

Research article

Who wants to work and why? workplace practices, job satisfaction and the will to work

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Abstract: Beyond the obvious positive effect on employees, job satisfaction is also critical for organizations. Job satisfaction affects workers' turnover intents, while also predicting employees' commitment to their workplace and their performances. Thus, not surprisingly, most organizations strive for employee satisfaction. The goal of the study is to examine which job characteristics and workplace practices affect the job satisfaction of employees, and particularly that of older ones (55+), and, in turn, enhance their will to work and may encourage them to work longer. Our analysis of the Social Survey for 2016 from the Israel Central Bureau of Statistics focused on job conditions and revealed that income satisfaction, additional benefits, a sense of belonging and work-life balance enhance job satisfaction and the desire to work longer, particularly among older workers. Among younger workers, a higher significance was found for professional training and skills. Implications for organizations and policymakers are discussed.

Keywords: job satisfaction; older workers; workplace practices; job characteristics

JEL Codes: J28, J81

1. Introduction

Job satisfaction represents employees' level of liking versus disliking their jobs (Spector, 1997). Beyond the obvious positive effect on employees, job satisfaction is also critical for organizations. Job

satisfaction affects workers' turnover intents (Lambert & Hogan, 2009), while also predicting employees' commitment to their workplace (Igbaria & Guimaraes, 1993) and their performance (Jalagat, 2016). Thus, not surprisingly, most organizations strive for job satisfaction among their employees.

Special attention to older workers is important in this regard, because older workers' job satisfaction may influence their desire to remain in the labor market and postpone their retirement. Population aging is a phenomenon faced by policymakers in many developed countries (Axelrad & Mahoney, 2017), and from a macro-level perspective, working longer relieves the pressure on pension systems (Mermin, Johnson & Murphy, 2007). Hence, it may be worthwhile for policymakers to encourage older workers to work longer and motivate employers to prolong the working life of their employees.

The goal of the current research is to examine which workplace practices can enhance the job satisfaction of older compared to younger workers, which, in turn, may affect older workers' will to work longer. In the study, we analyzed the job characteristics, job practices and levels of job satisfaction of workers aged 25–54 and 55+, as well as the differences between the two groups in terms of their will to work despite having the option of retiring. The cutting point age of 55 was chosen to differentiate between older and younger workers based on previous studies (Hill et al., 2014; Ng & Law, 2014; Wilckens et al., 2020), as well as the notion that many workers start to think about retirement around the age of 55. A trend of declining employment rates after the age of 55 is noticeable in various countries (OECD, 2022). Based on the question: "If you could financially afford not to work at all, would you work?" we can differentiate between workers who want to work and those who need to work due to their financial situation. The group of older workers is of special interest, because analyzing their characteristics allows organizations and policymakers to understand what practices and measures can prolong their working life.

2. Literature review

Job satisfaction is a much-researched variable in the field of workplace psychology (Lu et al., 2012). It refers to the extent to which an individual's expectations of a job match their actual rewards from this job (Bruck et al., 2002). Alternatively, job satisfaction may be defined as the extent to which people like (feel satisfied with) or dislike (feel dissatisfied with) their jobs (Aziri, 2011). Job satisfaction suggests that an individual works at a job they enjoy, that they do it well and that they feel adequately rewarded for their efforts. It also suggests that they are enthusiastic and happy with their work (Kaliski, 2007).

Few theories can explain important contributors to job satisfaction. Maslow's (1981) hierarchy of needs theory suggests that human needs can be divided into a five-level hierarchy (i.e., physiological needs, safety, belongingness/love, esteem and self-actualization); it has been used to explain job satisfaction because the theory's main components are applicable to the work setting. Within an organization, financial compensation may enable employees to fulfill their basic physiological needs. Feeling physically safe in their work environment and secure in their jobs fulfills the employees' safety/security needs. When these needs are satisfied, employees can focus on developing positive relationships with colleagues and supervisors in the workplace, which helps them feel a sense of belonging to their organization. Employees seek to feel valued and appreciated by their organization, which allows them to pursue self-actualization and fulfill their potential.

