

A quantitative assessment of the parameters of the role of receptionists in modern primary care using the work design framework

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Abstract

Background Amidst increased pressures on General Practice across England, the receptionist continues to fulfil key administrative and clinically related tasks. The need for more robust support for these key personnel to ensure they stay focussed and motivated is apparent, however to be effective a more systematic understanding of the parameters of their work is required. Here we present a valuable insight into the tasks they fulfil their relationship with colleagues and their organisation, and their attitudes and behaviour at work collectively defined as their 'work design'. **Methods** Our aim was to quantitatively assess the various characteristics of receptionists in primary care in England using the validated Work Design Questionnaire (a 21 point validated questionnaire, divided into four categories: task, knowledge and social characteristics and work context with a series of sub-categories within each). This was available online and in addition 500 postal questionnaire were sent to a random sample of 100 general practices across England. An online cross-sectional survey was employed with receptionists (N=54). Additionally (N=16; RR=3.1%). **Results** Seventy participants completed the WDQ; 54 completed the survey online 16 completed the postal version (response rate of 3.1%). Receptionists reported high task variety, task significance and, high level of information processing and knowledge demands, confirming the high cognitive load placed on them by performing numerous yet significant tasks. This complex role required an array of skills, to accommodate their various administrative, communicative, problem solving and decision-making duties they have, and there was a reliance on colleagues for support and feedback. **Conclusion** Research with modern GP receptionists is sparse and little is known formally regarding the parameters of the role. This research explores the work design of GP receptionists and offers clinicians in practice a practical overview of this important and essential role and its implications for the modern GP practice. We suggest a number of ways in to better support the modern receptionist, including separating complex tasks to avoid the errors involved with high cognitive load, providing informal feedback and developing training programmes.

Background

Over the last 15 years, general practice has experienced a profound escalation of workload as the population ages and the complexity of care increases (1-4). Demand has now reached unprecedented levels (2, 5) within an evolving model of service delivery that requires clinical and non-clinical members of the primary care team adapt to providing care in a far more complex and dynamic environment.(6-8) Amongst the most visible of these are receptionists who not only undertake an array of administrative duties (9, 10) but also fulfil clinically relevant tasks such as triaging patients, reporting results, or administering screening (11-19) all without any requisite qualifications (10). The failure of receptionists to successfully fulfil these responsibilities has potentially serious implications for patient outcomes and safety (15, 20-22).

The need for more robust support for these key personnel to ensure they stay focussed and motivated is apparent, but for it to be effective a more systematic understanding of the parameters of their work is required. This includes the tasks they fulfil, the relationships they maintain with colleagues and their

organisation, and the attitudes and behaviour exhibited at or towards their work. The concept of understanding how the nature of work can reflect how well it is performed was first introduced by Herzberg (23) who described how jobs and roles could be designed to enrich employee experience, foster responsibility and grow competence. Building on this, the concept of job characteristics theory described how people would perform at their best when they were internally motivated to do so as opposed to the promise of some external reward or the threat of supervisory attention (24). By its nature therefore the design and characteristics of an individual's work shapes the contribution made to the organisation and offers an understanding of the experiences and behaviours of employees (25). Termed 'work design' these factors are a critical component of human resource management that when understood and optimised improves job satisfaction, the quality, safety and efficiency of the work, (26, 27) and has positive impacts on performance, absenteeism and staff turnover (28, 29). In understanding work design and supporting its improvement the validated work design questionnaire (WDQ) (26), has proved a valuable tool across a range of industries producing benefits for information technology (30), nursing (31), and policing (32).

Whilst arguably the most visible member of the practice team, the receptionist's role has continued to be overlooked and to date there has been no detailed exploration of the existing work design of GP receptionists. Here we report our findings from the first England wide survey of GP receptionists to use the validated WDQ to investigate the extent of their current role. Our findings provide a valuable insight into how we can help receptionists remain motivated, productive and effective within a work environment coping with increasing demand and increasingly restricted resources.

Methods

Study design

The study was designed as a large scale survey study of the job design of receptionists in England, utilising the an existing validated questionnaire, the WDQ (26) (See supplementary material 1).

