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**One-way pendulum? – Staff retention in the NHS:
Determining the relative salience of recognised drivers of
early exit.**

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3 **One-way pendulum? – Staff retention in the NHS: Determining the relative salience**
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5 **of recognised drivers of *early exit***
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8 **Abstract**
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11 **Purpose** - This paper presents the results of employee rankings of reasons why staff
12 leave their employment in the UK National Health Service (NHS). It is based upon data
13 gathered as a component of the Medical Research Council funded project *Extending*
14 *working life in the NHS Challenges and Prospects* (2014-2018).
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21 **Design/methodology/approach** – The data was collected from an opportunity sample of
22 1594 health professionals, managers and administrators employed by the NHS.
23
24 Participants completed a paired ranking task (Case V method of paired comparisons,
25 Thurston 1927) to determine the relative importance of eight widely cited reasons for
26 exit. The item set was derived from focus groups conducted as a component of the wider
27 study.
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36 **Findings** – The analysis revealed that *job demands*, *resources* and *time pressure* were
37 ranked as the strongest drivers of *early-exit*, and that the three lowest ranked elements
38 were pay, working hours and flexible work. A high degree of consensus was apparent
39 across the principal professional groupings, job grades and age cohorts. Findings raise
40 important questions over the impact of the current NHS employer emphasis on flexible
41 work and widespread calls for increased pay as solutions to the staff retention crisis.
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50 **Originality/value** – Each of the drivers of exit had previously been identified in both
51 NHS and international health sector research on staff retention. However, this is believed
52 to be the first study that has attempted to determine the relative strength of recognised
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3 drivers of exit, and the degree to which their influence may vary between different
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5 segments of the NHS workforce. Findings are of relevance to NHS employers and trades
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7 unions with respect to the focus for future intervention activity aimed at maintaining and
8
9 improving staff retention rates.
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13 **Keywords** – Staff retention; Health Sector; NHS; Flexible work.
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16 **Paper type** – Research paper
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Introduction

The UK National Health Service has a deepening issue of staff shortages. It is widely held that the degree of shortage facing the NHS has the potential to reach unprecedented levels within a decade (Weyman, Meadows & Buckingham, 2013; Jones-Berry, 2017a). Historically, issues of recruitment, have tended to dominate UK Government and NHS employer perspectives on staffing (Leese, Storey, & Chear, 2009). But with growing recognition that traditional routes to training new apprentice staff and migrant labour recruitment initiatives are unlikely to prove sufficient, the focus is on measures to improve staff retention (Addicott, Maguire, Honeyman & Jabbal, 2015; Buchan, Charlesworth, Gershlick & Seccombe, 2017; 2019; NHS Employers 2017; NHS Improvement, 2018).

This paper presents new evidence highlighting the importance of retention, rather than recruitment, as the key issue that NHS human resource management personnel should be addressing. It provides the first quantitative assessment of the relative significance of variables that staff identify drivers of exit from NHS employment. It commences by reviewing studies that have attempted to explain recent patterns of staff recruitment and turnover in the NHS. The second part describes the research objectives, its design and the methods applied to address the question: what are the main reasons that staff identify for leaving the NHS? The third section presents the results of the analysis and the fourth part presents the conclusions.

Research evidence

i) Reasons for leaving NHS employment

Recent studies of staff turnover and retention in the NHS have highlighted the interplay of three main causal influences:; intrinsic job satisfaction, extrinsic elements (e.g. pay and conditions), and strength of identification with the NHS. High job demands, due to staff or other critical resource shortages, and elements relating to the configuration of work including working hours, have featured prominently. Given the longstanding policy debate about the adequacy of funding and resources available to the NHS, it is not surprising that the issue of workload (the duration, scope and intensity of work), has been highlighted (Fletcher, Carter, Lyubovnikova, 2018; Gray, Wilde & Shutes, 2018; Khan, Teoh, Islam & Hassard, 2018). Echoing findings from other sectors, excessive workload has been found to decrease job satisfaction, increase the risk of work-related stress and burnout, and, consequently, the likelihood of exit (see, in particular, Joshua-Amadi, 2002; Loan-Clarke, Arnold, Coombes, Hartley, & Bosley, 2010; Hayes, O'Brien, Duffield, Shamian, Buchan, & Hughes, 2012).

An array of other psychosocial components (morale, support, recognition, reward, fairness and equity) have also been identified (Atkinson, Lucas & Hall, 2011; Brown, Ahmed-Little & Stanton, 2012; Buchan & Seccombe, 2011; Joshua-Amadi, 2002; Shields & Ward, 2001). Beyond potential detrimental effects on physiological and psychological health, there is evidence to support claims that excessive workload arising from staff shortages has had a corrosive effect on staff morale, intrinsic job satisfaction and work life-balance. Noteworthy insights point to a greater propensity to engage in paid and unpaid overtime-working; restricted scope for line managers to take account of employee needs and preferences over working hours (Patterson, 2011; Rimmer, 2015; Wise, Smith, Valsecchi, Mueller & Cabe, 2007); and reports of staff frustration over shortages degrading the quality

of patient care (Wilson, 2006). Increasing bureaucracy and burdensome monitoring and auditing requirements have been identified as critical source of frustration for health professionals, eroding the time available for staff to interact with patients (Cunningham, Kennedy, Nwolisa, Callard, & Wike (2012) ICM, 2013; Holroyd, 2018).

