Self-preservation comes at a cost: Why British National Health Service paramedics might be choosing a healthier, but poorer, retirement

Deborah Roy¹*, Andrew K Weyman¹ and Peter Nolan²

Abstract
Objectives: To explore and portray the perspectives of National Health Service Ambulance personnel related to the latest rise in the National Health Service occupational pension age.
Methods: Data gathering took the form of 35 in-depth interviews. A thematic analysis was used to characterise and articulate key concepts and meanings. The analysis applied interpretive techniques, as views expressed were from personal experiences, and allowed for an in-depth analysis of shared meanings.
Results: The themes reported captured the desire of many Ambulance personnel to exit their employment well in advance of their retirement age, despite satisfaction gained from patient care. This early exit is being driven by increased worry that the work demands of the job are unsustainable, especially for older workers, as clinical responsibilities increase and their social support diminishes. Also, Ambulance personnel feel betrayed by their employers, because their retirement is being delayed further by another change in their pensionable age.
Conclusion: There is an increased orientation for ‘living for today’ and indications of a willingness to sacrifice salary and pension income in order to protect their health in older age, which has implications for long-term financial and general well-being in retirement.

Keywords
Critical care, emergency medicine, paramedics, extending working life, job demands, qualitative research, stress

Date received: 23 January 2019; accepted: 23 December 2019

Introduction
Governments across Europe have been raising the State Pension retirement age in response to the significant costs anticipated from more people living longer in retirement. This means the Department for Work and Pensions (DWP) has the Extension of Working Life as one of its key policy objectives.¹² In the United Kingdom, State Pension and Public Sector retirement age have been aligned by the Pension Act 2011, and the UK State Pension age is now at 66–67, regardless of job role.³ This means that depending on when a paramedic first entered the service, their normal retirement from the National Health Service (NHS) Ambulance Service will now be 67 years of age. Many NHS staff work in physically and psychologically demanding roles and an extension to their working lives will mean added years of exposure to risks of work-related ill health. These risks are particularly salient with regard to the UK NHS Ambulance Service, where demands continue to intensify with emergency calls increasing by 3.36 million (42%) between 2002 and 2011.⁴ Moreover, the UK ambulance service has a pivotal role in triaging patients, and increasingly offers community and social care.⁵ Stress levels have inevitably risen, and morale is worryingly low when compared with other NHS staff working in hospitals and community health organisations.⁶ Given that staff...
shortages are already a major concern and sickness absence rates high,\(^6\) it is crucial to understand how this latest rise in the pension age is influencing ambulance personnel’s future employment intentions.

A significant amount of information about the possible implications of extending the working life of NHS employees exists due to a large recent audit that revealed the key factors which can foster early exit. These include the configuration of work; a lack of flexible options; health and financial status; work life balance; existing retirement norms; job characteristics (e.g. intrinsic job-satisfaction, working hours); and access to State Pensions.\(^3\) Health status stood out at that time as the most salient individual-based determinant of a decision to leave work before normal retirement age. However, the rate of exit on health grounds was low at that time – suggesting that while ill health has strong intuitive appeal as a causal influence, large numbers are leaving early for other reasons. This report also conveyed at that time, while some worry existed over pension values, it was not a significant issue. Since then, little is known about how the latest change in pension legislation has affected morale or work intentions. The research reported here attempted to address this gap in the literature through a series of in-depth interviews with emergency ambulance service personnel.

**Methods**

The authors used convenience sampling and an initial invitation was placed in the staff bulletin inviting all personnel to volunteer to take part in semi-structured qualitative interviews. After obtaining initial expressions of interest, personal emails to respondents followed, and the authors (D.R. and A.K.W.) conducted the interviews at ambulance stations or at the home of ambulance personnel. Ethical approval was obtained from the Ethics Committees of the University of Leicester (ref: gp171-912f) and University of Bath (ref: 14/123) and Research Governance approval passed by the Ambulance Trust.