Research instrument

The WDQ (26) consists of a 21 point scale, divided into four groups; Task Characteristics describing the scope of the task and how it is completed, Knowledge Characteristics which include the knowledge and skills necessary to perform the task; Social Characteristics relating to their formal working relationships and interactions with peers and colleagues; and Work Context which refers to the physical impact of that work environment and the demands placed on those within it. Each group has sub-categories, responses to which are coded on a 5 point Likert Scale; from strongly disagree to strongly agree (as summarised in Figure 1). Also routinely collected were demographic details consisting of age, gender, disability, and ethnicity.

Recruitment

Receptionists are difficult to access as there is no overall list for practices in England therefore, multiple recruitment methods were employed. These included disseminating the link to the online questionnaire via Clinical Commissioning Groups in England, Health Education England, Association of Medical Secretaries, Practice Managers, Administrators and Receptionists, and general practice surgeries working with the University of Birmingham in a . Bristol Online Survey hosted the survey and the link directed the respondent to an information page, consent was required. In addition, as most practices have more than one receptionist, 500 postal questionnaires were sent to 100 randomly selected GP practices across England between September 2016 and September 2017.

Sampling

All GP receptionists in England were eligible to participate. There were no exclusion criteria beyond job role. In 2014 (the most recent year for which there was data) there were 93,037 admin and clerical staff in primary care, 67% of the primary care workforce (33). Employing a 95% confidence interval and a margin of error of .5 a sample of 384 was required.

Analysis

Following standard procedures for analysis of the WDQ (26), the respondent's scores were added together for each of the subscales, a mean was drawn, presented as a percentage of the total possible score. Responses were then categorised as low (score less than 50% of the total score), moderate (scores between 50% and 75% of the total score) and high (above 75% of the total score) for each subscale.

Results

Seventy receptionists completed the questionnaire, of which 16 were postal questionnaires (3.1% response rate) and 54 online questionnaires. Sixty-nine (99%) were female, over half (56%) were aged 40 and over, and nearly half (49%) had been in post for longer than 5 years. These data are summarised in Table 1.

Table 1: Participant characteristics

Demographics*Gender Identity (%)*

Female (%)	Male (%)
69 (99)	1 (1)

Age Range years (%)

18-28	30-39	40-49	50-59	60+
15 (21)	16(22)	11(16)	21(30)	7(10)

Level of Education (%)

No Qualifications	GCSE/CSE	Further Education	A Levels	Bachelors Degree	Post-Grad. Qualification
3 (4)	27(39)	19 (27)	12 (17)	7 (10)	2 (3)

Marital Status (%)

Single	Living with partner	Married/civil partnership
26 (37.7)	9 (13)	35 (49.3)

Disability (%)

Yes	No
2 (2.9)	68 (97.1)

*Sexual Orientation (%)**

Heterosexual	Gay woman/Lesbian	Gay Man	Bisexual	Other
65 (96)	1 (1)	0	2 (3)	0

Religious Belief (%)

No Religion	Christian	Muslim	Other
31 (45.6)	35 (51.5)	1 (1.5)	1 (1.5)

Ethnic Background (%)

White	Pakistani	Other
68 (97.1)	1 (1.5)	1 (1.5)

Occupational Characteristics*Time in post (%)*

0-5 Years	6-10 Years	11-15 Years	16-20 Years	21 Years +
35 (51)	16 (23)	10 (14)	4 (6)	4 (6)

Respondents Practice Size (%)

Small	Medium	Large
4 (6)	38 (55)	27 (39)

Geographical range*Region (%)*

West Midlands	South	South West	East Anglia	North West	North East	East Midlands	South East
30 (45)	9 (14)	6 (9)	9 (14)	5 (8)	3 (4)	2 (3)	2 (3)

*completed by 68/70 correspondents

The results from the WDQ are presented below where we describe the key findings in each of the four categories, with the means and percentages given for each sub category.

Task Characteristics

Receptionists reported moderate levels of autonomy across the three subsets of work scheduling, decision making and work methods; decision making autonomy scored the highest (Mean score [m]=3.62, 73%). Both task variety (M=4.25, 85%) and significance (M=4.03, 85%) were high. Task identity relating to whether an individual undertakes a single overall task or contributes to a smaller aspect of a larger service was moderate (M=3.21, 65%). Feedback from the job relates to the extent that the role itself provides 'direct and clear information' on the effectiveness of their performance (26) was scored as moderate by receptionists (M=3.25, 67%) .