Findings on pay, in contrast, are rather mixed. Some studies, principally concerning nurses, claim it to be one of the most important drivers of exit (Gulland, 2001; Newman, Maylor & Chansarkar, 2001). Others however, report that pay has a small impact on retention (Frijters, Shields, Wheatley & Price, 2006), relative to the greater effect of scarce resources and under-staffing (Arnold, Loan-Clarke, Coombs, Park, Wilkinson & Preston, 2003; 2006); anti-social working hours (Fleming & Taylor, 2006); poor quality of work environment (Shields & Ward, 2001); and, excessive work-related stress, low morale and poor promotion prospects (Joshua-Amadi, 2002; Shen, Cox, & McBride, 2004). Evidence that pay rates realised after leaving the NHS are, in the majority of cases, equivalent or, as in the case of paramedics, often lower, suggest that pay is not the key consideration in driving decisions to quit (Frijters, Shields, & Wheatley-Price, 2006; Weyman, Meadows, & Buckingham, 2013; Quaile, 2016).

More nuanced insights point to compensatory effects, where dissatisfaction with pay is bound up with notions of fairness and equity relative to job demands, in short, where there is a perceived imbalance between effort and reward. Staff tend to feel most acutely dissatisfied when pay rates remain static in the presence of rises in work rate and load (Dean, 2011, Shen Cox, & McBride, 2004;). Social comparison effects are also relevant. As Shield and Ward (2001) note, pay rates falling behind what are perceived to be comparable staff in other parts of the public sector, can constitute a notable source of

dissatisfaction. An additional source of tension accompanied the 2011/2015 UK Government orchestrated NHS pension reforms (Hausknecht, Howard & Rodda, 2009). Characterised as a high-profile amplification station (Kasperson, 1992), the changes may have fuelled established perceptions of unfairness, inequity and effort-reward imbalance (British Medical Association, 2016; Johnson & Manfreidi, 2016; Santry, 2011). Historically, NHS employees have tended to view their entitlement to a *'good pension'* as offsetting salary shortfalls, i.e. a compensatory effect (Arnold, Loan-Clarke, Coombs, Park, Wilkinson, & Preston, 2003). Issues of perceived effort-reward imbalance seem further apparent within findings on staff recognition, with around three-fifths of NHS employees reporting that they feel undervalued (Bibby, Bevan, Carter, Bate, & Robert, 2009). The extra effort expended to manage increased job demands and workload are often unrecognised and unrewarded (Hayes 2012; Shen & McBride, 2004; Williamson & Williams, 2011).

ii) The relative salience of drivers of exit from NHS employment

Very few studies have attempted to produce rankings of the relative strength of drivers of *early-exit* from the NHS (Table 1). The term *'early-exit'* is used to refer to individuals who leave the NHS to take-up non-NHS employment before reaching the age that maximises their NHS eligibility (currently, variously 55-66yrs).

Two decades ago, Smith & Secombe (1998), reported inadequate resources, inadequate pay, and inadequate skill development opportunities as, respectively, the three headline *push* effects. More recent studies lay claim to the primacy of lack of appreciation, low pay, and workload, (Joshua-Amadi, 2002); or, irregular and antisocial hours, followed by lack of management support and workload pressures (Fleming & Taylor, 2006).

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3 Complementary qualitative insights point to understaffing, working hours, and pay (Arnold,
4 Loan-Clarke, Coombs, Park, Wilkinson, & Preston, 2003), while correlational studies have
5 highlighted bureaucracy and lack of autonomy; workload; working hours and working
6 patterns; lack of recognition for contribution at work; and job-related stress as the main
7 factors influencing turnover amongst midwives and consultants (Shen, Cox & McBride,
8 2004). While there are detailed differences in the variables selected for manipulation across
9 studies, there is considerable overlap, and notable alignment over the inclusion of
10 configuration of working hours, workload and pay.
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22 Insert Table One about here
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25 In contrast to the findings presented in this paper, previous studies of NHS staff retention
26 have tended to be restricted to discrete professions or single NHS Trusts/Boards. This
27 raises questions over whether differences in findings reflect variability in the relative
28 significance of push influences between the different study populations, or methodological
29 differences within the respective studies. Only two studies were identified that drew upon
30 multiple professions (Table 1).
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40 From the perspective of intervention aimed at increasing retention rates, it is important to
41 determine whether a small number of drivers of exit are clustered at the top of the scale,
42 relative to other less important influences. It is also important to determine the extent to
43 which perspectives on primacy vary across different employee demographics, e.g. by
44 profession, age and staff grade. There has, for example, been notable speculation over pay
45 and working hours being of greater salience within the ambulance service (National Health
46 Executive, 2015) and amongst early career employees in general (Murrells, Robinson &
47 Griffiths, 2008). The availability of part time work is widely claimed to be more important
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3 to employees with young children and to reflect the work-life balance aspirations of older
4 employees (Dean, 2017; Ryan, Bergin & Wells, 2017). In addition, grade and occupation
5 differences have been reported with respect to job demands, time pressure and pay (Anicich
6 & Hirsch, 2017; Buchan, Seccombe, Gershlick & Charlesworth, 2017; Evans, 2017;
7 Knowles, O’Cathain, Morrell, Munro & Nicholl, 2002).