The researchers advertised across the organisation to ensure all ambulance staff had the opportunity to participate. The researchers had no previous contact or relationship either working or personal, with any of the participants. The study took place over a six-month period. Only the respondents and researchers were present during the interviews. Recorded interviews lasted between 40 and 60 minutes and were subsequently transcribed (copies of the interview protocols and coding framework are obtainable from the corresponding author). The authors used a semi-structured interview protocol that had been piloted previously to elicit respondents’ views about the prospect of working longer, the rise in NHS pension age, and the key drivers of decision-making over work and retirement. The analysis applied interpretive techniques, as views expressed were from personal experiences, and allowed for an in-depth analysis of shared meanings. NVivo 11 software was used to assist with coding the data and data analysis. The lead researcher began by reading each transcript and making some initial notes. The transcripts were re-visited on a number of occasions and an inductive thematic analysis characterised and articulated key concepts and meanings.\(^13\) Data were coded primarily by the D.R., who is trained and experienced in qualitative research methods including thematic analysis. By the end of the coding phase, no further themes were emerging of any substance and the authors were satisfied that a saturation point had been reached. Interrater reliability was established.
through an examination by the A.K.W. of a sub-set of inter-
view transcripts, who agreed with emergent themes. After
face to face meetings to discuss the codes, some adjustments
followed, until both coders were satisfied with the overall
coding framework and themes.

Results

The authors recruited 35 respondents, 30 males and 5
females, with ages ranging from 22 to 59 years of age. The
respondents were all paramedics; some of whom had a
more senior leadership role, but continued to work as crew
on occasional shifts to maintain their professional skills
and training. The results contain reports of continued
increases in physical and psychological job demands
resulting mainly from the shortages of staff and resources,
and these reports dominate the respondents’ narratives,
along with references to worry about the continued rises in
employer’s expectations that they continue to professional
advance, becoming more clinically specialised. Feelings
of betrayal also emerged, because the age at which NHS
staff can retire had been raised for the second time in less
than 10 years, and this seems to have created a striking
feeling of injustice. When all these influences are taken
collectively, it explains why many paramedics make an
early exit from their careers, well before retirement age.

The following analysis reveals these influential factors in
more detail and how these feelings may be driving behav-
ior. Additional theme-based quotes are available in the
Data Supplement File.

Influences on the paramedic workforce

Increased worry that physical and psychological
demands are unsustainable

Perhaps the predominant finding was that the lack of
resources and current growth in the caseloads are making
the job more psychologically and physically challenging,
due to rises in work rate/increased exposure (A1). There
were widespread claims that these work rates continue to
grow along with public expectations, and the role is becom-
ing unsustainable for those in their 40s as well as older staff
(A2). Even among those currently in their 40s, there was
worry over capacity to meet the physiological demands
later in their career (in their 60s). There was a strong belief
that continuing to try to meet the increase in current job
demands (e.g. call rates) is becoming dangerous practice
(A3). A paramedic performing this role into their 60s was
considered to be a totally unrealistic scenario. Paramedics
already felt exhausted by long night shifts and had limited
time for rest breaks.

(A1): ‘So, yes, we’re busier. You know? It’s physically hard. And the shift patterns are, you know, quite relentless’ [F49]

(A1): ‘I mean the job hasn’t changed in terms of the kind of incidents that we respond to and the people that we meet, but it’s just so
much more pressurised than it used to be, mainly because of increased call rates’ [M55]

(A2): ‘We are lifting people all the time, yes there are Mangars but you can’t use a Mangar to get somebody downstairs. And, me in my
seventies or late sixties lifting some 19 year-old that is drunk down three flights of stairs? [laughs] It’s not going to happen’ [M50]

(A2): ‘I don’t know what other role they could perform (over 60’s) within the Trust. But I just don’t think anybody that age will be able
to perform effectively. I mean, take a road accident, you’d be crushed up in the back of a car for an hour trying to support somebody’s
head. At 65 you’re going to have a job crawling in. And the amount of kit we’ve got to carry. You know? The bags are getting bigger.
It’s – short of putting three people in an ambulance’ [M53]