Knowledge Characteristics

Knowledge characteristics include job complexity, the amount and type of information an individual must process to perform their role, the problem solving ability required, the variety of skills and the degree of specialisation required. Receptionists reported moderate complexity (M=3.81, 75%) however informational processing demands were classified as high (M=3.81, 75%). The need to develop original solutions and ideas was classed as moderate, bordering on high (M=3.74, 75%). Skills variety was classed as high (M=4.16, 85%). Reflecting the degree to which the role requires a wide variety of skills and the need for specialized or specific knowledge was scored as moderate by those we surveyed (M=3.43, 70%).

Social Characteristics

The social characteristics of a role relate to various social or interpersonal aspects of the job and, the degree of support, advice and assistance (needed and received) in the workplace and was classed as high (M=3.99, 80%).

Interdependence was divided into either initiated independence, referring to the extent one job flows into others or received independence the extent that the one role is affected by work from other jobs and both were classed as moderate (M=3.30, 67%) and (M=3.66, 73%). Receptionists scored the level of interaction with external agencies as moderate (M=3.41, 73%) as they did feedback from their colleagues (M=3.11, 60%)

Work Context

This covers the environment of the organisation in which the individual works and the physical demands placed on the employee in undertaking their roles. Receptionists scored the ergonomic value of their role as moderate (M=3.51, 73%), the physical activity and effort required as low (M=1.96. 40%) and the variety

and complexity of the equipment needed as moderate (M=3.01, 60%). Overall the working conditions which includes factors such as the existence of health hazards, cleanliness, noise were described as moderate (M=3.43, 68%)

Discussion

Summary

We used Hackman and Oldham's theory of work design (28) to help us understand how the characteristics of a receptionist's roles can resonate psychologically in terms of the meaningfulness of their role, the level of responsibility assumed, and the outcomes of their work. These criteria are fundamental to intrinsic motivation their emotional connection to the results of their actions and the overall success of their contribution

We found that receptionists reported a high level of autonomy and variety in the work they do though were relatively uncertain as to the impact and success of their individual contribution perhaps linked to the lack of regular feedback from their colleagues. They were required to process a high level of information and employ a wide variety of skills but . the ergonomic and physical impact of their work was low. Below we describe these findings in more detail within each of the four domains of the WDQ; Task characteristics, Knowledge characteristics, Social Characteristics, and Work Context.

Strengths and limitations

Seventy participants completed the WDQ, in the 12 months the study was open; falling short of the expected sample size. As there is no centralised list of practice receptionists in England either at CCG or national level multiple means of recruitment and dissemination were undertaken with limited success and it may be appropriate to class GP receptionists as a potentially hard to reach group (34). The smaller sample size presents limitations for the validity and generalisability of the findings. However, while the sample size is limited, the characteristics of the receptionist reflect those identified in previous research i.e. they are most likely to be female, white and middle aged (10, 35, 36). In addition the participants were drawn from geographically diverse locations across England and a range of practice sizes (37). As such, it is representative of a range of GP practices and primary care environments across England and the WDQ has provided the first quantitative insight into the design parameters of the role of receptionists. It has highlighted key aspects of their work and provided evidence of areas where additional support may prove beneficial particularly in addressing the high cognitive load inherent in their work.

Comparison with existing literature

Task characteristics

Increasingly, modern surgeries are multi-disciplinary teams consisting of clinical and non-clinical staff each undertaking a range of inter-related tasks to successfully deliver care (38-41). As such the work the receptionist undertakes is varied (9-11, 42-45) and straddles both clinical and non-clinical responsibilities (9-11, 14, 16-19, 43, 46-51). In doing so the receptionist juggles multiple sources of information from patients, colleagues, and external agencies, often with competing demands on attention. For example, they can be required to check patients into the practice while simultaneously taking phone calls (17, 52). Such variety in tasks can be rewarding (26, 27) but may also lead to an overtaxed and underperforming workforce (26, 27).