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12 The capacity to determine the degree of homogeneity / heterogeneity across different
13 employee demographics is important, as it informs government and employer policy
14 thinking over whether a generic (whole population) or bespoke, segmented approach to
15 intervention is likely to yield a higher return on investment (Karanika-Murray & Weyman,
16 2013).

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18 We believe our study to be the first that has attempted to determine the relative strength of
19 headline drivers of exit from the NHS, and how this this profile varies structurally, e.g.
20 between different health professions and functional roles.
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38 **Research Design, Methods and Data**

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41 The research has three main objectives. First, to determine the relative salience of
42 recognised headline drivers of early-exit from employment in the UK National Health
43 Service. Second, to determine the degree of homogeneity or heterogeneity in employee
44 rankings of drivers of early-exit from the UK National Health Service. Third, on the basis
45 of the results, to provide recommendations for the focus of government and employer
46 interventions aimed at increasing staff retention rates in the UK National Health Service.
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3 The elicitation method selected for our study was Case V paired comparisons (Thurstone,
4 1927). Paired comparisons is a constant method, which uses the variables of interest as
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6 both test stimuli and a standard (Bock & Jones, 1968). Using a series of logical assumptions
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8 about the subjective distribution of the stimuli (push entities, in this instance), a numerical
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10 interval scale of the value placed on each can be constructed (Thurstone, 1959).
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15 Originating from foundation work in psychophysics, paired comparisons is designed to
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17 deal with the quantification of variables of unknown intensity, to determine the stimuli's
18
19 values themselves (Thurstone, 1959). The elicitation method is simple to perform
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21 (participants are asked to indicate which of a pair of items they consider the more important;
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23 for all permutations of pairings, presented in a randomised order). The output is an interval
24
25 scale that indicates the relative distance in psychophysical space (in the current instance
26
27 salience / importance) between the ranked items (for a full account see Thurstone, 1927;
28
29 1959; Bock & Jones, 1968). Importantly, the method has been empirically demonstrated
30
31 to afford a number of methodological advantages over the ranking and rating techniques
32
33 used in previous NHS leave studies (Table 1); (see Sjoberg 1967; Bock & Jones, 1968;
34
35 Daniels, 1980; Cromer Seaver, Stillwell, & Gaddy 1984). Notable advantages include the
36
37 capacity to determine the consistency (Kendall's K) of each participant's responses; the
38
39 degree of concordance between participants (Kendall's W); the extent of between group
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41 differences (by profession, grade and age) and, summatively, whether push effects (as a
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43 whole) have a stronger influence on certain personnel demographics, relative to others.
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53 (i) Generation of the item set 54 55 56 57 58 59 60

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3 In the first instance, a set of 15 push items was derived from published findings on staff
4 retention and reasons for leaving the NHS (see, in particular, Fletcher, Carter &
5 Lyubovnikova, 2018; Johnson, Hall, Berzins, Baker, Melling, & Thompson, 2018; Kim &
6 Windsor 2015).
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13 In order to refine the item set and produce alignment with the number of variables used in
14 previous studies, two focus groups were conducted with a sample of health professionals
15 (drawn from; general nursing; community nursing; clinical psychology; physiotherapy;
16 speech and language therapy). Prior to any discussion, each participant independently,
17 rated the importance of each push variable on a 1-10 subjective scale. Following this,
18 participants discussed their ratings with other members of their respective group. This
19 revealed a high degree of consensus over the most highly rated items. This exercise
20 produced the set of eight high-rated variables, that were used in the paired comparisons
21 task (Table 2).
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40 **(ii) Cognitive pilot**

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43 The ranking task was configured for on-line completion using Bristol-on-line survey
44 software. Prior to data gathering, cognitive and quantitative piloting ($N = 5$) was conducted,
45 to confirm the effectiveness of instructions to participants and, critically, to check that the
46 push items were meaningful to respondents and that they could make reliable distinctions
47 between them. The latter was formally tested (Kendall's K) for the presence of intransitive
48 triadic responses, of the type $A > B > C > A$, the presence of which would sponsor the
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conclusion that the item set was unsuitable for its intended use. The pilot identified the need for minor editorial amendment to the task instructions. It also demonstrated that respondents were able to make consistent comparisons ($K > 0.70$ in each case).

(iii) Participants

Participants were a volunteer opportunity sample recruited within six NHS Trusts in England (one, Ambulance, one Community Health, one Mental Health and two Acute hospitals) and UK-wide, via health sector professional associations and trades unions. This produced a substantial and diverse sample of NHS employees (see Table 3). Although exhibiting some variability in cell size, with the exception of medical and dental professionals, numbers in each demographic segment (by profession, grade and age) were of sufficient magnitude to permit statistical testing. The sample lacked the methodological strengths of a probability or quota sample, but was notably larger and more diverse than those reported in previous NHS *exit* studies (see Table 1).

