Generational differences in work quality characteristics and job satisfaction

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Abstract

Purpose – The purpose of this paper is twofold: first, to determine if job satisfaction increases with age, and if this is consistent across countries; and second, if individuals belonging to the same age cohort, who experience similar life conditions and events and have been posited to share common attitudes and behaviors, differ in terms of job satisfaction, and if this difference is comparable across countries.

Design/methodology/approach – The study provides a comparative analysis of the impact of age and generational differences on job satisfaction globally, based on non-panel longitudinal data from the most recent wave of the International Social Survey Program (Work Orientations IV, 2015).

Findings – Age has a positive statistically significant impact on job satisfaction (e.g. the older you get, the more satisfied you are with your job). However, the same analysis with each specific age cohort indicates that age is only statistically significant with the baby boomers. Statistically significant cross-generational differences exist in the levels of job satisfaction across generations and cross-generational differences in the determinants of job satisfaction. Most differences are seen between the silent generation and the other three age cohorts.

Originality/value – Previous comparative studies have found that job satisfaction across generations, even within the same or similar countries, shows little variation. Research measuring the relationship between age and job satisfaction indicates three key contradictory findings – satisfaction increases with age, decreases with age, or no relationship exists. The current large-scale, global study updates and extends previous research by exploring similarities and differences in job satisfaction and work quality characteristics by age cohort, with a global sample.

Keywords Job satisfaction, Age, Generations, Country variations

Paper type Research paper

Over the past 60 years, the examination of job satisfaction has been an interdisciplinary endeavor, including psychology (Argyle, 1989), sociology (Kalleberg and Loscocco, 1983; Hodson, 1985; Westover, 2016), economics (Freeman, 1978; Hamermesh, 2001), management sciences (Burgard, and Görlitz, 2014; de Menezes and Wood, 2015; Hunt and Saul, 1975; Siengthai and Pila-Ngarm, 2016; Van Dierendonck, 2015; Yadav and Rangenekar, 2015), and public administration (Wright and Kim, 2004; Jung et al, 2007). The persistent interest of academics and practitioners is due to several reasons: satisfied workers are more productive (Appelbaum and Kamal, 2000), deliver higher quality of work (Tietjen and Myers, 1998), and improve a firm’s competitiveness and success (Garrido et al, 2005). Conversely, unsatisfied workers are more frequently late for work, absent from work, and motivated to leave the firm (Blau, 1994; Lee, 1998). While job satisfaction has been thoroughly examined for decades, there is still relatively little known about the overall comparative nature work quality characteristics and job satisfaction across age cohorts, particularly from across the globe.

This research utilizes data from the International Social Survey Program (ISSP) (Work Orientations IV: 2015 – survey questions on job characteristics and job quality) to examine the following questions:

RQ1. What are the empirical generational differences in workplace conditions, job characteristics, employee attitudes, and job satisfaction?

RQ2. What are the causes behind these differences?
A brief literature review of age and generational differences in job satisfaction

While differences in job satisfaction can be due to a number of variables such as the nature of the work, work sector, social interactions, coworkers, supervision, pay, cultural values, work values, and personality (Robbins and Judge, 2017), age and generational differences are two key variables that merit further investigation. While much research has focused on age, conclusions vary. A limited amount of research has focused on generational differences and their impact on job satisfaction. We next review these two areas with primary emphasis on the latter.

Overall, there is considerable evidence that job satisfaction increases with age (Clark et al., 1996; Crites, 1969; Durst and DeSantis, 1997; Eichar et al., 1991; Hunter, 2007; Josiam et al., 2009; Katz, 2008; Ng and Feldman, 2010), with some evidence that the pattern follows a U-shaped curve (Clark et al., 1996; Durst and DeSantis, 1997; Eichar et al., 1991; Hunter, 2007). Other findings indicate a decrease in satisfaction with age (Bern et al., 1998; Hickson and Oshagbemi, 1999; Jung et al., 2007; Luthans and Thomas, 1989; Oshagbemi and Hickson, 2003). Finally, some studies show no relationship between age and job satisfaction (Ghazzawi, 2011; Jepsen and Sheu, 2003; Sarker et al., 2003; Sharma and Jyoti, 2005, 2009; Tu et al., 2005).

Generation theory posits that individuals growing up during the same period of time experience similar socioeconomic conditions and historical events and thus share similar attitudes and behaviors, which extend to the workplace. Howe and Strauss (1991) identifies generational biographies based on the history of the USA although the authors also explored trends and cycles in other countries. Generational theory originated with the work of Karl Mannheim (1952) who posited that people’s behavior is influenced by social and historical events, more so than by class and culture. In other words, people resemble the time period in which they grew up. Generational theory is appealing as a means of understanding and resolving organizational problems.

Generational studies in the USA

The primary generations referred to in the USA are as follows: “silent generation” (born 1925–1945); “baby boomers” (born 1946–1964), “generation X” (born 1965–1976), “generation Y/millennials” (born 1977–1995), and Generation Z (born 1996 and later) (Robinson, 2018). Briefly, the silent generation is characterized by discipline, hard work, loyalty, respect for authority, and duty before pleasure (Generational Differences Chart, n.d.). Baby boomers have been described as optimistic, team oriented, anti-government, focused on equal rights and opportunities as well as personal gratification, and questioning everything. Generation X is known for diversity, fun, informality, independence, lack of organizational loyalty, pragmatism, and being highly educated, entrepreneurial, and self-reliant. Finally, generation Y, or the millennials, are considered confident, highly moral, highly tolerant, competitive, diverse, sociable, tech savvy, spiritual, and realistic; they also like personal attention.

Research on generations indicates that job satisfaction across generations does not vary to the extent one might expect. In a five-generation study (GIs, silents, boomers, gen Xers, and generation Y/millennials), millennials reported somewhat more overall satisfaction with their companies and jobs as well as with job security, recognition, and career development and advancement, but similar levels of satisfaction with pay, benefits, work itself, and turnover intentions compared to boomers and gen Xers (Kowske et al., 2010). However, effect sizes were small.

