Testing the performance of a new approach to measuring employee well-being

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Abstract

Purpose – The purpose of this paper is to test the performance of two generic scales designed to evaluate employee well-being against a new well-being scale constructed for a specific sector; call centres.

Design/methodology/approach – The method to develop the new scale is based on well-established clinical models used to evaluate the well-being of patients. Potential variables were confirmed using an item selection method known as impact analysis which places keen emphasis on the frequency and importance of variables according to employees themselves.

Findings – From a potential pool of 102 items, impact analysis confirmed 43 variables most strongly associated with adverse well-being. These were distributed across eight separate dimensions. Content validity and internal reliability were satisfactory. The results showed that existing scales were substantially insensitive to aspects of work that were perceived to be important and troubling to call centre employees and could therefore provide incomplete accounts of employee well-being.

Research limitations/implications – Confirmation of the assessment’s measurement properties will be the subject of future studies. The generalisability of the findings to other call centres will also be investigated.

Practical implications – For employers and researchers wishing to evaluate and act on well-being within a particular sector, this approach to measurement may offer a practical, parsimonious alternative to existing, generic options. Impact analysis also addresses criticisms of factor analysis when used in well-being scale construction.

Originality/value – The findings suggest support for a new approach to measuring the well-being of sector specific workers that is based on clinical evaluation practices.

Keywords Welfare, Employees, Measurement, Personal health, Call centres

1. Introduction

Interest in employee well-being (EWB) is rising (Robertson and Cooper, 2010; Danna and Griffin, 1999). According to Cox and Jackson (2006), the occurrence is driven by a shift in the developed world from a manufacturing economy to one which is more service-based that brings with it a change in the types of threat to health that employees encounter.

EWB is intrinsically different to job satisfaction or employee engagement. As Robertson and Cooper (2010) note, employee engagement describes positive employee behaviour that is of direct interest to the organization owing to the benefits it is likely to deliver operationally. In contrast, EWB encompasses a much broader concept that is likely to be more important to the workers themselves.

The study of EWB is significant on a number of counts. First, it is related to the health status of individual employees. In their synthesis of the literature trained on
health and well-being in the workplace, Danna and Griffin (1999) highlight how work experiences affect the individuals themselves through impact on physical and psychological health and how this can “spill over” into non-work domains and lead to more serious health complaints.

The second reason relates to the associated impact on productivity and performance in the workplace (Wright et al., 2007; Danna and Griffin, 1999). The costs to the state and the employer of impaired EWB are sizable. Absence due to sickness costs approximately £12 billion per year (Department for Work and Pensions, 2005). The number of people who claim incapacity benefits in the UK has risen from 3 per cent in the 1960s to 7 per cent in 2006 (Dewe and Kompier, 2008).

Like policy makers (for example Black, 2008), employers are keen to see levels of sickness absence drop and productivity improve. One of the ways in which organizations are approaching this is to initiate various EWB programmes for their employee ranks. According to a recent Chartered Institute of Personnel and Development (CIPD) survey, 42 per cent of employers indicated that they had a well-being strategy or similar in place, representing an increase of 26 per cent on the previous year (CIPD, 2007).

With the rising number of employers taking a proactive interest in EWB, many may wish to evaluate the well-being of their workers at the outset so that they are better able to assess opportunities for effective management action. Options available to organizations wanting to do this are in short supply if it is accepted that short, self report questionnaires are the preferred mode of measurement (Levi, 1992), that questions should cover both work and non-work elements (for example Page and Vella-Brodrick, 2009; Van Laar et al., 2007; Sirgy et al., 2001; Danna and Griffin, 1999) and finally, that assessments should reference workplace traits directly associated with EWB so that management teams may formulate effective, targeted interventions.

Two validated EWB questionnaires meet these criteria; Van Laar et al.’s (2007) 23-item Work-related Quality of Life Scale (WRQoL) and Sirgy et al.’s (Sirgy et al., 2001) 16-item Quality of Work Life (QWL) measure.