Insert table 3 about here

Analysis

(i) Pre-analysis checks

Prior to commencing the analysis, reflecting the general method (Thurstone, 1927; 1959) tests of within-respondent consistency (Kendall's K) and between-respondent concordance (Kendall's W) were performed. 96.2%, ($N = 1594$) of response sets produced a K coefficient of ≥ 0.70 (Kendall, 1970). As less than 5% ($N = 60$; 3.8%) of cases exhibited

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3 high inconsistency, all response sets could have been retained. However, as there was no
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5 systematic demographic pattern to the inconsistent response sets, reflecting
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7 recommendations on method to reduce the noise that their retention might introduce, they
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9 were removed (see Thurstone, 1959; Bock & Jones, 1968). This gave a viable sample of
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11 1534 response sets.
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15 Testing for concordance, to determine the degree of agreement across all respondents
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17 produced a modest coefficient of $W = 0.32$ (significance $p < .001$). Grouping respondents
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19 into the seven occupational families detailed in Table 3, revealed within group coefficients
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21 that fell within the range $W = 0.21$ to 0.49 (significance $p < .001$, in each case), indicating
22
23 that the strength of consensus varied between the different professions. Calculation of
24
25 concordance within job bands (grade) and age group and gender, revealed coefficients
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27 within the ranges of $0.26-0.52$; $0.26-0.47$ and $0.31-0.32$, respectively (significance $p < .001$,
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29 in each case).
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37 (ii) Results

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40 In the first instance, judgement proportions (the frequency with each item was judged to
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42 be a more important push influence than each of the other items in the set), were calculated
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44 for the sample as a whole ($N = 1534$). To produce a closer approximation to a probability
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46 scale than a simple linear representation, the judgement proportions were transformed to
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48 arcsine deviates (for proofs and associated recommendations for this development of the
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50 method of paired comparisons see Sjoberg, 1967).
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3 The means were calculated for each push variable. Setting the lowest ranked variable to
4 zero, and the highest to 100, produced the relative proportions depicted in Figure 1.
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8 *Insert Figure 1 about here*
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11 This revealed that shortage of staff and resources was ascribed the most important push
12 influence; almost 30 points higher than the second-place variable, job-demands. Of
13 particular note, is the reactively low positions ascribed to pay, working hours, and access
14 to flexible working, given their prominence within the academic literature and
15 contemporary NHS human resources policy publications.
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19 In view of the prominence of pay issues within the literature and contentious high-profile
20 disputes over pay at the time of data gathering, this variable was selected to act as the
21 standard (comparator) item (see Thurstone 1927; 1959) and point of comparisons against
22 which to express the other push influences. Setting pay to zero produced the distribution
23 depicted in Figure 2. Conceptually, this shows variables rated as stronger drivers of exit
24 than pay, and those considered less important than pay.
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28 *Insert Figure 2 about here*
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31 Having established a profile for the NHS as a whole, the analysis moved to exploring the
32 degree to which this might vary by the headline demographics of profession, grade (job
33 band), and age. In the first instance, comparison was limited to the ordinal rankings using
34 linear regression, rather than the scale values ascribed to each entity, (Table 4).
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38 *Insert Table 4 about here*
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3 This revealed high agreement at the level of rank order across each of the primary
4 demographics, with the exception of the senior medical and dental group, which presented
5 as an outlier (figure 3). The most striking contrast between this group and the other
6 professions was the higher salience ascribed to pay.
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13 *Insert Figure 3 about here*
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16 The very modest sample size for the medical and dental cohort transparently limits
17 confidence in the detected contrast. However, the authors believe that it presents as
18 sufficiently marked to warrant further investigation in a dedicated supplementary study.
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23 Due to their discrete profile and the size of the sample, medical and dental respondents
24 were excluded for the next stage of the analysis. Having established that there was high
25 agreement at the level of rank order, the analysis moved to exploring whether the set of
26 headline push influences, as a whole, exert a stronger push influence on some occupational
27 groups than others, such that some sub-populations might be considered more prone to
28 leave the NHS than others, i.e. having found high consensus over the ranking of leave
29 variables, this analysis explored between group differences in the scaled values ascribed to
30 the variables. This analysis could performed due to the presence of high agreement across
31 the demographics of interest at the level of rank order (see Ostberg, 1980; Weyman and
32 Clarke, 1999).
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47 Reflecting the method advanced by Ostberg (1980), to formally test this, a series of
48 univariate analyses of variance were performed with respect to profession, grade and age
49 (although relatively large, the sample was not considered sufficient to support a reliable
50 full multivariate analysis). Again referenced to pay, this revealed a degree of variation in
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3 the leave scales produced by the different demographics (Figures 4, 5 & 6). However, none
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5 of the differences were of sufficient magnitude to achieve statistical significance at $p < 0.05$.
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8 In summary, the findings indicate a high degree of consensus and homogeneity over the
9
10 relative influence of push effects at the level of rank order across a wide range of NHS
11
12 employee demographics. Scaleable differences are apparent in the weightings ascribed to
13
14 push variables, and proportionately highlight the primacy of *shortage of staff and resources*,
15
16 *job demands* and *time pressure*. Finally, the set of push influences explored, as a whole, do
17
18 not appear to exert a differential influence on certain demographics, notably, on the basis
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20 of claims within the literature, older workers, paramedics or intermediate grades.
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25 *Inset Figure 4 about here*