Generation Y, born from 1980 to 2000, is characterized by high self-esteem (Holt et al., 2012). Known as the “everyone gets a trophy” generation (Alexander and Sysko, 2011), individuals born in this time period may fail to understand the relationship between effort and performance (Ng et al., 2010). They are also reportedly less likely to want long-term employment compared to baby boomers, staying in a job (e.g. 3.2 years vs 10.3 years for
those over 55; US Department of Labor Statistics, 2013). Entitled employees, such as
generation Y, may initially view accountability as the means to attain expected rewards
(Naumann et al., 2002), but when tenure in a position results in increased negative feedback
and decreased rewards, accountability becomes a hindrance (Laird et al., 2015).

Entitlement has been linked to low job satisfaction (Harvey and Harris, 2010; Harvey and
Martinko, 2009). Although tenure can result in the increased development of coping
strategies (Hobfoll, 1989), the critical feedback associated with this development may deter
entitled employees, who dislike feedback harmful to their self-esteem, from experiencing job
satisfaction (Laird et al., 2015). In a study of generation Y university resident assistants,
however, those with high and low levels of entitlement reported similar levels of job
satisfaction under high accountability conditions while high and low entitled workers with
high tenure experienced slightly less job satisfaction (Laird et al., 2015). In this case,
accountability addressed the issue of entitled employees who “erroneously claim
responsibility for success and pass blame for failure” (Laird et al., 2015, p. 95), and
demonstrated that entitled employees respond favorably to high accountability.

Findings from studies comparing work values across generations (e.g. learning,
conformity, personal growth, work environment, comfort, security, loyalty, hard work, etc.),
work attitudes, and personality are inconsistent and have failed to reveal clear patterns or
distinguish generational effects (Kowske et al., 2010). Indeed, WorkTrends data indicate that
“employees across generations are similarly satisfied with their jobs; they like their job, feel
a sense of personal accomplishment, and report that their skills are being put to good use”
(Kowske et al., 2010, p. 275). A meta-analysis of studies measuring generational differences
on work outcomes, specifically job satisfaction, organizational commitments, and turnover
intent, indicated no differences for traditionalists, baby boomers, generation Xers, and
generation Y/millennials (Costanza et al., 2012). Overall, differences across generations have
been difficult to establish through research and generalizations about generations may
be inaccurate (Robbins and Judge, 2017). These studies demonstrate that other factors
may be more important determinants of job satisfaction than generational differences.

Generational studies in other contexts
Studies outside of the USA have found generational differences in work values and job
satisfaction. A study of three generations of Chinese female migrant workers (those who
migrated from rural locations to cities) found no differences in work values across the
generations, but older generation workers were more satisfied with work rewards and reported
higher overall job satisfaction (To and Tam, 2013). For younger workers, social support from
coworkers and supervisors positively impacted job satisfaction. These workers may have
perceived they had future opportunities to pursue better salaries and working environments,
thus leading to greater dissatisfaction with current employment.

Older employers have greater ability to control or manage their emotions (Hochschild,
1983; Kim, 2008; Kruml and Geddes, 2000) and engage more in deep acting – changing one’s
feelings to conform to expected workplace behaviors – than younger workers (Cheung and
Tang, 2010). Authentic displays of emotion may be less psychologically draining for them
than superficial displays or surface acting; thus, they may be less satisfied with their
employment if they are required to engage in surface acting (Walsh and Bartikowski, 2013).
In the case of German service workers, however, deep acting was not related to job
satisfaction for older workers (between 28 and 50 years old; generation Y), but was related
to satisfaction for male and younger employees (under age 28) (Walsh and Bartikowski,
2013). Surface-level acting lowered job satisfaction for both younger and older workers.

Other studies support this finding to some extent, indicating that Generation Y employees
benefit from clear direction on specific tasks but expect empowerment (Morton, 2002;
Zemke et al., 2000). They value leadership and mentoring (Gursoy et al., 2013). They also place
importance on opportunities for career growth (Kong et al., 2014). Indeed, career expectations for generation Y hospitality industry workers in China correlated positively with job satisfaction (Kong et al., 2014). These expectations included opportunities for growth and challenge, including promotion, education, and job security, similar to previous studies (Maxwell et al., 2010). Satisfaction for generation Y workers is related to help with career goal setting and organizational support in achieving these goals (Kong et al., 2014).

The studies represented in this review reflect multiple countries, work sectors, and time periods. Considering these context variables is critical to drawing conclusions about the relationship between age cohorts and job satisfaction. Generational differences appear to have little impact on satisfaction (Kowske et al., 2010) although studies do show variations across generations in areas such as accountability (Morton, 2002; Zemke et al., 2000), entitlement (Harvey and Martin, 2009; Harvey and Harris, 2010; Laird et al., 2015), and emotional management (Hochschild, 1983; Kim, 2008; Kruml and Geddes, 2000; Walsh and Bartikowski, 2013). Large sample sizes and meta-analyses point to job satisfaction increasing with age with exceptions for specific work sectors and countries. Based on the literature, then, it appears that other job satisfaction factors may have a greater impact on job satisfaction than age cohort, but larger scale studies representing extended work and country contexts are needed.

**Theoretical framework and model**

Figure 1 depicts the overall theoretical model of the influences on job quality and overall job satisfaction. In addition to the various intrinsic, extrinsic, and work relations factors (as well as individual control variables) examined in most satisfaction research, this model also includes commonly omitted factors, including control variables for organizational and job characteristics, and work–life balance variables.
Research design and methodology

Hypotheses

Overall, there is considerable evidence that job satisfaction increases with age, with some evidence that the pattern follows a U-shape. Findings also indicate a decrease in satisfaction with age while others show no relationship between age and job satisfaction. These studies reflect multiple countries, work sectors, and time periods. Hence, it is hypothesized that:

H1. Age has a positive statistically significant impact on job satisfaction.