Both EWB scales are generic. While this allows researchers the ability to conduct cross-sectional studies, there is a risk that the question sets are insufficiently sensitive to EWB issues that are deemed by employees to be important within a particular sector. This inability to capture relevant, sector specific data may mean that employers could inadvertently overlook aspects of EWB that may be intrinsic to an effective well-being strategy.

This same quandary has arisen in the measurement approaches applied to evaluate the well-being of patients. Assessments known as Health Related Quality of Life (HRQL) questionnaires are used to evaluate and track the well-being of patients in a clinical setting (for example Juniper et al., 1996; Guyatt et al., 1986). An HRQL scale asks patients to “score” how they themselves believe their own well-being has been impacted by their ill-health.

HRQL scales can be disease-specific or generic in content. An example of a generic HRQL scale is the Medical Outcomes Survey Short Form 36 (SF-36) (Stewart et al., 1988). These generic questionnaires can be used across a range of medical conditions and the burden of illness can be compared across different disease states.

Disease-specific HRQL scales have been developed on the premise that different disease conditions may affect different day to day functions and therefore lead to
different quality of life problems for patients (Guyatt et al., 1986). These instruments are therefore better able to identify problems that are most troubling to patients which better inform treatment plans and are more responsive to changes in patient well-being over time. An example of a disease-specific questionnaire is the Asthma Quality of Life Questionnaire (AQLQ), which comprises 32 questions across four different domains: symptoms, activity limitation, emotional function and environmental stimuli (Juniper et al., 1992).

The central purpose of this current study is to examine how the principles of well-being measurement practiced in clinical surroundings compare with those currently available in occupational environments. Specifically, it is posited that the two generic scales available to organizations may fail to capture elements of EWB that are most troublesome to workers by virtue of their standardised approach which could compromise an employer’s capacity to assess and address matters effectively. This present work will determine those well-being variables that are commonly associated with a specific sector using the disease-specific HRQL approach to questionnaire construction and compare these with items contained within generic EWB scales. By contrasting the sector-specific question set with generic question sets directly, the performance of each approach may be assessed.

The precedent of applying existing clinical methods to the workplace has already been set. The General Health Questionnaire (GHQ) (Goldberg and Williams, 1988) for example, originally developed to detect minor psychiatric disorders among respondents in community settings, has been used as an indicator of mental health in occupational studies (Banks et al., 1980). The notion also finds support from Losocco and Roschelle (1991) who conclude in their extensive review of EWB that a frustrating number of organizational psychologists duplicate studies unnecessarily and call for them to embrace theories and methods from other disciplines to advance understanding in this field.

The call centre sector will be investigated for the purposes of this study. There exists a widely-held view that call centres are unpleasant places to work (Holman, 2002). Variously referred to as “electronic sweatshops” and “human battery farms” (Fernie and Metcalf, 1998; Schlesinger and Heskett, 1991; Hochschild, 1979), this sector has earned an unfavourable reputation for dull, repetitive, low skilled work which is heavily scripted and closely monitored using sophisticated surveillance systems (Holman, 2003).

These features make the sector a fitting environment for the current study and have already led to a number of studies that have examined call centre work within the wider context of employee health and well-being. Generally, scholarly studies have taken the form of generic, self-report questionnaires. For example, Holman’s (2002) work on call centre well-being used Warr’s (1990) mental health scales for anxiety and depression and Holdsworth and Cartwright (2003) deployed the Occupational Stress Indicator (Cooper et al., 1988).

Criteria for the development of an exploratory well-being assessment for call centres follow those described for HRQL instruments (Juniper et al., 1996; Guyatt et al., 1986) as follows:

- Work-related well-being (WRWB) items should have content validity i.e. reflect those areas of well-being that are important to call centre workers.
• The finalised scale should be simple and quick to complete for call centre workers (no more than seven minutes to complete).
• Summary scores should be amenable to statistical analysis.

The definition of WRWB is adapted from HRQL practices (Juniper et al., 2009) and can be described as:

[...] that part of an employee's overall well-being that they perceive to be determined primarily by their work and can be influenced by workplace interventions.