(A3): ‘I think it’s dangerous. Really, I know people are living longer. But to carry on with the nature of this job, I just don’t think it’s
feasible’ [M48]

(A3): ‘It’s unrelenting, you’re constantly against your biological clock and I just can’t see young people starting in the service now
existing until they’re 67 years of age. I can’t feel myself doing it, because I am exhausted, you know, I’m tired now!’ [M48]

Increasing clinical specialisation

Paramedics interviewed spoke of continuous advances and
growth in new clinical guidelines and technology, along with
employer expectations that they keep up to date with all the
latest clinical advances (B1). While some staff are embrac-
ing the opportunities available to develop their clinical skills
and obtain postgraduate qualifications (B2), some of the
older staff had been finding it daunting, having joined the
service many years before and completed on the job para-
medic training, rather than a university paramedic course
(B3). This anxiety coupled with the rise in call rates and
longer shifts simply add more weight to decisions to make
different career choices which include early retirement.
While Health and Safety guidelines for manual handling and lifting have improved,14 ambulance personnel are treating more bariatric patients. Nurses in hospitals and elsewhere also face increasing demands to lift and transport this heavier population15 but paramedics who work solely in the community, both young and old, are being expected to move heavy patients from awkward-to-reach locations, where their equipment cannot be easily deployed (C1). While the transfer of patients is a core aspect of the job, it is considered a critically demanding task for paramedics,16 and they are frequently left to do the heavy lifting at Accident and Emergency departments (C2). Also, no dispensation is being given to older paramedics, because everyone is effectively treated equally, and subsequently expected to perform exactly the same types of tasks and shifts (C3).

Demographic changes among users

While Health and Safety guidelines for manual handling and lifting have improved,14 ambulance personnel are treating more bariatric patients. Nurses in hospitals and elsewhere also face increasing demands to lift and transport this heavier population15 but paramedics who work solely in the community, both young and old, are being expected to move heavy patients from awkward-to-reach locations, where their equipment cannot be easily deployed (C1). While the transfer of patients is a core aspect of the job, it is considered a critically demanding task for paramedics,16 and they are frequently left to do the heavy lifting at Accident and Emergency departments (C2). Also, no dispensation is being given to older paramedics, because everyone is effectively treated equally, and subsequently expected to perform exactly the same types of tasks and shifts (C3).

Camaraderie

The rise in demand relative to the available staff resources means that crews routinely have to remain ‘on the road’ throughout their 10- or 12-hour shifts. In the past, less demanding shifts meant more frequent returns to base (ambulance station) throughout the day, and had provided an important source of social support. The rise in demands for services means it is more likely that ambulance crews rarely get breaks and have to attend a call near the end of their shift, consequently miss getting down time and a chat with colleagues. ‘Banter’ is a valued way for emergency personnel and also police officers to decompress, and dark humour is known as an important mechanism for managing emotions17 (F1). The reduced down-time and interaction with others effectively means a loss in much needed social support (F1), considered an important buffer against high work strain and psychological stress. Depersonalisation was also mentioned, as crew are now related to as a number (F2).
Affective response to the pressures on ambulance personnel

Intrinsic job satisfaction from caring for patients

Despite the lack of resources that is placing considerable pressures on Ambulance personnel, a number of staff described continued high satisfaction from the knowledge that they are able to help people, and it is important for them to feel valued and appreciated by the patients they help (D1). Often their motivation for becoming a paramedic in the first place was to pursue a true vocation in a caring profession (D1). The social interaction is also a particularly satisfying aspect of the job, both with patients and also other health care professionals, and being part of a multi-disciplinary effort (D2). Job satisfaction gained from patient care is known to be important for staff retention, and the rewarding aspects of the job should go in some way to creating a balance between the efforts demanded of them, and intrinsic satisfaction from patient care. However, satisfaction gained from caring for patients was a less salient feature of the discourse, compared with the rise in workload and changes to the age at which they can draw their occupational pension.