In other work environments such as aviation, issues of competing demands and multitasking have been tackled by introducing concepts such as the 'sterile cockpit' which prohibits extraneous activities such as non-essential communication or reading non-essential materials during the critical phases of the flight (53). Cognitive processing is undertaken serially and so multi-tasking is effectively "task-switching" between multiple tasks effectively sharing attention sequentially (54). This process slows down work and errors are more likely directly after the 'switch' has occurred (54, 55). Of course not all interruptions are negative and it must be acknowledged that where they provide the information needed for task completion (59) they are beneficial (60). Similarly where tasks are routine, distractions can speed information processing without concomitant negative effects on accuracy (59, 61).

The implications of excessive cognitive load are especially important in healthcare where demand is high, information often incomplete and time constrained (56-58). Distractions, interruptions, and external extraneous stimuli disrupt attention and can lead to error (56, 57). For reception work, separating tasks may reduce the likelihood of error in complex tasks, for example separating greeting patients and answering the telephone into discrete roles may help to reduce error by minimising the interruptions encountered when undertaking these roles simultaneously. Similarly, complex work with potentially serious implications for patient safety such as repeat prescribing would benefit from being undertaken as a separate activity to reduce the cognitive load of multitasking (54, 55, 62).

Knowledge characteristics

The receptionist undertakes a number of roles that at times require specialised knowledge including triage (15, 20, 21), and repeat prescribing (21, 22). However, no formal qualifications are required (10, 15) and much of the training that exists is provided in-house from existing reception staff (36, 42, 63, 64) and viewed by many receptionists as inadequate (10, 42, 63, 64). Barriers to improving this training including time constraints, and a lack of funding and relevant courses (65). Recently this training shortfall has been acknowledged and in 2017 Health Education England, established a £45 million fund to support training in two discrete roles, managing medical correspondence and active care navigation (66) though its effect on quality, safety and staff satisfaction is as yet unknown.

Social characteristics

Social support in the workplace including constructive feedback from colleagues helps underpin well-being (67, 68) and psychological and behavioural functioning (69) in a range of jobs and environments, including policing (70) hospitality (71) and healthcare (69, 72). Our sample described the level of feedback only as 'moderate' yet receptionists have previously described its importance to their well-being and job satisfaction (10, 42). Though systematic mechanisms for providing feedback to receptionist staff exist, such as annual performance reviews and appraisals, (73) the time constrained and high pressured atmosphere of modern general practice precludes other avenues for providing the type of informal social support that can improve well-being (74). The social connection with colleagues also helps engender in reception staff a grasp of the outcomes of the work they complete; understanding the implications of their actions can help increase motivation, enable mistakes to be observed constructively and in the case of receptionists contribute to a framework for monitoring and improving performance (28).

Work context

Work environment directly affects an employee's ability to perform their role (25-29). Receptionists are some of the most visible members of the practice team (16), their front of house position can bring them into contact with difficult or aggressive patients (75) or otherwise leave them feeling dissociated from the rest of the primary care team (42, 43). Although their location in the practice is unlikely to change, some of the negative effects might be mitigated by the opportunity for receptionists to share their experiences with supervisors and colleagues (76, 77).

The receptionist regularly uses information technology (IT) to manage patient data and service delivery. These clinical software systems are used to manage patient records, prescribing, test results and appointment bookings as well as facilitating communication from GPs to receptionists (78). Despite their pivotal role a recent survey found that 12% of receptionists received no training in their use despite evidence of errors linked to their misuse (15, 21). A sociotechnical perspective is one theory that has previously been adopted to improve the fit between individual and IT system and can be used to ensure the design of healthcare IT is better informed by the context of the individual and their work environment (79).

Conclusions

Though receptionists continue to fulfil many of their traditional roles, the demands and complexity of modern primary care mean that they are being placed under increasing pressure to ensure they are fulfilled safely and effectively. Reducing cognitive load, improving training and feedback, and ensuring that IT systems harmonize with personnel and work practices can all help. Further research should aim to explore how these factors can be accounted for in the design of the receptionist's role and its fit with existing and evolving systems and processes. To do this more direct mechanisms of recruitment should be attempted to overcome recruiting participants in this under researched and difficult to reach group.

Declarations

Ethics approval and consent to participate

Ethical approval was granted by the University of Birmingham's ethical board (ERN_15-1175). All participants provided written consent.

Consent for publication

Not applicable.

Availability of data and material

All data generated or analysed during this study are included in this published article.

Competing interests

The authors declare that they have no competing interests.