This definition is important in three respects. First, it is employees' subjective perceptions that are key; second, the direction of causality considers how work impacts well-being (rather than the reverse); and third, the variables selected are only those that employers are able to modify.

2. Method
Approval for the study was awarded by Cranfield University’s School of Management Ethics Committee.

The study was based on one call centre organization spread across six bases in the East and South East regions of the UK. Call centre agent (CCA) work was almost exclusively concerned with taking in-bound calls off a national queue using detailed scripts and algorithms. Three main roles existed; CCAs who fielded calls initially, professionally qualified CCAs who provided technical advice to callers and team leaders who were responsible for the performance of CCAs. Provision of services was 24 hours a day, 365 days a year.

The theoretical framework applied was Impact Analysis (IA) – a proven, clinical methodology used to create disease-specific HRQL instruments (Juniper et al., 1996; Guyatt et al., 1986).

A comprehensive list of 102 possible WRWB issues was generated through a series of 84 semi-structured interviews with CCAs and team leaders where participants were asked to recount how they believed their call centre work had impacted their overall well-being. Participants represented a range of roles, locations and experience. Discussions were also held with managers, occupational health specialists and human resource professionals numbering nine in total. The item pool was supplemented by a literature review of health and well-being studies within the sector. The call centre operation’s most recent staff satisfaction survey was also appraised. The item pool reflected a wide array of ways in which call centre employees perceived that their work was detrimental to their well-being.

All CCAs and team leaders were invited to complete anonymously an online questionnaire comprising all items gathered in the earlier phase. The questionnaire was serially piloted with a number of staff to ensure content and instructions were clear.

Respondents were allocated time during their shift to complete the questionnaire. They were asked to complete two demographic questions (role and location) and then indicate which of the WRWB items they had experienced during the past year. A score of “0” denoted items that were not experienced by respondents. For each item that was positively identified, subjects were asked to rate how important and bothersome they considered it to be to their overall well-being on a five-point scale (1 = not at all
important and 5 = extremely important). A total of 377 completed assessments were returned, representing 69 per cent of the total workforce approached (n = 550). A total of 124 free text comments were contributed. A review of these yielded no new WRWB themes, not already covered in the item reduction questionnaire.

Results were expressed as “frequency” (the proportion of people experiencing the issue) and “importance” (the mean importance for each variable listed). The “impact score” for each variable was the product of “frequency” and “importance”. To check content validity, respondents were also able to contribute comments in a free text facility if they wished to record additional work-related well-being experiences.

Items were ranked according to impact score. The non-parametric statistic, Kendall’s Tau coefficient (τ), was used to measure the level of agreement between item rankings for each role (Kendall, 1938). Significant correlations (p < 0.05) would indicate that it was acceptable to use the same set of items to assess the WRWB of people performing all three roles within the call centre operation.

Generally, the variables that showed the highest impact scores were selected and categorised into domains based on methodological experience and established, validated instruments (Juniper et al., 1996; Guyatt et al., 1986). Choice of impact score cut-point was primarily influenced by the wish to limit the final set of items to approximately 50 (in the interests of utility and practicality) and ensure domains contained a minimum of three items to reduce the impact of any idiosyncratic responses to certain questions (Guyatt et al., 1993). If uncertainty arose over which items should be grouped in which domain, correlations with items that clearly fell in particular domains were examined for verification (Juniper et al., 1996).

Consistent with accepted HRQL instrument development, remaining variables that appeared to be measuring the same impairment, e.g. fatigue and tiredness, and were highly correlated (Pearson r > 0.7) were either combined or the item with the lowest impact score was discarded (Juniper et al., 1996).

Internal reliability for each domain was assessed using Cronbach’s alpha (α) (Cronbach, 1951). Acceptable levels of α are considered to be values greater than 0.7 (Rick et al., 2001).