(D1): ‘My aunt used to work in A & E many years ago and she used to say how much she enjoyed working there, and I thought, yeah I want to do some, I want to help people. Because I have always been very much a people person’ [M50]

(D1): ‘I enjoy the sort of helping and caring and dealing with people. I’m a people person who likes all the people focus’ [M29]

(D1): ‘I think it’s the thank you that you get. I don’t really get many of them, but it’s when you get a relative or the patient who thanked you as you leave them in the hospital. And you know that you’ve picked up a scared, vulnerable, poorly person and when you leave them they’re smiling and they’re thanking you for your efforts’ [M29]

Feeling of betrayal due to changes to occupational pension

The considerable health concerns due to the rise in both call rates and clinical responsibilities clearly have an impact on ambulance personnel’s decisions as to whether or not to extend their working lives, or plan for an early retirement. This is evident, as the narratives were dominated by the particular health risks ambulance personnel face (E1) and these were sometimes expressed with reference to future life expectancy (E2). But we also found evidence that the further rise in pension age, at a time when pay in real terms has been falling, has negatively impacted staff morale markedly, and promoted wider feelings of injustice. This is because the rise in pension age is being understood as a way to compel ambulance personnel to work for longer, only to get less pension at the end of it (E3).

(E1): ‘And now we’re losing 5% of our pension for every year we go early. So if I went at 60, I could lose 25% of my pension. To save my health I can leave early, and yet I’m obviously being penalised financially’ [M37]

(E2): ‘I genuinely think none of us should be doing this beyond the age of 55, they produced some statistics a few years ago showing that our pension life expectancy was about 2 years post retirement and if you worked to 65 – expect to be dead by 67’ [M43]

(E3): ‘We have seen our wage frozen, essentially for what five years now or something like that, you know, this is a good sort of stress/moral thing, you know, our workload is continually increasing, the expectations and the skills and the drugs we use have gone up, the, you know [laughs], our pensions have been attacked and yet the pay is frozen [laughs] and they wonder why morale is shit, you know?’ [M48]

(E3): ‘I felt betrayed basically with my pension. Um, the whole thing of closing it and forcing me onto another pension scheme I felt betrayed. You know, if it, and you know, the arguments are “we don’t have enough money.” Blah, blah, blah. That was an agreement; that was part of my contract. I must admit the pension thing – I felt thoroughly betrayed’ [M48]

These powerful feelings of betrayal, worry about capacity to meet job demands and the impact on their future health status, concerns expressed about life expectancy, and uncertainty over pensions, cast a particularly heavy shadow over any prospect of safely extending the working life of paramedics (E2). Perhaps more perturbing, something highlighted by other researchers is the evidence that self-rated life expectancy can accurately determine health risk particularly in men, and is a better predictor of mortality in older people than current health or family history. The concern that existing job demands are a serious risk to ageing well is important, as self-perception of age and health can reduce self-efficacy – a set of beliefs said to be at the heart of motivation. Staff said that they were aware of colleagues
dying soon after retirement and the prospect of reduced longevity weighed heavily on their minds (E3).

**General discussion**

This article set-out to analyse the perspectives of NHS paramedics about the prospect of an extended working life because the NHS retirement age is now set to be 66–68 years of age, depending on the employee’s age and when they joined the service. UK ambulance personnel are already coping with the unprecedented demands upon the service, and therefore the further government pension age changes have been introduced at a time when morale is already low and yet work demands continue to intensify. The themes that have been formulated include: increased worry that physical and psychological demands are unsustainable; increased clinical responsibilities; demographic change; camaraderie; intrinsic job satisfaction from caring for patients; and feelings of betrayal because of the rise in occupational pension age. Taken together, they are creating real anxiety about what their health will be like in older age, and a strong sense of unfairness was present. While the narratives also contained reports of continued satisfaction gained from patient care, it does not appear to be a sufficient condition to compensate for the stressful and demanding working conditions. The final straw that has the potential to break the back of staff morale has been this latest further rise in their retirement age, effectively making them work longer for a smaller pension.

