their likeliness to give positive feedback.

Nevertheless, in support of supervised learning events, Batty et al (2016) asked trainees to test a direct observation of procedural skills in a supervised learning event format and found that 95% of trainers and 68% of trainees thought the supervised learning event format was an improvement on the workplace-based assessment format. This evidence demonstrates that workplace-based assessments are useful for trainees filling in their learning gaps. Direct observation of procedural skills maximise the training experiences obtainable in the face of reduced time available. The value of workplace-based assessments was reflected as it was shown that trainees would like to spend more time completing them. Other improvements that have been introduced to enhance the benefit from workplace-based assessments were: to better use face to face training time, validate workplace-based assessments in person rather than over email so direct timely feedback could be delivered, and to give more constructive feedback, positive or negative (Aryal et al, 2020). Both trainees and trainers found the supervised learning event format easier to link to the curriculum and that it enhanced the trainees' learning and development. The supervised learning event format of direct observation of procedural skills was implemented by the General Medical Council in 2016.

Through both the focus on narrative reflection and supervised learning events by the General Medical Council and Modernising Medical Careers, many trainers (consultants and

senior trainees) have become increasingly aware of their role not only as clinical experts but also as educators and trainers for their junior colleagues. With this mindset, there has been a greater propensity for trainers to collaborate with trainees through the use of supervised learning events, simulators and supplementary training courses, to aid in the development of their professional identity. This awareness among trainers following the introduction of the European Working Time Directive has fostered more innovative ways to deliver medical education. Simulation workshops have enabled a greater number of trainees to benefit from teaching sessions at once (Shaharan and Neary, 2014). These sessions have been delivered in several ways including virtual reality, which is becoming more popular (Torkington et al, 2000). They have shown great promise, with simulated environments removing the risk of clinical error and harm to the patient (Sarker and Patel, 2007). These methods have maximised the amount of training that can be delivered, especially in high fidelity scenarios, delivering a more positive training experience despite the reduction in clinical time available (Robertson and Davies et al, 2019).

Impact from the public's perspective

There is surprisingly very little published information on the public (including patients') perception of the European Working Time Directive. However, there is public opinion on the junior doctor strikes that happened in 2016. The Telegraph claimed that the proportion of the public who were in favour of the strikes (66%) remained constant but the proportion of those who opposed the action grew from 15 to 22% (Bennett, 2016a, 2016b). This shows that there was initially public sympathy for junior doctor strikes, but this was followed by an increase in public opposition. Furthermore a study found that 43% thought that doctors 'should never take industrial action, regardless of the circumstances' (Survation, 2015). The European Working Time Directive has been purported by some as reflecting a change in public perception of doctors from the all-knowing, work-obsessed, extraordinarily altruistic professional to those with a better work–life balance. These reports from the junior doctor strikes still seem to support the large proportion of the public expectation that doctors are to put patients first and to consider their own personal lives second. This reinforces trainees' identity as an altruistic caregiver that puts patients above all else at all cost.

Many studies surveying the perspective of consultants, senior and junior trainees demonstrate no clear improvement in patient care since the introduction of the European Working Time Directive (Cochran-Smith et al, 2008). What the directive may have led to is a change in attitudes among the public in how doctors are perceived.

Ever since the COVID-19 pandemic started there has been a radical shift in the expression of gratitude reflected nationally in articles, interviews and the language used such as 'War Heroes' and clapping at 20:00 on Thursdays at the start of the pandemic. There has been a cultural shift which is reflected in the abolition of the NHS surcharge for migrant healthcare workers, although this has been interpreted by some as more of a governmental public relations decision in pressing times (Kemp, 2020).

Conclusions

The impact of the European Working Time Directive on the professional identity development of trainees is complex, influenced by varied effects on the trainee, trainer and the public. The reduction in working hours, which has mainly involved surgical specialities, has no doubt decreased the raw volume of clinical experience and potential opportunities for trainees to immerse themselves in developing their skills and make adjustments to their evolving professional identities. There is a dearth of qualitative studies focussing on professional identity development relating to the European Working Time Directive and this review highlights the need for further research.

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Conflicts of interest

The authors declare no conflicts of interest.

Key points

- The impact of the European Working Time Directive and junior doctor contract on the professional identity development of trainees is complex and influenced by varied effects on the trainee, trainer and the public.
- The gross reduction in working hours has decreased the raw volume of clinical experience and opportunities for trainees to immerse themselves in critical incidents from which to challenge their own beliefs and make adjustments to their evolving professional identities.
- However, the General Medical Council and Modernising Medical Careers have developed smarter learning processes through supervised learning events and a greater awareness of coaching and training among trainers.
- There is a dearth of qualitative studies focussing on professional identity development relating to the European Working Time Directive and the junior doctor contract, and more research is needed in this field.
- The COVID-19 pandemic continues to significantly impact the professional identity development of trainees.

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