To help evaluate the performance of IA when applied to the call centre environment, some basic findings pertaining to the well-being levels of the participating call centre operation were examined. To this end, all “0” values recorded for confirmed items were replaced with a “1” value since, in this data set, “0” and “1” scores represented the same general meaning (where 0 = “No, I did not experience this problem” and 1 = “Yes, I did experience this problem but it was not at all important to my overall well-being”). Once the data were amended, differences in impact scores between the different domains and roles were examined using a repeated measure analysis of variance (ANOVA) where the selected domains were the dependant variables. Residuals were tested for normality and Fisher’s Least Significance Difference (LSD) test was used to determine the significant differences between group means in an analysis of variance setting.

3. Results
A breakdown of responses (n = 377) by role is set out in Table I. An examination of findings overall showed that frequency scores ranged from 0.96 to 0.49; mean
importance scores ranged from 3.83 to 1.42 and impact scores (the product of frequency and importance) ranged from 3.62 to 0.75.

Table II shows the highest 15 impact scores prior to item reduction. Impact scores for each item were ranked for each role and Kendall Tau correlations ($\tau$) of the impact score ranks between the roles were examined (Table III). Rankings of impact score for each role were significantly correlated with the other two roles ($p < 0.05$) indicating it was appropriate to construct one questionnaire for all three roles.

In general, items with impact scores that exceeded 2.00 were selected for inclusion in the instrument (range 1-5). A threshold of 2.00 was selected because this value indicated a notable degree of impairment and accommodated the requirement to develop a final scale of approximately 50 items. As with each HRQL scale developed

<table>
<thead>
<tr>
<th>Role</th>
<th>Count</th>
<th>Percent</th>
<th>Cumulative – percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team leader</td>
<td>45</td>
<td>11.94</td>
<td>11.94</td>
</tr>
<tr>
<td>Technical CCA</td>
<td>199</td>
<td>52.79</td>
<td>64.72</td>
</tr>
<tr>
<td>CCA</td>
<td>133</td>
<td>35.28</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table I.
Respondent breakdown

<table>
<thead>
<tr>
<th>Rank</th>
<th>Question</th>
<th>Frequency$^a$</th>
<th>Mean.Imp$^b$</th>
<th>Impact$^c$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Perceiving the organization to be more target led than [customer] led</td>
<td>0.94</td>
<td>3.83</td>
<td>3.62</td>
</tr>
<tr>
<td>2</td>
<td>Having to read your emails during your break times or before/after your shift</td>
<td>0.93</td>
<td>3.82</td>
<td>3.56</td>
</tr>
<tr>
<td>3</td>
<td>Having to book holiday so far in advance</td>
<td>0.95</td>
<td>3.70</td>
<td>3.53</td>
</tr>
<tr>
<td>4</td>
<td>Ability to plan ahead with friends and family is restricted because of the rostering system</td>
<td>0.96</td>
<td>3.65</td>
<td>3.49</td>
</tr>
<tr>
<td>5</td>
<td>Plans with family and friends being affected by the shift system</td>
<td>0.96</td>
<td>3.54</td>
<td>3.40</td>
</tr>
<tr>
<td>6</td>
<td>Finding it difficult to swap shifts</td>
<td>0.94</td>
<td>3.45</td>
<td>3.24</td>
</tr>
<tr>
<td>7</td>
<td>Having insufficient time to familiarise yourself adequately with new policies and procedures</td>
<td>0.94</td>
<td>3.36</td>
<td>3.17</td>
</tr>
<tr>
<td>8</td>
<td>Poor air conditioning (either too cold or too hot)</td>
<td>0.92</td>
<td>3.38</td>
<td>3.10</td>
</tr>
<tr>
<td>9</td>
<td>Experiencing frustration because of the rostering system</td>
<td>0.92</td>
<td>3.29</td>
<td>3.01</td>
</tr>
<tr>
<td>10</td>
<td>Having a limited social life because of the shifts that you work</td>
<td>0.91</td>
<td>3.31</td>
<td>3.01</td>
</tr>
<tr>
<td>11</td>
<td>Finding it difficult to attend regular courses/classes outside of work because of the shift system</td>
<td>0.90</td>
<td>3.33</td>
<td>2.99</td>
</tr>
<tr>
<td>12</td>
<td>Not having enough team meetings to discuss issues and ideas</td>
<td>0.90</td>
<td>3.31</td>
<td>2.97</td>
</tr>
<tr>
<td>13</td>
<td>Finding it difficult to arrange weekends off</td>
<td>0.90</td>
<td>3.29</td>
<td>2.96</td>
</tr>
<tr>
<td>14</td>
<td>Not having enough team meetings so you know what is going on</td>
<td>0.91</td>
<td>3.22</td>
<td>2.94</td>
</tr>
<tr>
<td>15</td>
<td>Lacking adequate control over your choice of shift</td>
<td>0.92</td>
<td>3.18</td>
<td>2.92</td>
</tr>
</tbody>
</table>