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Author's contributions

IL, SG, NG and MB were responsible for the design of the study. MB collected and analysed the data in collaboration with IL and SG. MB produced the initial draft of the manuscript. This was then edited for content following the recommendations of IL, SG and NG. All authors read and approved the final manuscript.

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Figures

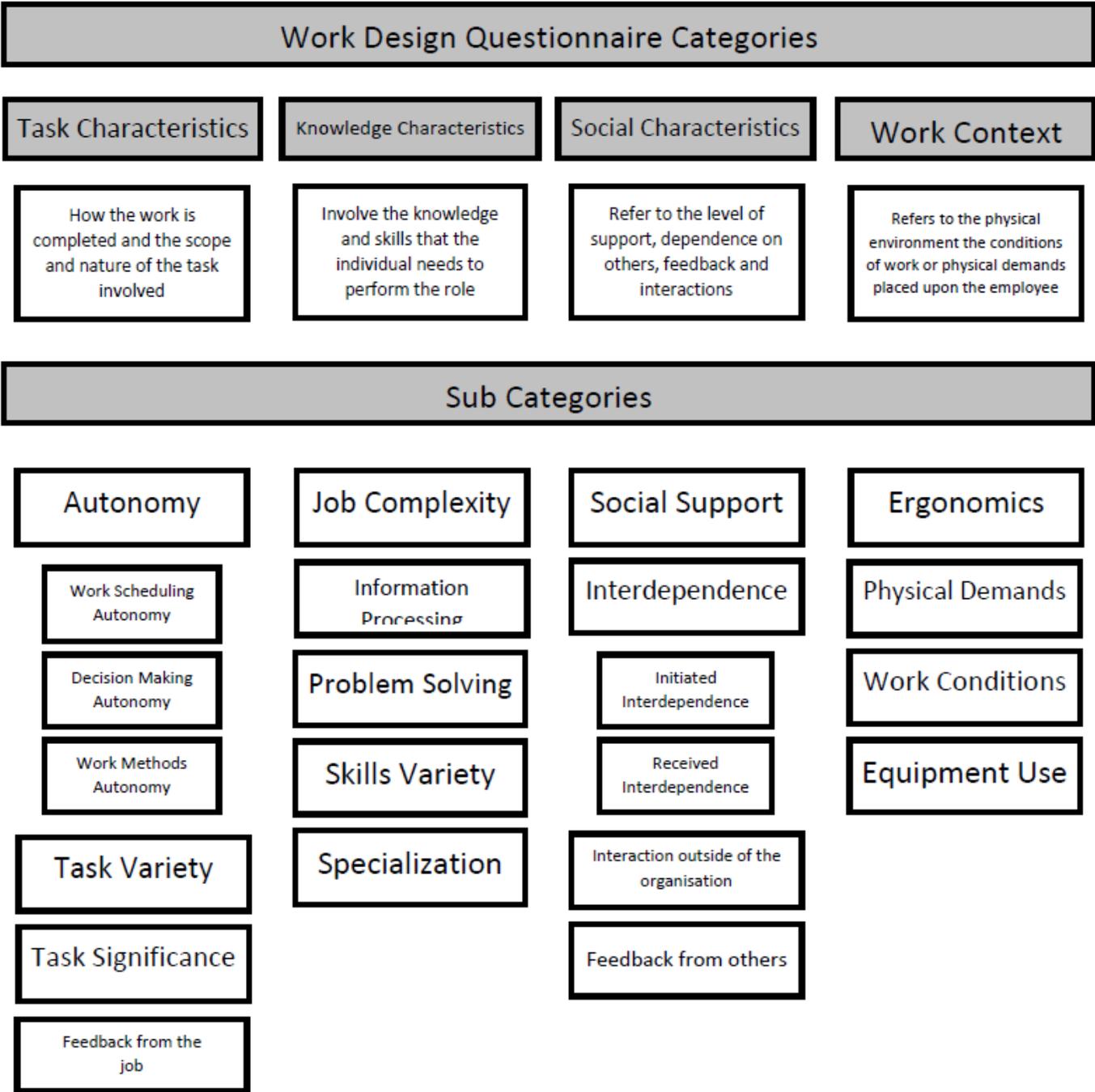


Figure 1

Work Design Questionnaire, Categories and Sub Categories