Additionally, there is little empirical evidence to support generational differences in job satisfaction. Furthermore, WorkTrends data indicate that “employees across generations are similarly satisfied with their jobs; they like their job, feel a sense of personal accomplishment, and report that their skills are being put to good use” (Kowske et al., 2010, p. 275). Hence, it is hypothesized that:

H2a. One’s age cohort does not have a statistically significant impact on job satisfaction.

H2b. One’s age cohort does not have a statistically significant impact on the determinants of job satisfaction.

Description of the data

We use non-panel longitudinal data from the 2015 wave of the ISSP Work Orientations Modules IV – various survey questions on job characteristics and job quality[1]. The ISSP Work Orientations modules utilized a multistage stratified probability sample to collect the data for each of the various countries with a variety of eligible participants in each country’s target population[2]. In total, 37 countries participated in the 2015 wave[3]. The Work Orientations module focuses on the areas of general attitudes toward work and leisure, work organization, and work content[4]. Variables of interest in the data collected by the ISSP are single-item indicators (i.e. with a single survey question for job satisfaction, interesting work, job autonomy, workplace relations, etc., on a Likert scale)[5]. For the purposes of this study, the units of analysis start with individuals within the separate sovereign nations[6]. In addition to examining one large sample including all respondents from all participating countries, we examine a separate sample for each age cohort to determine which job characteristics best predict job satisfaction among that particular age cohort and then make comparisons.

Operationalization of variables

We use Handel’s (2005) job satisfaction model (based on Kalleberg’s 1977 findings) for conducting a cross-national comparison of job satisfaction and the perceived importance of intrinsic and extrinsic job quality characteristic and work relations across countries (see also Spector, 1997; Sousa-Poza and Sousa-Poza, 2000). Handel (2005) characterized 12 variables from the General Social Survey into intrinsic and extrinsic job quality factors. Ten of the 12 variables used by Handel are available for all countries in the fourth waves of the International Social Survey data used for this study. In addition, key variables on the meaning of work, workplace discrimination/harassment, schedule flexibility and work–life balance, and a range of individual control variables are available in the ISSP data and are outlined in the Appendix (all variables are single-item measures).

Individual and family circumstances and characteristics

Though the literature has identified many important individual control variables, due to limitations in data availability (e.g. some variables of interest and other important control variables cannot be included in the analysis, as data are not available for each wave of data collection across all countries of interest), control variables used for the quantitative piece of
this study will be limited to the following individual characteristics: sex, age, years of
education, marital status, and size of family (see Hamermesh, 1999; Sousa-Poza and
Sousa-Poza, 2000; Hodson, 2002; Carlson and Mellor, 2004). Additionally, an age cohort
variable was coded based on the respondents’ birth year: silent generation: 1918–1942, baby

Organizational and job characteristics
Though the literature has identified many important organizational and job characteristics
control variables, due to limitations in data availability, control variables used for the
quantitative piece of this study will be limited to the following, individual characteristics:
work hours, ISCO job classification, supervisory status, employment relationship, and
public/private organization (see Hamermesh, 1999; Sousa-Poza and Sousa-Poza, 2000;
Hodson, 2002; Carlson and Mellor, 2004).

Statistical methodology
First, we use data from the ISSP Work Orientations IV module to perform a descriptive
statistical analysis of work characteristics and job satisfaction for individuals across the 37
countries in the 2015 wave. These bivariate and multivariate analyses include trend
analysis, correlations, ANOVA, and ANCOVA procedures, cross-tabulations, as well as
general descriptive statistics of job quality characteristics and job satisfaction among each
age cohort to provide descriptive comparative similarities and differences between age
cohorts. Additionally, we include both aggregate and age cohort-specific OLS regression
models of the impact of individual work characteristics on job satisfaction to provide
additional comparison between age cohorts[7].

Studies of job satisfaction and job quality have included a variety of statistical approaches
to examine the relationship between job satisfaction and job quality characteristics. In a study
conducted with a similar design to this one, Handel (2005) used ordinary least squares
regression to examine these relationships. He selected this statistical procedure for “ease of
interpretation,” and notes identical models using other statistical procedures “indicates few
substantive differences” (p. 74). However, for this data, it is more appropriate to use the
procedure used by Sousa-Poza and Sousa-Poza (2000) – namely ordered probit regression
(used when the dependent variable is ordered and categorical). Therefore, we ran identical
models using both OLS and ordered probit procedures[8]. Upon comparing the OLS and
ordered probit results, we have come to the same conclusion as Handel – namely that for the
purposes of comparing coefficients and significance across countries and across models, as
well as for overall ease of interpretation of the results, OLS is sufficient (however, full-ordered
probit results are all available upon request).

Results
Descriptive results
Figure 2 shows mean job satisfaction levels across the four age cohorts included in the 2015 wave
of ISSP Work Orientations data. The highest job satisfaction levels are held among those in the
silent generation (mean = 5.69), while baby boomers are slightly less satisfied (mean = 5.39), and
generation X and millennials are nearly identical (means of 5.28 and 5.26, respectively).

Table I shows a wide range of mean similarities and differences across the different
intrinsic rewards, extrinsic rewards, work relations, and work–life balance variables, by age
cohort. Additionally, Table I shows some core demographic characteristics (including age,
years of education, size of family, and hours worked per week), by age cohort. As one would
expect, the average age corresponds to the various age cohorts of which the respondent is a
part. Additionally, years of education increase from cohort to cohort (just a little over 11
years of formal education for the silent generation, compared with nearly 14 years of formal education for millennials). Additionally, generation X individuals work more hours on average than the other three age cohorts.