Table II.
Top 15 highest ranking impact scores prior to item reduction

Notes: $^a$Proportion of workers reporting item as important and bothersome (maximum = 1); $^b$mean importance score in subjects who reported item as bothersome (maximum = 5); $^c$frequency $\times$ mean importance (maximum = 5)
using IA (for example Guyatt et al., 1989), choice of cut-point was contextual to the specific data set under inspection.

In total, 34 items had impact scores of less than 2.00 and were omitted. Item-item correlations for remaining variables were examined and a further 24 items were eliminated (r > 0.7). One other item (“Having a different desk space each time you come to work”) was also discarded; on reflection, it was deemed a workplace factor that the employer was unable to modify for practical reasons and therefore did not fit with the stated WRWB definition.

Remaining items totalled 43 and were studied at length to identify common sub-categories. Text for some items was shortened or amended to reflect a wider meaning if the item had been combined with another (for example “Always feeling tired/run down because of shift patterns”).

Analysis identified an optimal structure of eight domains. Choice of domain was informed by earlier occupational and clinical well-being research. The two largest domains, both comprising eight items, were Home Work Interface (HWI) and Job (JOB). Respectively, these described how people’s work was perceived to impact on home life (because of the shift system) and how specific aspects of call centre job design (such as variation, call flow, heavy scripting) were considered troublesome to well-being. The Organizational domain (ORG) described how wider organizational practices impacted on workers. Items referring to how people considered their work impacted on health were grouped either into the Physical Health (PHY) or Psychological Health (PSY) domain. Interpersonal Relationships (REL) considered associations between colleagues. Advancement (ADV) described opportunities for training and promotion and Workplace Facilities (FAC) captured perceptions relating to call centre accommodation, air conditioning and food-related amenities. Table IV presents the finalised domains and Cronbach’s Alpha coefficients (α). The α coefficients indicated that each domain showed acceptable levels of internal reliability with the exception of the Facilities domain (α = 0.63) which was slightly below the recommended threshold of 0.70 (Rick et al., 2001). Owing to reasons of copyright, it is not possible to reproduce the confirmed list of 43 items.

In order to consider the WRWB findings for the participant call centre operation, data were amended so that all “0” scores were converted to a value of “1”.

A repeated measures analysis of variance (ANOVA) indicated that there were significant differences in mean importance scores (p < 0.05) between domains, roles and the interactions between them (Table V). Residuals were checked and did not deviate from normality.

Table VI compares the mean impact scores for each domain (averaged over roles) using Fisher’s LSD test and depicts significant differences (p < 0.05). The mean

<table>
<thead>
<tr>
<th>Role</th>
<th>Team leader</th>
<th>Technical CCA</th>
<th>CCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team leader</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical CCA</td>
<td>0.38 *</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>CCA</td>
<td>0.43 *</td>
<td>0.71 *</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note: *p < 0.05
The findings show that, overall, call centre workers perceived that the impact their work had on their lives outside of work (HWI, mean = 2.98) impaired their well-being significantly more than all other domains. Conversely, workers perceived that impact of work on their physical well-being (PHY, mean = 2.51) was significantly less than other domains.
Fisher’s LSD test also established significant differences between team leaders and both other roles (Table VII). Differences between advisory roles were not significant. Values in the body of Table VII show $p$ values for pair-wise comparisons of roles.

Further investigation of the interaction between domains and roles showed significant differences in mean importance scores for the REL and JOB domains in respect of team leaders and their subordinates (Figure 1).