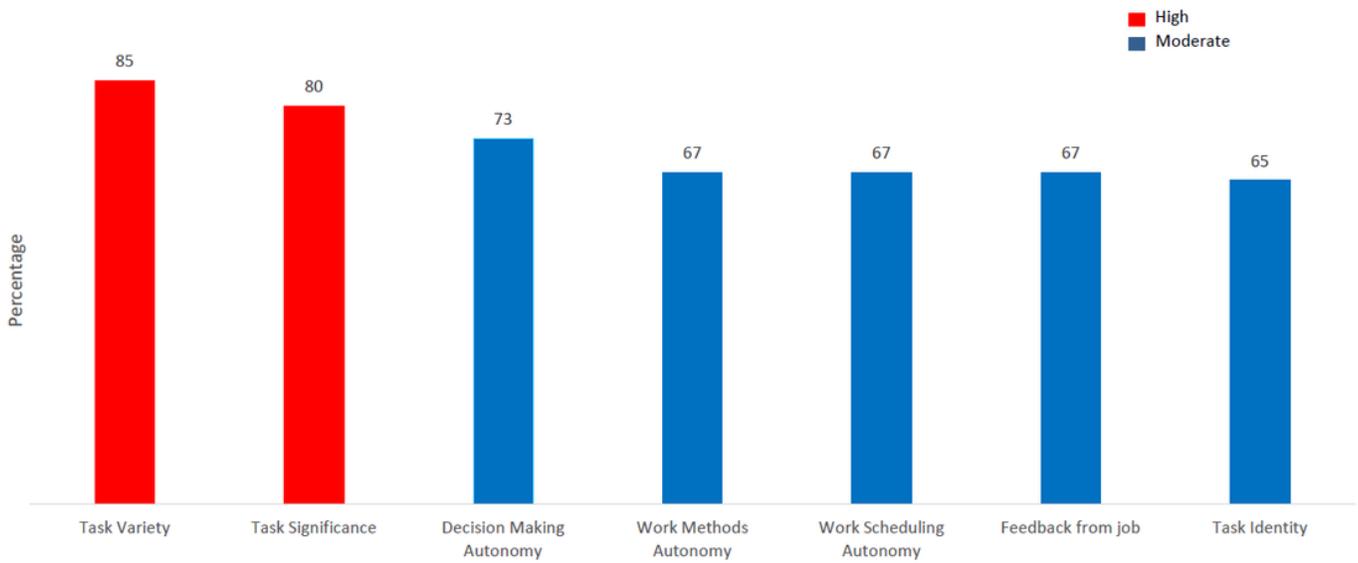


Figure 2

Task Characteristics Subscales, percentage of total score

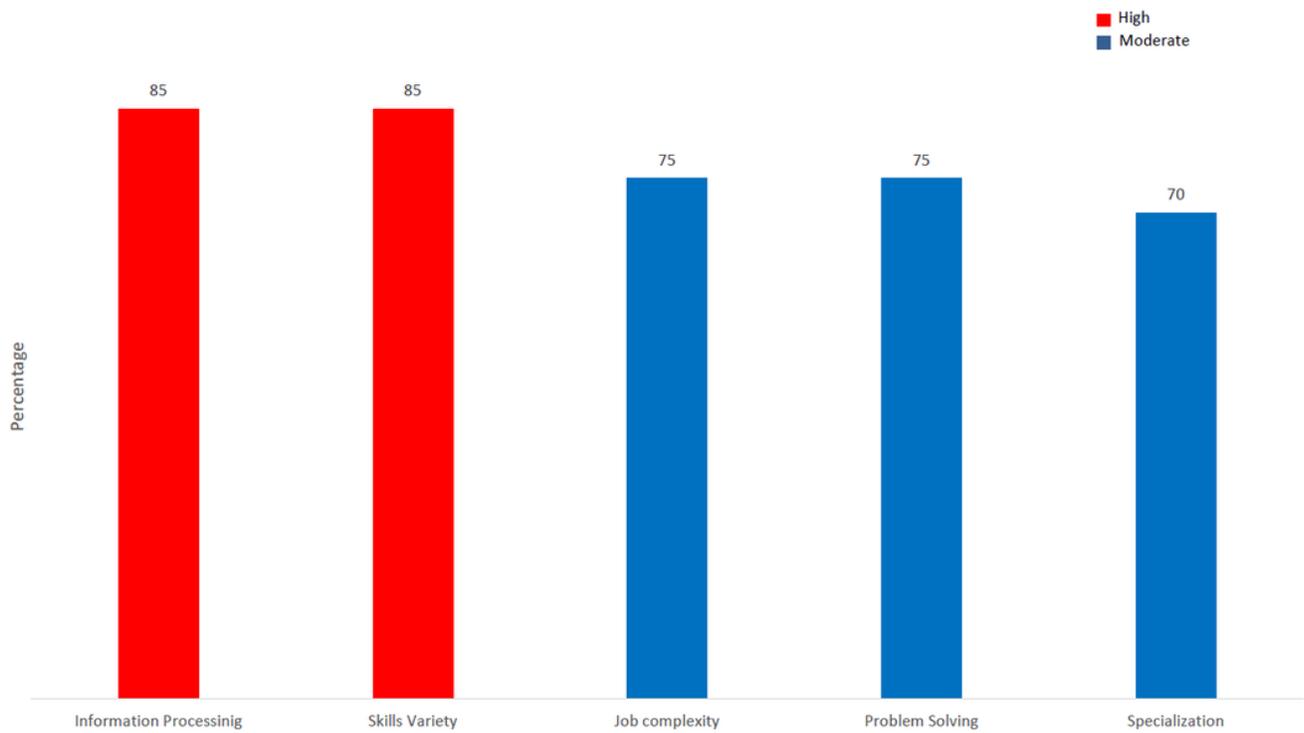


Figure 3

Knowledge Characteristics Subscales, percentage of total score

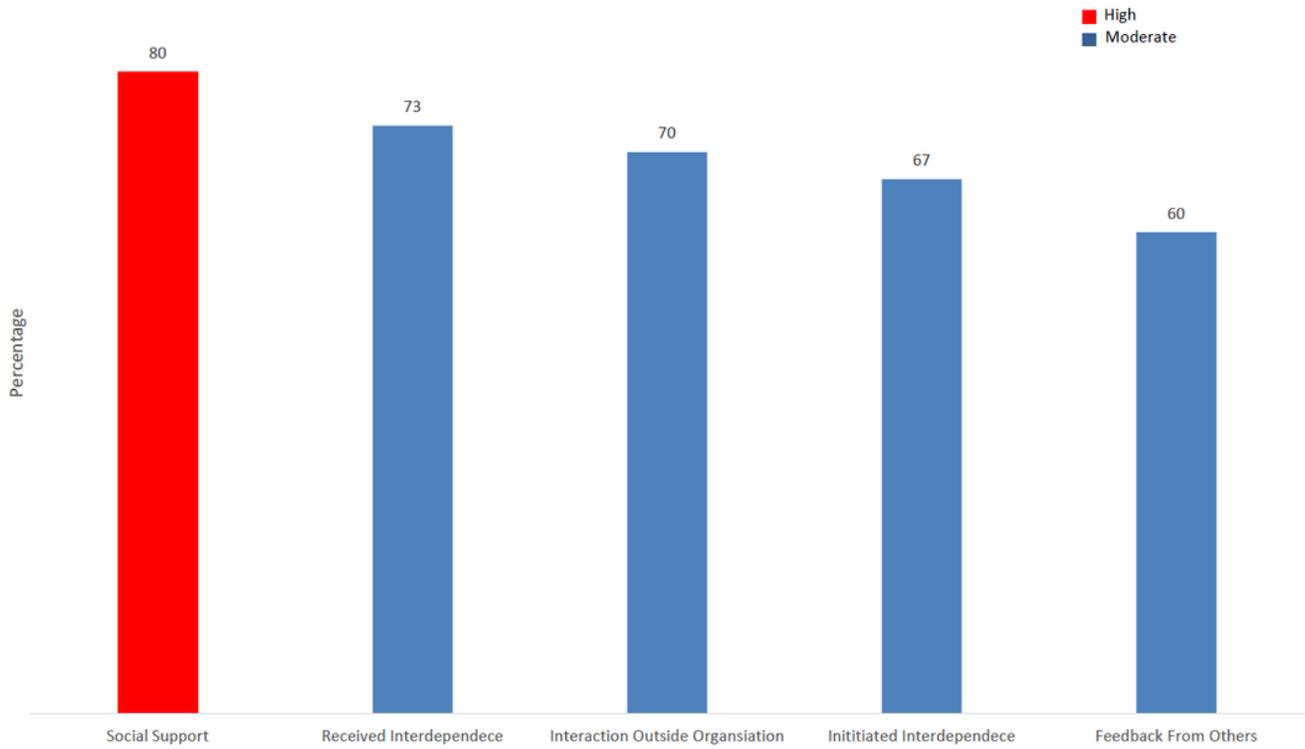


Figure 4