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28 *Inset Figure 5 about here*

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31 *Inset Figure 6 about here*
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37 **Discussion**

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40 The evidence that the NHS is experiencing acute staff shortages is overwhelming, and there
41
42 are signs that the situation may worsen in coming years (Nuffield Trust, 2018). The
43
44 ascendant profile of issues of staff retention has sponsored frequently heated and politically
45
46 partisan debate over causal influences and their resolution. Determining the relative
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48 strength of headline drivers of early-exit offers the promise of informing strategic decision-
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50 making within Government and NHS employers over ameliorative intervention, i.e. they
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3 signpost the topics on which intervention is likely to deliver the highest return on
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5 investment, relative to alternatives.
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8 The key finding we can report relates to notable homogeneity and a strong consensus across
9
10 a wide range of NHS health professions (with the possible exception of senior medical and
11
12 dental practitioners) that the most powerful drivers are: *shortages of resources, job*
13
14 *demands* and the closely coupled issue of *time pressure*.
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18 Stakeholder and media debate over the drivers of early-exit is extensive. However, prior to
19
20 our study there is little evidence of any recent attempt at a large scale systematic
21
22 quantification of their relative influence, or the nature and extent of variability across
23
24 different personnel groups within the NHS.
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28 The decision to use the paired comparisons reflected empirical evidence of its
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30 methodological strength relative to alternatives (Thurstone, 1927; 1959; Ostberg, 1980,
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32 Cromer, Seaver, Stillwell, & Gaddy, 1984; Atkins, 1990), in particular its capacity to
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34 determine the interval (distance) between previously identified push variables.
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38 At this point it is important to reiterate that the task performed was a ranking of what are
39
40 widely cited important drivers of exit. Therefore, a low ranked item should perhaps most
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42 appropriately only be considered low in relative terms, i.e. within the domain of important
43
44 push effects. Equally, however, this does not preclude the possibility that low ranked items
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46 are, indeed, relatively unimportant, despite claims to the contrary within published findings.
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50 The low positions ascribed to pay and availability of flexible working hours are counter to
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52 what might have been predicted given their prominence within the peer reviewed literature
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54 and contemporary human resource policy publications (Buchan, Seccombe, Gershlick, &
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3 Charlesworth, 2017; Kaidi & Atun, 2017; Timewise Solutions, 2018). However, it may be
4
5 that the push effect of dissatisfaction with pay (Buchan, Seccombe, Gershlick &
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7 Charlesworth, 2017) should be considered with reference to rates achievable in alternative
8
9 employment. UK Labour Force Survey data indicates that, with the exception of (doctors
10
11 and dentists) rates achieved by leavers are not significantly higher, and for certain
12
13 professions, e.g. paramedics, tend to be lower (Weyman, Meadows & Buckingham, 2013).
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15 A viable conclusion seems to be, that while pay is almost certainly important to NHS
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17 employees, as it tends to be for all employees, and suppressed rates are likely represent an
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19 important source of contention and dissatisfaction (Dromey, 2018), action on pay, in and
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21 of itself, does not present as embodying the potential to resolve the staff retention issue,
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23 i.e. Government action to raise pay would almost certainly do no harm, but in the absence
24
25 of action to redress job demands; notably extrinsic elements impacting on work load and
26
27 work rate (shortages and time pressure), may not prove sufficient to arrest the rate of
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29 exodus.
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36 The finding that availability of flexible working hours was ascribed the lowest rank, overall
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38 and across all personnel groups, with the exception of medical and dental, is perhaps
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40 surprising, given its high profile in contemporary commentaries on retention and guidance
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42 aimed at employers (DWP 2017b; NHS Employers, 2017; NHS Improvement, 2018a;
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44 Royal College of Nursing, 2018). Widely cited as attractive to all employees, but
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46 particularly those with caring responsibilities and amongst the over 50's, increasing the
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48 availability of part-time and flexible hours is seen as key to increasing retention rates (DWP
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50 2017a; 2017b; Age Action Alliance, 2017). This belief is so deeply engrained in public
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3 policy and human resource circles that it seems to be taken as a given (O'Reilly, 2014;
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5 Willott, 2014).

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8 How then might we account for this issue occupying the lowest rank across a wide range
9
10 of NHS personnel? Should we simply conclude that flexibility is important, but not as
11
12 important as the other variables assessed? Or that the availability and degree of flexibility
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14 over work and working hours within the NHS is such that this is no longer an important
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16 issue for staff? Evidence that (i) demand for flexible working arrangements outstrips
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18 supply, (ii) NHS employers ration access by applying arbitrary qualification criteria, (iii)
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20 employees reduce their exposure to high job-demands by migrating to Bank and Agency
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22 (part time / zero hours) contracts would seem to suggest not (Jones-Berry, 2017b;
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24 Timewise Solutions, 2018; Weyman & O'Hara, 2018).