### 4. Discussion

This study sought to establish how call centre staff perceived their work to impact their well-being using a tried and tested clinical approach and compare the confirmed items against those established in the WRQoL scale (Van Laar et al., 2007) and the QWL measure (Sirgy et al., 2001). The current findings present a WRWB pilot scale

<table>
<thead>
<tr>
<th>Role</th>
<th>Team leader (2.28)</th>
<th>Technical CCA (2.82)</th>
<th>CCA (2.72)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Team leader</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Technical CCA</td>
<td>0.000 **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 CCA</td>
<td>0.001 *</td>
<td>0.283</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** * $p < 0.01$; ** $p < 0.001$; mean importance score for each role given in brackets.

![Figure 1. Comparison of well-being domains by role](image-url)

**Note:** Vertical bars denote 95% confidence intervals.
comprising 43 variables grouped into eight different domains. Content validity was confirmed and generally, internal reliability was verified.

How do these findings compare with existing EWB scales? Owing to copyright restrictions, it is only possible to discuss the factors contained within the WRQoL scale rather than individual items.

The WRQoL scale (Van Laar et al., 2007) comprises six factors; Job and Career Satisfaction (JCS), General Well-Being (GWB), Home-Work Interface (HWI), Stress at Work (SAW), Control at Work (CAW) and Working Conditions (WCS). The WRWB domains originating from the current study indicate general overlap with four of the WRQoL scale factors (ADV = JCS, HWI = HWI, PSY = SAW and FAC = WCS). However, the REL, JOB and PHY domains find no commonality with the WRQoL scale and only minimal traces of the ORG domain are apparent. Aspects of the WRQoL’s CAW factor are evident in a number of the different domains (for example JOB and ORG). The GWB factor refers to elements of context-free well-being and is therefore outside of the remit of WRWB, which focuses only on work-related issues.

The QWL measure (Sirgy et al., 2001) is designed to evaluate employees’ satisfaction with seven major needs arising from the workplace. These are represented as seven factors: Health and Safety, Economic and Family, Social, Esteem, Actualisation, Knowledge and Aesthetic. The measure is theoretically based and draws on need satisfaction and spillover theory. With only 16-items in the QWL measure, crossover with the current findings is inevitably limited. The strongest association between the two sets of items arises between the REL domain and social needs factor. Two direct references to economic and family needs and esteem needs may be found in the ORG domain. Items pertaining to actualisation and knowledge needs may be found in the ADV domain. The QWL measure (Sirgy et al., 2001) fails to cover, in any way, the five remaining domains revealed in the present study; HWI, JOB, PHY, PSY and FAC.

The significance of these differences is considered. As noted, the WRQoL scale (Van Laar et al., 2007) lacks factors that consider intrinsic aspects of a job or workplace relationships when compared to the WRWB of call centre people. To an extent, this is to be expected since the JOB domain captures elements of work that are specific to working in a call centre environment and is akin to symptom domains contained within disease-specific HRQL questionnaires (for example Juniper et al., 1992). The REL domain describes the state of interpersonal relationships at work, indicating that feelings of isolation are important and troublesome to the well-being of respondents. This sense of loneliness is likely to be characteristic of call centre work where headsets are worn and interaction between colleagues is discouraged in order for call flow targets to be met. The absence of these dimensions from the WRQoL scale (Van Laar et al., 2007) is appreciable in view of their relatively high rankings among CCAs as shown in Figure 1. Also lacking in the WRQoL scale are most of the elements captured within the ORG domain. This includes the variable referencing a target led culture which showed the highest score (impact score = 3.62) out of all 102 initial items (Table II) and was therefore considered by respondents to be highly important and bothersome to their overall well-being. A physical health factor is absent from the WRQoL scale as well. For this present study, the PHY domain ranked lowest out of all eight domains in mean importance values (Table VI) and is therefore less concerning.
The QWL measure (Sirgy et al., 2001) bears only negligible resemblance to the domains established in the current findings. The largest and most important domains (HWI and JOB) (Table VI) have no equivalence in the QWL measure although it does reference social needs which CCAs do consider important (Figure 1).