Regression models
To fully examine the association between job satisfaction and the independent variables, six regression analyses were conducted on the aggregated data for all countries in the 2015 wave of Work Orientations data (see Table II). The first base model, which regresses job satisfaction on the main study variables, is presented in Table I.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Silent generation</th>
<th>Baby boomers</th>
<th>Generation X</th>
<th>Millennials</th>
<th>All generations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job satisfaction</td>
<td>5.69</td>
<td>5.39</td>
<td>5.28</td>
<td>5.26</td>
<td>5.32</td>
</tr>
<tr>
<td>Interesting work</td>
<td>3.84</td>
<td>3.86</td>
<td>3.82</td>
<td>3.78</td>
<td>3.83</td>
</tr>
<tr>
<td>Job autonomy</td>
<td>4.07</td>
<td>3.88</td>
<td>3.81</td>
<td>3.71</td>
<td>3.82</td>
</tr>
<tr>
<td>Help others</td>
<td>4.02</td>
<td>3.91</td>
<td>3.88</td>
<td>3.83</td>
<td>3.88</td>
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<tr>
<td>Job useful to society</td>
<td>4.06</td>
<td>4.01</td>
<td>3.95</td>
<td>3.86</td>
<td>3.94</td>
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<td>Job security</td>
<td>3.89</td>
<td>3.77</td>
<td>3.75</td>
<td>3.81</td>
<td>3.77</td>
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<tr>
<td>Pay</td>
<td>2.63</td>
<td>2.73</td>
<td>2.83</td>
<td>2.87</td>
<td>2.82</td>
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<tr>
<td>Promotional opportunities</td>
<td>2.51</td>
<td>2.52</td>
<td>2.79</td>
<td>3.03</td>
<td>2.78</td>
</tr>
<tr>
<td>Physical effort</td>
<td>2.53</td>
<td>2.64</td>
<td>2.70</td>
<td>2.81</td>
<td>2.71</td>
</tr>
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<td>Work stress</td>
<td>2.53</td>
<td>3.07</td>
<td>3.25</td>
<td>3.16</td>
<td>3.17</td>
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<td>Relations with coworkers</td>
<td>4.30</td>
<td>4.21</td>
<td>4.16</td>
<td>4.22</td>
<td>4.19</td>
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<td>Relations with management</td>
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<td>3.93</td>
<td>3.89</td>
<td>3.93</td>
<td>3.91</td>
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<tr>
<td>Contact with others</td>
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<td>4.23</td>
<td>4.23</td>
<td>4.20</td>
<td>4.23</td>
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<tr>
<td>Discriminated against at work</td>
<td>1.89</td>
<td>1.83</td>
<td>1.81</td>
<td>1.81</td>
<td>1.82</td>
</tr>
<tr>
<td>Harassed at work</td>
<td>1.91</td>
<td>1.86</td>
<td>1.85</td>
<td>1.87</td>
<td>1.86</td>
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<tr>
<td>Work from home</td>
<td>3.30</td>
<td>3.93</td>
<td>3.95</td>
<td>4.17</td>
<td>4.00</td>
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<td>Work weekends</td>
<td>3.10</td>
<td>3.21</td>
<td>3.14</td>
<td>3.05</td>
<td>3.14</td>
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<tr>
<td>Schedule flexibility</td>
<td>2.10</td>
<td>1.71</td>
<td>1.62</td>
<td>1.52</td>
<td>1.63</td>
</tr>
<tr>
<td>Flexibility to deal with family matters</td>
<td>1.81</td>
<td>2.15</td>
<td>2.26</td>
<td>2.36</td>
<td>2.25</td>
</tr>
<tr>
<td>Work interferes with family</td>
<td>4.00</td>
<td>3.79</td>
<td>3.55</td>
<td>3.71</td>
<td>3.66</td>
</tr>
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<td>Age</td>
<td>77.59</td>
<td>58.73</td>
<td>42.93</td>
<td>27.23</td>
<td>43.37</td>
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<td>Education</td>
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<td>12.37</td>
<td>13.40</td>
<td>13.76</td>
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<td>2.71</td>
<td>3.48</td>
<td>3.41</td>
<td>3.23</td>
</tr>
<tr>
<td>Work hours</td>
<td>32.35</td>
<td>39.85</td>
<td>41.87</td>
<td>41.10</td>
<td>40.96</td>
</tr>
</tbody>
</table>