Social Characteristics Subscales, percentage of total score

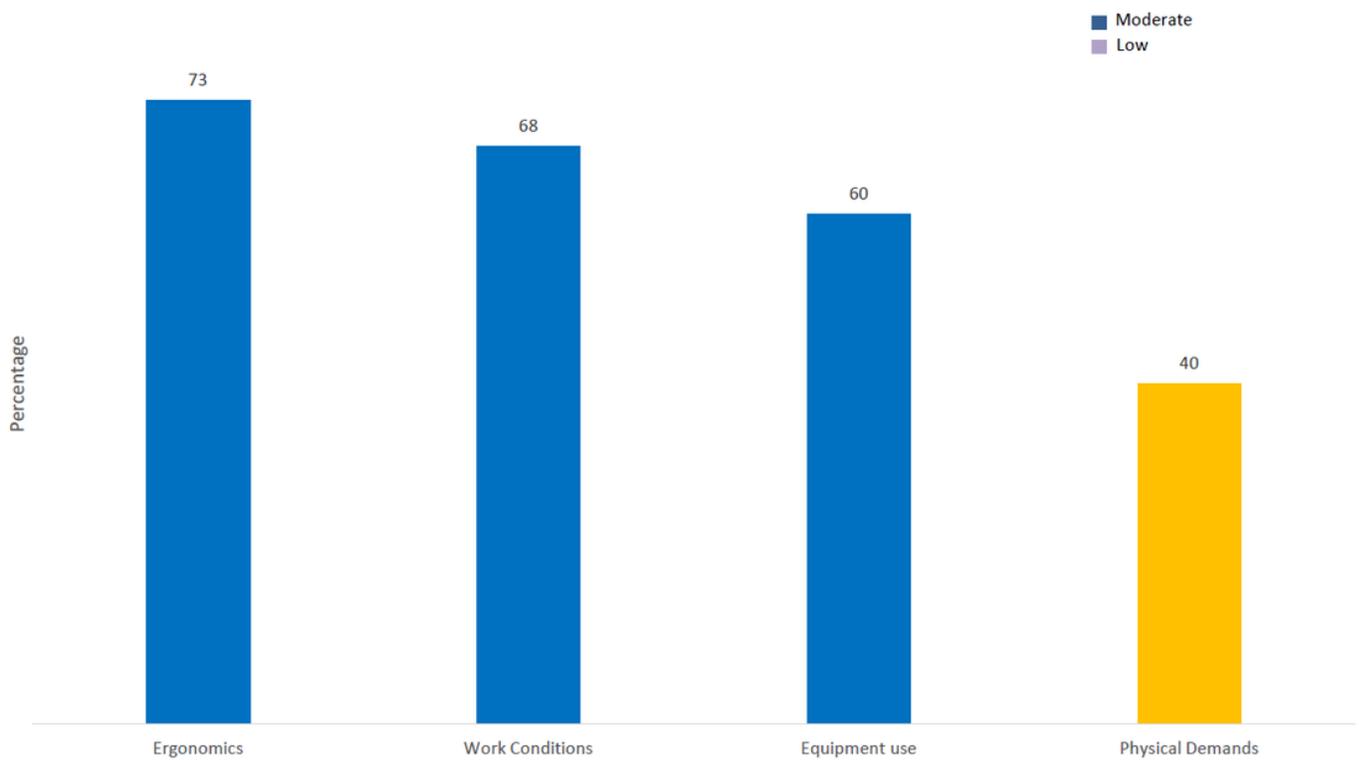


Figure 5

Work Context Subscales, percentage of total score (moderate scores in blue, low in yellow)

Supplementary Files

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- [SupplementaryMaterials1WDQ.pdf](#)