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27 On balance, it seems reasonable to conclude that increased opportunities for flexible
28
29 working are likely to be welcomed by employees but, as with pay, intervention on this
30
31 issue, in the absence of addressing more highly ranked drivers of early-exit, seems likely
32
33 to render it an at best a partial, and possibly marginal, solution.

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36 As noted above, this finding is in marked contrast to the profile ascribed to flexible working
37
38 within the literature on retention, and contemporary UK Government (Department for
39
40 Work and Pensions) and NHS employer guidance. A number of explanations seem possible.
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42 Published evidence based is dominated by descriptive accounts and may be at risk of
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44 conflating employees' aspirations with the practicalities of their realisation, i.e. an attitude
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46 behaviour disparity (Weyman, Wainwright, O'Hara, Jones & Buckingham, 2012). In
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48 addition, it seems possible that the emphasis on flexible working in contemporary employer
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guidance reflects restricted scope to address more fundamental causes of exit, attributable to external contingencies, e.g. funding constraints, labour shortage.

Turning to the three highest ranked variables, there are intuitive linkages between *shortage of equipment and resources*, *job demands* and *time pressure*, which may explain their clustering at the upper end of the scale. Although sources of time pressure are multiple, including those arising from the service-delivery performance regime (Wankhade, 2011), in large part, time pressure is a manifestation of (in)sufficiency of resources relative to demand for care, i.e. a state of disequilibrium between inputs and outputs.

In considering job-demands, from the perspective of the scope for employer intervention, it is important to distinguish between intrinsic and extrinsic components. Intrinsic components relate to health professional practice in the care of patients, whereas extrinsic elements, arise from the design of work and workplace climate, external to the individual e.g. working hours, intensity of work, structural, cultural and socio-technical elements. The issue of intensity of work is, in large degree, bound up with sufficiency of resources, i.e. extrinsic job demands will tend to rise where resources are scarce, absent or insufficient to comfortably meet presenting objectives. In job design terms, intrinsic components are for most practicable purposes immutable (although they can be the subject of employer support), whereas extrinsic components are potentially malleable and amenable to ameliorative intention.

With regard to the scope for intervention, it is apparent that options for NHS employers are, in large part, bounded by the resources at their disposal and over which they have limited control. Recognition that *shortages*, *time pressure* and *job demands* represent headline effects is of little value if the scope to address them is thwarted by external

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3 contingencies. While there may be scope for addressing lower ranked issues, such as
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5 flexible working hours and staff recognition, there is a risk that the impact on exit rates
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7 will be modest, such that any positive effects may be inundated by more fundamental issues.
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10 The arising implication is that the capacity to address the highest ranked issues rests with
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12 Government as well as employers, i.e. under current funding arrangements, Government,
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14 via employers.
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18 On the basis of published findings, a number of demographic contrasts were predicted
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20 regarding the relative importance of push influences. Notably, age cohort differences with
21
22 respect to the configuration of working hours and job demands (Dean, 2017; Ryan, Bergin
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24 & Wells, 2017), as well as grade and occupation differences with respect to job demands,
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26 time pressure and pay (Knowles, O’Cathain, Morrell, Munro & Nicholl, 2002; Evans, 2017;
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28 Buchan, Seccombe, Gershlick & Charlesworth, 2017). These were explored, s from the
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30 perspective of intervention, as it is important to determine whether a segmented or a whole
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32 population approach is likely to deliver the highest returns (Karanika-Murray & Weyman,
33
34 2013). Our findings suggest the latter, as both the rankings and the overall influence of
35
36 push variables showed very close alignment across a wide range of primary demographics.
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41 Limitations to findings include the caveat that survivor population effects could constitute
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43 a source of sample bias, i.e. all participants were current NHS employees, as such it is
44
45 possible that those who remain may be more resilient or hold different dispositions to
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47 leavers. An arising implication is that comparisons by age and grade may not be comparing
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49 like with like. In addition, tapping respondent beliefs about the actions of peers can be
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51 predicted to embody some degree of inaccuracy and attribution bias. However, these
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3 effects can be considered to operate as a source of common, rather than systematic, error
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5 across the demographics compared.
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10 11 **Conclusions** 12

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14 The focus of this paper has been on determining the relative salience of headline push
15 influences that motivate early-exit from the NHS. In this respect, we believe we offer
16 stakeholders a number of important insights relevant to the prioritisation of topics for
17 intervention to raise staff retention rates.
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24 The almost universal consensus over the rank order and relative salience of headline push
25 effects is telling, and seems to provide an unambiguous signpost for intervention. The
26 finding that *job demands*, *resources* and *time pressure* were the most negatively rated
27 entities confirms the suspicions of many commentators, and reflects alignment with
28 established evidence job stress and burnout (Bakker & Demerouti, 2017; Jones-Berry,
29 2017b). Our findings raise questions over the potential for the contemporary emphasis on
30 pay, flexible work and changes to working to increase staff retention, in the absence
31 addressing what present as more fundamental issues. Addressing the former in the absence
32 of the latter may have the potential to do some good, but there are grounds for concluding
33 that it may not do enough good to redress the high and rising exodus.
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Table 1