Figure 2.
Mean job satisfaction, by age cohort

Table I.
Mean scores of job satisfaction and main study variables, by age cohort
<table>
<thead>
<tr>
<th>Variable</th>
<th>Base model: controls</th>
<th>Model 1: intrinsic rewards</th>
<th>Model 2: extrinsic rewards</th>
<th>Model 3: work relations</th>
<th>Model 4: work–life balance</th>
<th>Combined model</th>
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</thead>
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<tr>
<td>Gender</td>
<td>-0.037 (0.016)***</td>
<td></td>
<td></td>
<td></td>
<td>0.005 (0.014)***</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.029 (0.001)***</td>
<td></td>
<td></td>
<td></td>
<td>0.033 (0.001)***</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-0.052 (0.002)***</td>
<td></td>
<td></td>
<td></td>
<td>-0.045 (0.002)***</td>
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<tr>
<td>Marital status</td>
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<td></td>
<td></td>
<td></td>
<td>-0.028 (0.003)***</td>
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<tr>
<td>Size of family</td>
<td>-0.008 (0.005)</td>
<td></td>
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<td>-0.007 (0.004)</td>
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<tr>
<td>Work hours</td>
<td>-0.022 (0.001)***</td>
<td></td>
<td></td>
<td></td>
<td>0.006 (0.001)</td>
<td></td>
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<td>Job classification</td>
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<td></td>
<td></td>
<td>-0.009 (0.003)</td>
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<td>Supervisory status</td>
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<td></td>
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<td></td>
<td>-0.004 (0.016)</td>
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<td>Employment relationship</td>
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<td></td>
<td>0.008 (0.013)</td>
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<tr>
<td>Public/private organization</td>
<td>-0.052 (0.018)***</td>
<td></td>
<td></td>
<td></td>
<td>-0.028 (0.015)***</td>
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<tr>
<td>Interesting work</td>
<td>0.419 (0.007)***</td>
<td></td>
<td></td>
<td></td>
<td>0.237 (0.008)***</td>
<td></td>
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<tr>
<td>Job autonomy</td>
<td>0.098 (0.006)***</td>
<td></td>
<td></td>
<td></td>
<td>0.019 (0.007)***</td>
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<tr>
<td>Help others</td>
<td>0.031 (0.008)***</td>
<td></td>
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<td></td>
<td>0.022 (0.009)***</td>
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<td>Job useful to society</td>
<td>0.047 (0.008)***</td>
<td></td>
<td></td>
<td></td>
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<td>Job security</td>
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<td></td>
<td></td>
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<td>0.063 (0.007)***</td>
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<tr>
<td>Pay</td>
<td>0.162 (0.007)***</td>
<td></td>
<td></td>
<td></td>
<td>0.098 (0.007)***</td>
<td></td>
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<td>Promotional opportunities</td>
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<td></td>
<td>0.057 (0.007)***</td>
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<tr>
<td>Physical effort</td>
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<td></td>
<td></td>
<td>0.005 (0.006)</td>
<td></td>
</tr>
<tr>
<td>Work stress</td>
<td>-0.179 (0.006)***</td>
<td></td>
<td></td>
<td></td>
<td>-0.086 (0.007)***</td>
<td></td>
</tr>
<tr>
<td>Relations with coworkers</td>
<td>0.144 (0.010)***</td>
<td></td>
<td></td>
<td></td>
<td>0.085 (0.010)***</td>
<td></td>
</tr>
<tr>
<td>Relations with management</td>
<td>0.348 (0.009)***</td>
<td></td>
<td></td>
<td></td>
<td>0.225 (0.009)***</td>
<td></td>
</tr>
<tr>
<td>Contact with others</td>
<td>0.122 (0.008)***</td>
<td></td>
<td></td>
<td></td>
<td>0.010 (0.009)</td>
<td></td>
</tr>
<tr>
<td>Discriminated against at work</td>
<td>0.072 (0.017)***</td>
<td></td>
<td></td>
<td></td>
<td>0.037 (0.018)***</td>
<td></td>
</tr>
<tr>
<td>Harassed at work</td>
<td>0.044 (0.019)***</td>
<td></td>
<td></td>
<td></td>
<td>0.019 (0.020)***</td>
<td></td>
</tr>
<tr>
<td>Work from home</td>
<td>-0.073 (0.006)***</td>
<td></td>
<td></td>
<td></td>
<td>0.005 (0.006)</td>
<td></td>
</tr>
<tr>
<td>Work weekends</td>
<td>0.008 (0.005)</td>
<td></td>
<td></td>
<td></td>
<td>-0.023 (0.005)***</td>
<td></td>
</tr>
<tr>
<td>Schedule flexibility</td>
<td>0.068 (0.011)***</td>
<td></td>
<td></td>
<td></td>
<td>0.014 (0.012)***</td>
<td></td>
</tr>
<tr>
<td>Flexibility to deal with family matters</td>
<td>-0.134 (0.007)***</td>
<td></td>
<td></td>
<td></td>
<td>-0.036 (0.007)***</td>
<td></td>
</tr>
<tr>
<td>Work interferes with family</td>
<td>0.173 (0.007)***</td>
<td></td>
<td></td>
<td></td>
<td>0.097 (0.007)***</td>
<td></td>
</tr>
<tr>
<td>$n$</td>
<td>22,418</td>
<td>21,102</td>
<td>26,628</td>
<td>24,634</td>
<td>25,966</td>
<td>18,716</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.031</td>
<td>0.253</td>
<td>0.197</td>
<td>0.225</td>
<td>0.077</td>
<td>0.428</td>
</tr>
<tr>
<td>Change in Adjusted $R^2$ (from base model)</td>
<td>-</td>
<td>0.222</td>
<td>0.166</td>
<td>0.194</td>
<td>0.047</td>
<td>0.387</td>
</tr>
<tr>
<td>F</td>
<td>72.40***</td>
<td>2,293.11***</td>
<td>1,308.38***</td>
<td>1,686.99***</td>
<td>436.80***</td>
<td>483.58***</td>
</tr>
</tbody>
</table>

Notes: $\beta$ values, followed by standard error values are shown in parentheses. *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
satisfaction on the individual control variables, examines how much variance in job satisfaction is accounted for by the control variables. The next four analyses (Models 1–4) pertain to the separate analysis of the intrinsic, extrinsic, work relations, and work–life balance independent variables, and involve regressing each of these factors on job satisfaction. The last analysis (combined model) jointly examines the influences of all the independent variables (intrinsic, extrinsic, work relations, and work–life balance) and the control variables on job satisfaction.

Nearly all variables were statistically significant \( (p < 0.001) \) when the individual base model and Models 1–4 were run, with the exception of size of family as a control variable and working weekends as a work–life balance variable. However, when all of the individual models were included in the combined model, working weekends was significant, while physical effort, contact with others, working from home, and several individual control variables fell out of significant in the combined model. While the base model with just control variables only predicted 3 percent of the variation in job satisfaction (adjusted \( R^2 = 0.031 \)), intrinsic rewards variables accounted for 25 percent of the variation in job satisfaction (adjusted \( R^2 = 0.253 \)), extrinsic rewards variables accounted for nearly 20 percent of the variation in job satisfaction (adjusted \( R^2 = 0.197 \)), work relations variables accounted for nearly 23 percent of the variation in job satisfaction (adjusted \( R^2 = 0.225 \)), and work–life balance variables accounted for nearly 8 percent of the variation in job satisfaction (adjusted \( R^2 = 0.077 \)). The combined model with all intrinsic, extrinsic, work relations, work–life balance, and control variables accounted for nearly 43 percent of the variation in job satisfaction (adjusted \( R^2 = 0.428 \)).