The heavy psychological toll the paramedic job takes is already well documented for UK paramedics. But the increase in physical demands placed upon NHS ambulance personnel as a result of shortages of resources and staff means that crews regularly work beyond their 12-hour shifts, do not get down time back at their stations and often wait many hours for a comfort break. Coping with these stressful working conditions can be alleviated to some extent by social support, as stress and banter and dark humour are known to be important ways emergency personnel decompress and manage emotions. And yet there is a reported loss of camaraderie and opportunity to engage in banter with colleagues, and this represents a further worrying consequence of staff shortages.

There is no doubt that some ambulance personnel are embracing the opportunity to become paramedic specialists regardless of age, as it offers new challenges and the opportunity to come off front line to work into family practice and primary care centres. However for others, the narratives clearly point to intentions being formulated to make an early exit, because being asked to provide more clinically specialised healthcare, at a time when the size of their caseload continues to grow, is simply not sustainable, not just for older staff, but also, according to our findings, for staff in their 40s. The shift in traditional roles to more advanced clinical responsibilities is a challenge to traditional professional identities, and is something that is also happening elsewhere like in Canada, where the paramedic professional’s role has been evolving rapidly.

The interviewees stressed that it will be necessary to leave work well before the new retirement age of 66–68 in order to protect their health, even if this entails accepting a smaller pension. The only other options available to them as they saw it, (driven by a need to end night shift work) were to go on bank work which allows more flexibility with regard to shift work, or migration to non-NHS employment. Both options unfortunately also mean pension sacrifice. While these work alternatives may have short-term benefits, conversely, they carry the risk that ultimately health could suffer anyway, as economic insecurity in retirement could have negative effects on health and well-being.

Those worried about a shortened life after exiting the ambulance service mentioned colleagues who died soon after retirement, and such anecdotes came readily to mind. Such considerations lend legitimacy to an early exit predicated on health worries because death awareness can have a unique and strong influence on individuals’ motivations and behaviour. The concerns expressed about work rates and life expectancy are therefore important facets of the discourse, and indicate a real risk to any prospect of having paramedics planning for an extended working life.

Concerted efforts to address staff shortages are needed as well because of the ever intensifying job role. The adoption of a range of strategies, including those ergonomic in nature, would help to support an older and younger workforce. Given the worries about capacity to meet job demands, health concerns, shortened life expectancy, and their influence on retirement intentions, in-depth comparative research between other professions with very physically demanding jobs would also be useful, to explore relationship between life expectancy and retirement intentions.

The sense of anger and betrayal due to a further change in their pension age can be understood from a social exchange perspective as paramedics feel they are risking their health and longevity to fulfil a social and moral obligation to their patients. And yet perceive, that in return, the Government is failing to fulfil its promised obligation to provide decent pay and conditions of employment. The extent of this sense of injustice remains untested, but further research would allow us to ascertain how its impacts can be delimited to determine its influence on emergency personnel’s longer-term work plans.

This article offers novel insights about what is driving many paramedics in the UK ambulance service to leave their profession well before retirement, and we wish to signpost the important financial consequences that may arise from making this decision. It provides evidence that concerns about health and also longevity caused by additional demands being placed upon them may be driving self-protective actions such as the pension sacrificing behaviours. Few, if any qualitative studies of ambulance personnel have investigated the response of NHS staff to the latest increase
in the retirement age to 66–68 years. This qualitative study represents their beliefs and attitudes, and offers a valuable contribution to the staff turnover literature about extending working life, as personal perceptions, cognitions and emotions are integral to the experience of work behaviour and occupational health.35–38

**Limitations**

There are some caveats to this research. First, as the data came from one of 13 ambulance service organisations in the United Kingdom, it does not claim to represent the views of all NHS ambulance personnel. In addition, the sample was mainly male and could represent more of a male perspective, and because of this, more females should be recruited in future research.