Headline drivers of early-exit from the NHS

Fleming & Taylor 2006	Smith & Seacombe 1998	Arnold et al, 2003	Shen, Cox & McBride, 2004	Joshua-Amadi 2002
<i>Community care</i>	<i>Nurses</i>	<i>Nurses & Allied Health</i>	<i>Midwives & Consultants</i>	<i>Nurses</i>
Working hours	Inflexible working hours	Working hours	Working hours / patterns	
	Inadequate resources	Under-staffing		
Pay	Inadequate pay	Pay		Low inequitable pay
Qualifications and training	Inadequate personal development opportunities			
Workload pressures	Excessive workload		Workload	Increased workload

Supervision and	Personal
support	isolation

Inadequate
promotion
prospects /
career structure

Bureaucracy
and lack of
autonomy

Job-stress

Lack of	Lack of
recognition	appreciation

Job satisfaction.

Client attitudes

Decline in
patient care

Table 2

Item set

Time pressure

Shortages of staff/resources

Working hours

Psychological demands

Effort not recognised by
employer

Lack of part-time/flexible
working

Pay

Red tape and bureaucracy

Table 3 Sample demographics and assessment of within
group concordance ($N = 1534$)

		<i>n</i>	<i>W</i>
Occupation	Allied Health	425	0.49
	Nurse & Midwife	476	0.38
	Ambulance	112	0.25
	Medical and Dental	16	0.43
	Estates & administration	123	0.26
	Scientific and technical	194	0.21
	Other	188	-
Grade (job band)	Band 7+	765	0.38
	Band 5&6	627	0.52
	Band 1-4	142	0.26
Age (yrs)	>51	808	0.31

Table 4

Rank order - Between group concordance

	Range
Profession (Medical & Dental; Nurses; Ambulance; Allied Health; Scientific and Technical; Estates and Administration)	R^2 0.45-0.96 (R^2 0.86-0.96 medical and dental excluded)
Grade (Job bands 1-4; 5&6; 7 and above)	R^2 0.93 – 0.98
Age (<30yrs; 31-40; 41-50; 50 and over)	R^2 0.93 – 0.99

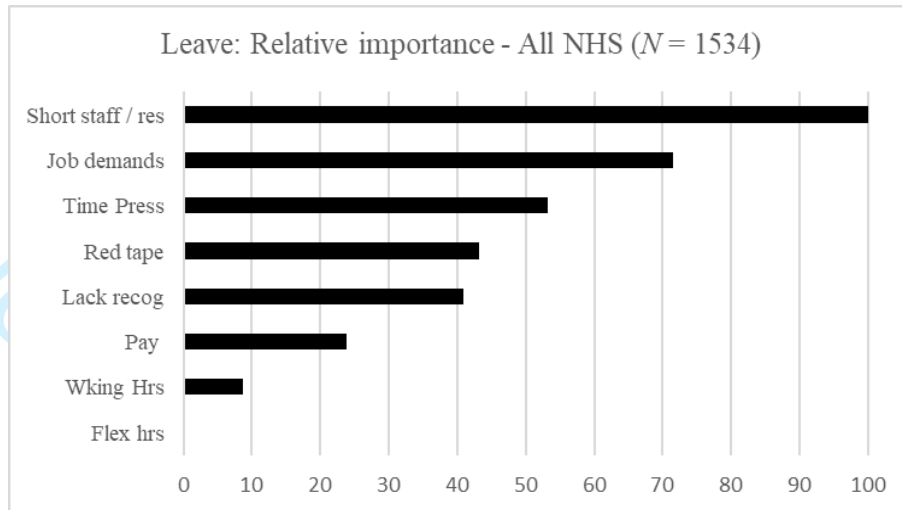


Figure 1: Relative salience of *push* variables (referenced to highest and lowest ranked entities).

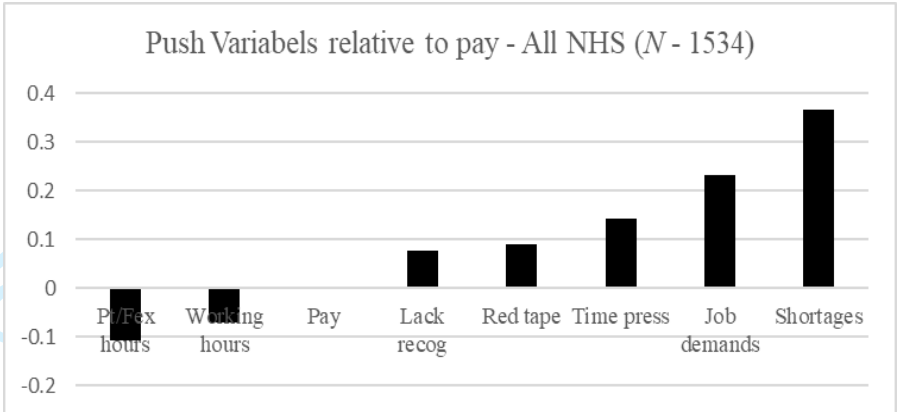


Figure 2: Relative salience of *push* variables (referenced to pay – set to zero)