Finally, the above specified combined model was then run for each individual age cohort represented in the 2015 wave of Work Orientations data. Table III summarizes the model specifications and OLS regression coefficient significance of key job characteristics for each age cohort, showing the comparative predictability (adjusted \( R^2 \)) of the model from cohort to cohort, as well as indicating the standardized coefficient significance for each of the key independent variables in the model (as compared with the aggregated “all age cohorts” model for the wave). First, as can be seen in Figure 3, there is a great deal of variation in model fit (adjusted \( R^2 \) scores) across the four age cohorts, with the best overall model fit in the silent generation, followed in turn by baby boomers, generation Xers, and millennials. Second, as can be seen in Table III, there is a great deal of variation between age cohorts in standardized \( \beta \) coefficient statistical significance for each of the intrinsic, extrinsic, work relations, and work–life balance job characteristics and control variables in predicting job satisfaction. Some variables are not significant within specific cohort models. As suggested in the literature review and hypotheses, this is to be expected, as motivators have different saliency within different age cohorts.

Additionally, when closely examining variations across age cohorts in specific standardized beta coefficient statistical significance for each of the intrinsic, extrinsic, work relations, and work–life balance job characteristics and control variables in predicting job satisfaction, certain patterns begin to emerge. In a couple of cases, the regression coefficients’ sign reverses from the individual models to the combined model. However, in each case, the variable at the individual level is statistically insignificant. As we examine the similarities and differences closely, first of all, there is a great deal of overall similarity in model variable significance (consistent with what we would expect based on the theoretical model) among the baby boomers, generation Xers, and millennials, while we see something very different for the silent generation individuals. For the silent generation, the only main model variables that held statistical significance were work stress and relationships with coworkers. In this model, individual and occupational control variables play a much bigger role in the overall predictability of job satisfaction among these workers (education level, marital status, size of family, work hours, and job classification).
<table>
<thead>
<tr>
<th>Variable</th>
<th>Silent generation</th>
<th>Baby boomers</th>
<th>Generation X</th>
<th>Millennials</th>
<th>All age cohorts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interesting work</td>
<td>0.191</td>
<td>0.311***</td>
<td>0.275***</td>
<td>0.283***</td>
<td>0.287***</td>
</tr>
<tr>
<td>Job autonomy</td>
<td>-0.081</td>
<td>0.016</td>
<td>0.024**</td>
<td>0.019</td>
<td>0.019**</td>
</tr>
<tr>
<td>Help others</td>
<td>0.014</td>
<td>0.004</td>
<td>0.018</td>
<td>0.036**</td>
<td>0.022**</td>
</tr>
<tr>
<td>Job useful to society</td>
<td>-0.070</td>
<td>0.050***</td>
<td>0.030**</td>
<td>0.038**</td>
<td>0.037**</td>
</tr>
<tr>
<td>Job security</td>
<td>0.148</td>
<td>0.059***</td>
<td>0.055***</td>
<td>0.074***</td>
<td>0.063***</td>
</tr>
<tr>
<td>Pay</td>
<td>-0.009</td>
<td>0.077***</td>
<td>0.098***</td>
<td>0.119***</td>
<td>0.098***</td>
</tr>
<tr>
<td>Promotional opportunities</td>
<td>0.185</td>
<td>0.041**</td>
<td>0.065***</td>
<td>0.057***</td>
<td>0.057***</td>
</tr>
<tr>
<td>Physical effort</td>
<td>0.059</td>
<td>0.009</td>
<td>0.008</td>
<td>-0.004</td>
<td>0.005</td>
</tr>
<tr>
<td>Work stress</td>
<td>-0.232***</td>
<td>-0.090**</td>
<td>-0.086**</td>
<td>-0.072***</td>
<td>-0.086**</td>
</tr>
<tr>
<td>Relations with coworkers</td>
<td>0.236*</td>
<td>0.068***</td>
<td>0.094***</td>
<td>0.082***</td>
<td>0.085***</td>
</tr>
<tr>
<td>Relations with management</td>
<td>0.020</td>
<td>0.247***</td>
<td>0.228***</td>
<td>0.208***</td>
<td>0.225***</td>
</tr>
<tr>
<td>Contact with others</td>
<td>0.101</td>
<td>0.023</td>
<td>0.020*</td>
<td>-0.012</td>
<td>0.010</td>
</tr>
<tr>
<td>Discriminated against at work</td>
<td>0.039</td>
<td>0.082***</td>
<td>0.026**</td>
<td>0.026*</td>
<td>0.037***</td>
</tr>
<tr>
<td>Harassed at work</td>
<td>-0.021</td>
<td>0.015</td>
<td>0.023**</td>
<td>0.014</td>
<td>0.019***</td>
</tr>
<tr>
<td>Work from home</td>
<td>0.118</td>
<td>0.036**</td>
<td>-0.003</td>
<td>-0.010</td>
<td>0.005</td>
</tr>
<tr>
<td>Work weekends</td>
<td>-0.031</td>
<td>-0.019</td>
<td>-0.013</td>
<td>-0.040***</td>
<td>-0.023***</td>
</tr>
<tr>
<td>Schedule flexibility</td>
<td>0.033</td>
<td>0.041**</td>
<td>0.007</td>
<td>0.002</td>
<td>0.014**</td>
</tr>
<tr>
<td>Flexibility to deal with family matters</td>
<td>-0.075</td>
<td>-0.024</td>
<td>-0.036***</td>
<td>-0.044***</td>
<td>-0.036***</td>
</tr>
<tr>
<td>Work interferes with family</td>
<td>0.004</td>
<td>0.114***</td>
<td>0.095***</td>
<td>0.091***</td>
<td>0.097***</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.026</td>
<td>0.011</td>
<td>0.012</td>
<td>-0.016</td>
<td>0.005</td>
</tr>
<tr>
<td>Age</td>
<td>-0.028</td>
<td>0.037***</td>
<td>0.010</td>
<td>0.013</td>
<td>0.033***</td>
</tr>
<tr>
<td>Education</td>
<td>-0.187*</td>
<td>-0.030*</td>
<td>-0.042***</td>
<td>-0.055***</td>
<td>-0.045***</td>
</tr>
<tr>
<td>Marital status</td>
<td>-0.220*</td>
<td>-0.006</td>
<td>-0.013</td>
<td>-0.057***</td>
<td>-0.028***</td>
</tr>
<tr>
<td>Size of family</td>
<td>-0.338***</td>
<td>-0.003</td>
<td>0.006</td>
<td>-0.003</td>
<td>-0.007</td>
</tr>
<tr>
<td>Work hours</td>
<td>-0.348***</td>
<td>0.026*</td>
<td>0.008</td>
<td>-0.008</td>
<td>0.006</td>
</tr>
<tr>
<td>Job classification</td>
<td>-0.294***</td>
<td>0.000</td>
<td>-0.005</td>
<td>-0.025</td>
<td>-0.009</td>
</tr>
<tr>
<td>Supervisory status</td>
<td>0.093</td>
<td>-0.002</td>
<td>-0.003</td>
<td>-0.010</td>
<td>-0.004</td>
</tr>
<tr>
<td>Employment relationship</td>
<td>0.070</td>
<td>-0.027*</td>
<td>0.032***</td>
<td>-0.005</td>
<td>0.008</td>
</tr>
<tr>
<td>Public/private organization</td>
<td>-0.021</td>
<td>-0.025*</td>
<td>-0.030***</td>
<td>-0.025*</td>
<td>-0.028***</td>
</tr>
</tbody>
</table>