**Conclusion**

It is not already being in poor health per se that it is the main causal influence of paramedics leaving the profession in large numbers, rather it is the apprehension that poor health will be an inevitable part of their older age, because of the pressures placed upon them now, and this is significantly impacting on their leaving intentions. There is considerable concern about the deleterious effect these pressures are having on their physical and psychological health and well-being, and some fear it may even shorten their life. Chronic staff shortages, increased clinical specialisation and the added sense of injustice arising from further erosion to their pensions, collectively, are pushing older personnel to consider precarious decisions about their future financial and psychological well-being. The rate at which paramedics are leaving the NHS continues to rise, and the concern is that this latest rise in occupational pension age for NHS Ambulance Personnel will mean that rates of leaving will only exacerbate the present shortage of qualified paramedics and technicians.

**Acknowledgements**

We would like to thank Hilary Metcalf, for support in carrying out this research and our other colleagues who worked with us on the project, particularly Anitha George for her invaluable contribution during the interview phase. We also gratefully acknowledge the contribution of all the respondents and employees of the participating Trust who gave up their time to inform this study.

**Declaration of conflicting interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**Ethical approval**

Ethical approval was obtained from the Ethics Committees of the University of Leicester (ref: gp171-912f) and University of Bath (ref: 14/123) and Research Governance approval was passed by the Ambulance Trust.

**Funding**

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This paper arises from funding of a research project on ‘Extending Working Lives in the NHS: Challenges, Opportunities and Prospects’ (project no. MR/L006634/1).

**Informed consent**

All participants were asked to read an information sheet and sign a form to indicate they were giving their consent to being part of the interview and were made aware they could stop at any time, and all information was to be kept anonymous in password protected files within a secure server.

**ORCID iD**

Deborah Roy  
https://orcid.org/0000-0003-4401-5426

**Supplemental material**

Supplemental material for this article is available online.

**References**

1. Department for Work and Pensions. Department for work and pensions state pension age timetables [Internet]. https://www.gov.uk/government/publications/state-pension-age-timetable (2014, accessed 9 November 2018).
2. Department for Work and Pensions. Fuller working lives: a partnership approach 2017 [Internet]. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/587654/fuller-working-lives-a-partnership-approach.pdf (accessed 9 November 2018).
3. Hutton J. Independent public service pensions commission: final report. London: Independent Public Service Pensions Commission, 2011.
4. Ambulance Services England, London. NHS digital [Internet]. https://digital.nhs.uk/data-and-information/publications/statistical/ambulance-services/ambulance-services-england-2012-13 (2013, accessed 9 November 2018).
5. NHS England. High quality care for all, now and for future generations: transforming urgent and emergency care services in England (Urgent and Emergency Care Review End of Phase 1 Report). London: NHS England, 2013, 79 pp.
6. Appleby J and Dayan M. Nuffield Winter Insight briefing 3: the ambulance service. London: Nuffield Trust, 2017.
7. Weyman A, Meadows P and Buckingham A. Extending working life: audit of research relating to impacts on NHS Employees. London: NHS Employers, 2013, 149 pp.
8. NHS Executive. Rate of paramedics leaving ambulance service nearly doubles. Manchester: Cognitive Publishing Ltd, 2015, http://www.nationalhealthexecutive.com/News/rate-of-paramedics-leaving-ambulance-service-nearly-doubles (accessed 9 November 2018).
9. Ball L. Setting the scene for the paramedic in primary care: a review of the literature. Emerg Med J 2005; 22(12): 896–900.
10. Blodgett JM, Robertson D, Ratcliffe D, et al. An alternative model of pre-hospital care for 999 patients who require non-emergency medical assistance. *Int J Emerg Serv* 2017; 6: 99–103.

11. Cropanzano R and Mitchell MS. Social exchange theory: an interdisciplinary review. *J Manage* 2005; 31: 874–900.

12. NHS Executive. Call for ringfenced MH budget as ambulance call-outs soar by 25%, 2017, http://www.nationalhealthexecutive.com/Mental-Health/calls-for-ringfenced-mh-budget-as-ambulance-call-outs-soar-by-25 (accessed January 2020).

13. Braun V and Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006; 3: 77–101.

14. Siegenthaler JK and Brenner AM. Flexible work schedules older workers and retirement. *J Ageing Soc Policy* 2008; 12: 19–34.

15. VanHoy SN and Laidlow VT. Trauma in obese patients: implications for nursing practice. *Crit Care Nurs Clin North Am* 2009; 21(3): 377–389, vi.