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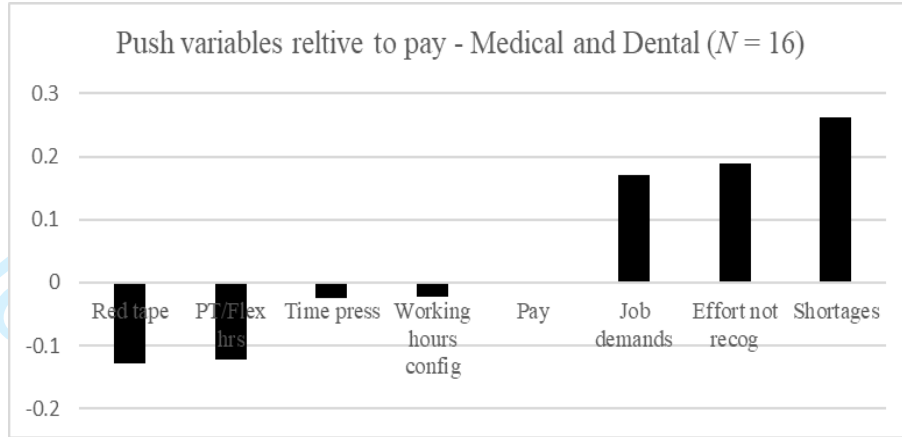


Figure 3: Relative salience of *push* variables Medical and Dental

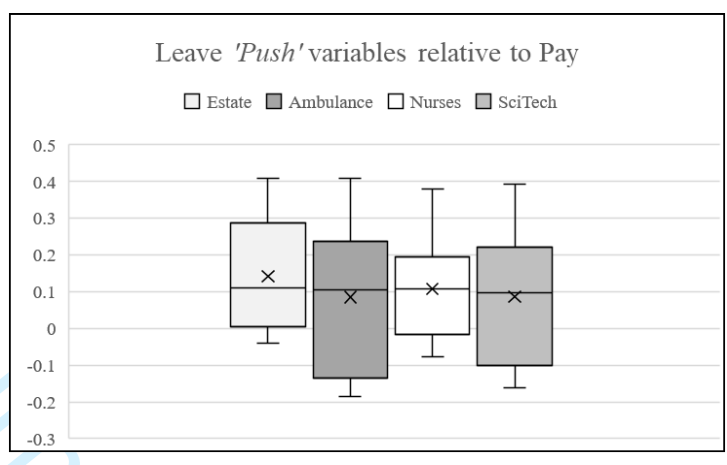


Figure 4: Distribution of headline *push* variables by occupation relative to pay

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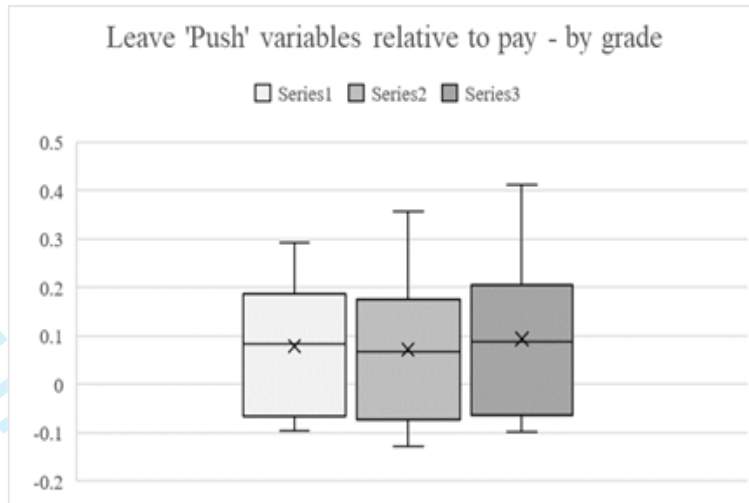


Figure 5: Distribution of headline *push* variables by grade

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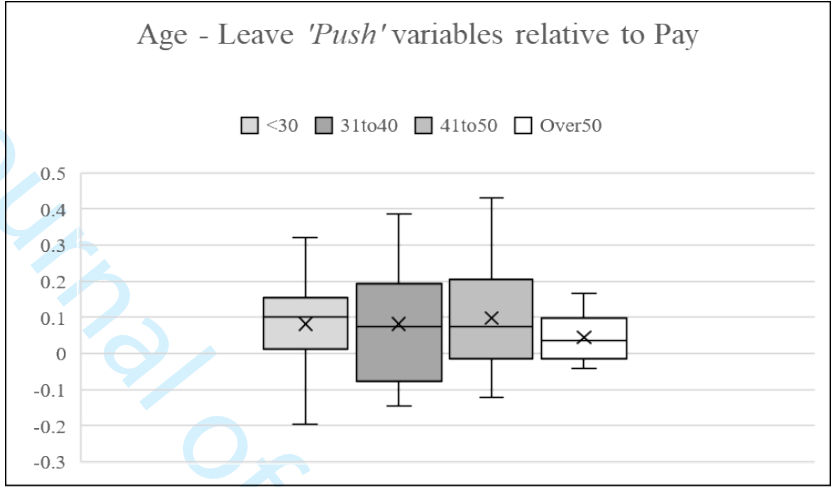


Figure 6: Distribution of headline *push* variables by age relative to pay

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