Table III.
OLS regression results of job satisfaction and main study variables by age cohort

\[ n \] 97 4,764 8,531 5,281 18,716

\[ \text{Adj. } R^2 \]
0.499 0.451 0.424 0.418 0.428

\[ F \]
4.30*** 135.72*** 217.90*** 131.60*** 483.58***

Notes: \( \beta \) values, all variable coefficients are standardized. *\( p < 0.05; ** p < 0.01; *** p < 0.001 \)

Figure 3.
Adjusted \( R^2 \) by Age Cohort
Revisiting hypotheses and future research

Age impact on job satisfaction

OLS regression analysis partially support $H1$, that age has a positive statistically significant impact on job satisfaction. Age is a statistically significant control variable in the main model for all respondents, with a positive relationship with job satisfaction (e.g. the older you get, the more satisfied you are with your job). However, when we do the same analysis with each specific age cohort, age is only statistically significant with the baby boomers.

Generational impact on job satisfaction

Descriptive statistics and OLS regression analysis do not support $H2a$ and $H2b$, as there are statistically significant cross-generational differences in the levels of job satisfaction across generations and statistically significant cross-generational differences in the determinants of job satisfaction. Additionally, there are differences in the statistical significance of model variables based on age cohort, but most of the differences are seen between the silent generation and the other three age cohorts (which are more closely similar).

Future research

This research supports previous findings that job satisfaction increases with age. However, contrary to previous research, the study empirically demonstrated differences in job satisfaction and its determinants across age cohorts. The question remains, what are the causes for these generational differences. More specifically, as the 2015 ISSP Work Orientations data looked at age cohorts across 37 different countries, what are the country differences age cohorts and what are the key country-level contextual and global-macro variables driving these country differences in job characteristics and perceived worker satisfaction? Existing research cannot answer these and other related questions. To be able to examine these questions and further explore possible explanations and mechanisms by which these relationships unfold, future research needs to address the following areas. First, future research needs to better understanding the linkage between various job quality characteristics and worker satisfaction across age cohorts and across counties. Furthermore, there is a need to better understand how age cohort-based differences in worker satisfaction relate to many other important organizational, institutional, economic, social, and individual outcomes. Finally, there is a need to better understand cross-national differences in these relationships and what these differences mean for various stakeholders (e.g. employers, employees, labor unions, governments, etc.).

Discussion and practical implications

This large-scale study is the first to examine variables that impact job satisfaction across age cohorts in a global context. Although generational differences exist across countries based on their unique histories and social movements, this study demonstrated similar trends overall in satisfaction for age cohorts. In particular, contrary to prior research demonstrating a little variation in job satisfaction across generations (Costanza et al., 2012; Kowske et al., 2010; Robbins and Judge, 2017), this study demonstrated some interesting differences and patterns:

1. The silent generation has the highest overall level of job satisfaction, followed by baby boomers, with generation X and millennials being very similar.

2. Intrinsic rewards, extrinsic rewards, and work relations account for 20–25 percent of the variation in job satisfaction with work life balance at 8 percent across generations.

With regard to the first finding, members of the silent generation, born from 1918 to 1942, are past retirement age. Many baby boomers would also be retired or close to retirement.
Memories of careers and work experiences may be more positive at this stage of life, possibly accounting for greater overall satisfaction. Additionally, the silent generation has been characterized as valuing loyalty and sacrifice; baby boomers are characterized by optimism and work engagement, consistent with these findings (Schuman and Rodgers, 2004; Smola and Sutton, 2002; Zemke et al., 2000). Research further indicates that job satisfaction increases with age (Clark et al., 1996; Crites, 1969; Durst and DeSantis, 1997; Eichar et al., 1991; Hunter, 2007; Josiam et al., 2009; Katz, 2008; Ng and Feldman, 2010), which also supports the findings of this study.

In terms of the second finding, research on motivation in the workplace indicates that rewards play a large role. Self-determination theory, for example, posits that competence, relatedness, and autonomy increase motivation (Deci et al., 1999; Deci and Ryan, 2002; Ryan and Deci, 2000; Gagné and Deci, 2005). However, this theory also indicates that when a task is viewed as an obligation, motivation may decline. In other words, extrinsic rewards may undermine intrinsic rewards.