16. Fischer SL, Sinden KE and MacPhee RS. Identifying the critical physical demanding tasks of paramedic work: towards the development of a physical employment standard. *Appl Ergon* 2017; 65: 233–239.

17. Filstad C. Learning to be a competent paramedic: emotional management in emotional work. *Int J Work Organ Emotion* 2010; 3: 368–383.

18. van Doorn C and Kasl SV. Can parental longevity and self-rated life expectancy predict mortality among older persons. Results from an Australian cohort. *J Gerontol B Psychol Sci Soc Sci* 1998; 53(1): S28–S34.

19. Hurd MD, Smith JP and Zissimopoulos JM. The effects of subjective survival on retirement and social security claiming. *J Appl Econ* 2004; 19: 761–775.

20. Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychol Rev* 1977; 84(2): 191–215.

21. Holahan CK and Holahan CJ. Self-efficacy, social support and depression in aging: a longitudinal analysis. *J Gerontol* 1987; 42(1): 65–68.

22. Sherman JJ. Effects of psychotherapeutic treatments for PTSD: a meta-analysis of controlled clinical trials. *J Trauma Stress* 1998; 11(3): 413–435.

23. Bennett P, Williams Y, Page N, et al. Levels of mental health problems among UK emergency ambulance workers. *Emerg Med J* 2004; 21(2): 235–236.

24. Tavares W, Bowles R and Donelon B. Informing a Canadian paramedic profile: framing concepts, roles and crosscutting themes. *BMC Health Serv Res* 2016; 16: 477.

25. Scales J and Scase R. Fit and fifty. A report prepared for the Economic and Social Research Council. Essex Institute for Social and Economic Research, University of Essex and the University of Kent, Essex, 2000.

26. Crowley JE. Longitudinal effects of retirement on men’s well-being and health. *J Bus Psychol* 1986; 1: 95–113.

27. Mein G, Martikainen P, Hemingway H, et al. Is retirement good or bad for the mental and physical health functioning? Whitehall II longitudinal study of civil servants. *J Epidemiol Commun H* 2003; 57: 46–49.

28. Pyszczynski T, Solomon S and Greenberg J. In the wake of 9/11: the psychology of terror. Washington, DC: American Psychological Association, 2003.

29. Australian Public Safety Commission. Checklist of strategies and activities when considering design for ageing workforce. Canberra, ACT, Australia: Australian Public Safety Commission, 2003.

30. Perry LS. Designing the workplace for the aging workforce: how to use ergonomics to improve the workplace design [Internet], http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.578.1021&rep=rep1&type=pdf (2013, accessed 9 November 2018).

31. Blau P. *Exchange and power in social life*. New York: John Wiley, 1964.

32. Blau G and Chapman SA. Why do Emergency Medical Services (EMS) professionals leave EMS. *Prehosp Disaster Med* 2016; 31(S1): S105–S111.

33. Benton JP, Christopher AN and Walter MI. Death anxiety as a function of ageing anxiety. *Death Studies* 2007; 31: 337–350.

34. Siegel M, Bradley EH and Kasl SV. Self-rated life expectancy as a predictor of mortality: evidence from the HRS and AHEAD surveys. *Gerontology* 2003; 49(4): 265–271.

35. Grant AM and Wade-Benzoni KA. The hot and cool of death awareness at work: mortality cues, aging and self-protective and pro-social motivations. *Acad Manage Rev* 2009; 34(4): 600–622.

36. Cox T, Griffiths A, Barlowe C, et al. *Organisational interventions for work stress. A risk management approach* (HSE CRR 286). London: HSE Books, 2000.

37. Rick J, Briner RB, Daniels K, et al. A critical review of psychosocial hazard measures (HSE CRR 356). London: HSE Books, 2001.

38. Rick J, Thomson L, Briner RB, et al. *Review of existing supporting scientific knowledge to underpin standards of good practice for key work-related stressors – Phase I* (HSE RR 024). London: HSE Books, 2002.