For a call centre operator wishing to evaluate and act on the well-being of staff, these shortcomings could be considerable. As with disease-specific HRQL instruments, the QWL measure (Sirgy et al., 2001) and, to a large extent, the WRQoL scale (Van Laar et al., 2007) fail to include some aspects of call centre work that are shown to be troubling to those who would be the prime focus of any well-being programme. Certainly, for the present call centre cohort, an absence of data cataloguing concerns in respect of job design, colleague relationships and the target-led culture would provide a somewhat incomplete and inaccurate account of the most important issues affecting the well-being of workers which could render any subsequent wellness programme deficient.

The WRQoL scale (Van Laar et al., 2007) and QWL measure (Sirgy et al., 2001) gauge levels of EWB by asking how much respondents agree/disagree with the item statements listed in their respective scales. This marks a different approach to the current study where, consistent with HRQL practice, subjects are asked how important and bothersome to their well-being, they perceive particular items to be. This may present a considerable advantage over the response options used by earlier authors since it allows subjects to quantify the degree to which a particular issue is perceived to be troublesome. This point is reiterated by Costanza et al. (2007) who notes that any measurement strategy should identify how well a need is met and assess the importance of that need to the respondent in terms of their well-being.

Both Van Laar et al. (2007) and Sirgy et al. (2001) used factor analysis to establish the underlying constructs of their respective scales. Interestingly, the use of factor analysis in the measurement of well-being has been challenged by some authors active in HRQL. According to Fayers et al. (1998) and Fayers and Hand (1997), results based on FA may be misleading. These authors claim that, unlike traditional psychometric instruments, which comprise effect indicators (for example anxiety), HRQL scales contain both effect indicators and causal indicators. Fayers et al. (1998) and Fayers and Hand (1997) claim that these latter indicators may cause a drop in HRQL for those patients experiencing them but the reverse relationship need not automatically apply; a poor level of HRQL need not mean that the patient suffers from that causal symptom. The argument follows that FA modelling is fundamentally flawed for HRQL applications because it implicitly assumes that factors are composed of effect indicators only and changes in HRQL are likely to be reflected in corresponding changes across all scale items. These same concerns may be levelled at the WRQoL scale (Van Laar et al., 2007) and the QWL measure (Sirgy et al., 2001) which both include causal and effect indicators.

Also emphasised by these commentators is the need for breadth of coverage in HRQL scales development in order to ensure that all important, HRQL-impairing symptoms and effects are included. Fayers and Hand (1997) note that a lack of mathematical correlation with other items (as happens with FA) does not provide sufficient grounds for excluding ones that are considered important by the patient populations. An HRQL study by Juniper et al. (1997) that compared factor analysis with IA provided support for the claims by Fayers and Hand (1997). Again, these
observations may also be directed towards the WRQoL scale (Van Laar et al., 2007) and QWL measure (Sirgy et al., 2001) and their factor analytical construction methods.

5. Conclusion
The application of the IA HRQL approach to EWB highlights some possible inadequacies in current practices. The pilot scale constructed for a call centre environment captures issues specific to this sector. This is to be anticipated. However, this study demonstrates that this applied approach allows for the systematic identification of the most important items that cannot automatically be assumed to be contained within generic questionnaires. This therefore challenges the content validity of the latter and carries consequences for the relevancy and effectiveness of any well-being programmes developed as a result. The IA approach also addresses possible drawbacks associated with the conventional use of factor analysis when used to evaluate well-being.

If the academic community wishes to carry out well-being research where comparisons with other sectors are important, then the use of existing, standardised models is appropriate. If, on the other hand, the aim of a study is to evaluate the well-being of a particular organization or sector, with a view to identifying parsimoniously, ways in which this may be enhanced practically, the IA approach may be more suitable.

The pilot assessment’s measurement properties (construct validity, reproducibility and responsiveness) will be the subject of a future study. A limitation of this study is the presumed ability of the selected items to represent broadly the WRWB issues of all call centre workplaces. The generalisability of the findings to other call centre operations will be examined further.

References


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