Thus, it is incumbent upon managers to identify appropriate approaches to rewards and recognition. Recognition programs and non-monetary rewards are associated with increased self-efficacy and satisfaction (Markham et al., 2002; Peterson and Luthans, 2006). The best approach may be to ensure that workers feel competent, are connected with others, and have autonomy over their work. Professional development opportunities can increase competence, teamwork may have positive outcomes in terms of relatedness, and choice and the ability to make decisions can positively impact feelings of autonomy. Extrinsic rewards must be carefully considered so as not to undermine intrinsic motivation as they can detract from achieving work goals (Chamorro-Premuzic, 2013; Sheldon et al., 2004).

Notes
1. Here, we use one of four waves of cross-sectional data and, therefore, we cannot specifically test the direction of causality among the variables examined as easily as we might with panel longitudinal data. However, we provide a conceptual framework that hypothesizes the path of causality.
2. ISSP researchers collected the data via self-administered questionnaires, personal interviews, and mail-back questionnaires, depending on the country.
3. Australia, Austria, Belgium, Chile, China, Taiwan, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, India, Israel, Japan, Latvia, Lithuania, Mexico, New Zealand, Norway, Philippines, Poland, Russia, Slovak Republic, Slovenia, South Africa, Spain, Suriname, Sweden, Switzerland, the UK, the USA and Venezuela.
4. For a full summary and description of this research, see www.gesis.org/issp/modules/issp-modules-by-topic/work-orientations/2015/
5. One of the primary limitations of the available attitudinal data is that each question represents a subjective single-item indicator. As Sousa-Poza and Sousa-Poza (2000) aptly point out, “[Subjective Well Being] scores depend on the type of scale used, the ordering of the items, the time-frame of the questions, the current mood at the time of measurement, and other situational factors” (p. 5; see also Diener et al., 1999). They further point out that, as the ISSP data set only measures job satisfaction as a single-item indicator, variance due to the wording of the item cannot be averaged out and the single item further makes the evaluation of internal consistency problematic.
6. A note on cross-cultural variation: in any research cross-national data, cross-cultural variation and culturally motivated bias in responses is always a potential concern. Though this research is not designed to be cross-cultural, per se, it is important to understand the possible implications of culturally motivated biased perceptions in responses, due to the cross-national nature of the data. Indeed, a cross-national analysis of subjective variables can produce a number of data and methodological problems. However, several researchers have found that individuals compare their
situation to those around them, and that happiness and well-being is based on this relative comparison (Clark et al., 1996; Diener et al., 1995). Furthermore, most studies examining job satisfaction are based on this type of data (Sousa-Poza and Sousa-Poza, 2000).

7. While OLS regression analysis is suitable for this analysis (dealing with just the individual-level variables in the overall model), structural equation modeling (SEM) or hierarchical linear modeling (HLM) would be the most appropriate statistical methodology to examine a cross-national model (including the country-level and individual-level variables), and would provide a better explanation of residual errors than OLS in a multi-level analysis, in that case. For SEM or HLM, given that the dependent variable, some independent variables, and individual control variables are measured at the individual level, while other independent variables are measured at the country level, hierarchical or cross-level techniques (HLM) are appropriate. This is because statistical techniques are inadequate to test hierarchical models and can result in aggregation bias, misestimated precision and levels of analysis problems (Bryk and Raudenbush, 1992, 2002; Snijders and Bosker, 2012).

8. Due to the ordinal nature of the dependent variable, it is most appropriate to use an ordered probit regression to look at the effect of different job characteristics on one’s overall job satisfaction. However, many researchers have argued that using OLS regression is appropriate when looking at satisfaction variables on a Likert scale, where most respondents understand that the difference between responses of 1 and 2 is the same as the difference between responses of 2 and 3, and so on. Additionally, using OLS regression results allows us to report an $R^2$ and adjusted $R^2$ value for the model and compare coefficients across models, which comparison is not appropriate in a probit model. Therefore, all regression results reported herein are OLS regression result. It is important to note that when the same OLS models where run in an ordered probit regression, the same significant results appeared for each of the independent and control variables across countries and waves (full-ordered probit model results, are available upon request).

References


**Appendix. Key work characteristics related to job satisfaction**

**Dependent variable**

Job satisfaction: “How satisfied are you in your main job?”

**Intrinsic rewards**

Interesting job: “My job is interesting.”

Job autonomy: “I can work independently.”

Help others: “In my job I can help other people.”

Job useful to society: “My job is useful to society.”

**Extrinsic rewards**

Pay: “My income is high.”

Job security: “My job is secure.”
Promotional opportunities: “My opportunities for advancement are high.”
Physical effort: “How often do you have to do hard physical work?”
Work stress: “How often do you find your work stressful?”

**Work relations**
Management–employee relations: “In general, how would you describe relations at your workplace between management and employees?”
Coworker relations: “In general, how would you describe relations at your workplace between workmates/colleagues?”
Contact with others: “In my job, I have personal contact with others.”
Discriminated against at work: “Over the past 5 years, have you been discriminated against with regard to work, for instance, when applying for a job, or when being considered for a pay increase or promotion?”
Harassed at work: “Over the past 5 years, have you been harassed by your supervisors or coworkers at your job, for example, have you experienced any bullying, physical, or psychological abuse?”

**Work–life balance**
Work from home: “How often do you work at home during your normal work hours?”
Work weekends: “How often does your job involve working weekends?”
Schedule flexibility: “Which of the following best describes how your working hours are decided (times you start and finish your work)?”
Flexibility to deal with family matters: “How difficult would it be for you to take an hour or two off during work hours, to take care of personal or family matters?”
Work interferes with family: “How often do you feel that the demands of your job interfere with your family?”

**About the authors**
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