The motivator-hygiene theory (Herzberg, 1966) argues that, rather than being on the opposite ends of the same continuum, job satisfaction and dissatisfaction are separate entities. While job

satisfaction is related to “motivating” factors like satisfying wages, fair benefits, recognition and achievements, job dissatisfaction is related to “hygiene” factors, such as working conditions, job security and quality of management. Since the hygiene and motivational factors are viewed as independent, an employee might be both or neither satisfied/dissatisfied at the same time.

The job characteristics model (Hackman & Oldham, 1975) argues that five job characteristics (i.e., skill variety, task identity, task significance, autonomy and feedback) influence three psychological states (i.e., meaningfulness of work, responsibility of outcomes and knowledge of results). The three psychological states then lead to a number of potential outcomes, one of which is job satisfaction. Thus, by improving the five-core job dimensions, the organization can increase job satisfaction.

2.1. Job satisfaction: personal and job characteristics

Previous studies have revealed some correlations between personal traits and job satisfaction. Education level was found to be significantly and positively correlated with job satisfaction, i.e., individuals with a higher level of education are usually more satisfied with their jobs than those with a lower level of education. Other studies found that married individuals tend to be less satisfied with their jobs than those who are not married (Gazioglu & Tansel, 2006). Similarly, work-family conflicts were found to be negatively associated with job satisfaction (Bruck et al., 2002). Interestingly, no conclusive association was found between gender and job satisfaction (Spector, 1997). In some studies, women were found to report a higher level of job satisfaction than men (Gazioglu & Tansel, 2006), whereas others found no significant differences between men and women in overall levels of job satisfaction (Franěk & Večeřa, 2008).

Ellickson and Logsdon (2002) argued that demographic variables are relatively poor predictors of job satisfaction compared to environmental factors. Different studies have found that organizational factors and environmental factors such as wages and benefits satisfaction, performance appraisal satisfaction, equipment and resources, training and supervisory relationships are positively associated with job satisfaction (Ellickson & Logsdon, 2002; Gazioglu & Tansel, 2006; Leppel et al., 2012).

Therefore, our first research questions were as follows:

RQ1: What are the effects of workplace practices (weekly working hours, additional benefits), personal sense-feelings (satisfied with income, involved in improvement, influence important decisions, useful work, balance, job security, feel at home, feeling discrimination), job characteristics and conditions (dangerous job, education-related, new working methods) on the job satisfaction of workers aged 25–54 compared to those aged 55+?

Thus, we hypothesized the following:

H1a: Longer weekly working hours will be found to be negatively associated with job satisfaction.

H1b: Dangerous jobs will be found to be negatively associated with job satisfaction.

H1c: Satisfactory income will be found to be positively associated with job satisfaction.

Additional benefits (H1d), a job that is education-related (H1e), new working methods (H1f), involvement in improvements (H1g), influence on important decisions (H1h), useful work (H1i), balance (H1j) and job security (H1k) will be found to be positively associated with job satisfaction.

H1l: Feeling discrimination will be found to be negatively associated with job satisfaction.

H1m: Feeling at home will be found to be positively associated with job satisfaction.

Many of the studies about the relationship between job characteristics and job satisfaction have been cross-sectional. While job characteristics may be associated with job satisfaction at a specific point in time, these characteristics are likely to compound over time to predict long-term attitudes toward work. In this case, no single event is expected to have a massive effect on overall outcomes, which will be revealed over time. Studies that chose a longitudinal methodology allowed not only separation between variables over time, but also the ability to control for the initial job satisfaction while predicting later job satisfaction (Grandey et al., 2005; Probst & Brubaker, 2001). In some cases, the results of the longitudinal study supported the relationship found in the cross-sectional study (Probst & Brubaker, 2001), while in others, it appears that the relationship between the variables varies (Grandey et al., 2005). Previous findings have revealed that cross-sectional and longitudinal studies go somewhat hand in hand with regard to the proposed relationships between workplace practices and job satisfaction (Grandey et al., 2005; Dobrow Riza et al., 2018; Toropova et al. 2021).

2.2. Job satisfaction of older workers

The relationship between age and job satisfaction tends to be U-shaped, or positive and linear (Gazioglu & Tansel, 2006; Smerek & Peterson, 2007; Ng & Feldman, 2010). Both correlations suggest that older employees are well adjusted to their job and obtain more intrinsic rewards from it (Mottaz, 1987). In a U-shaped relationship, job satisfaction declines during the initial stage and then rises as employees get older (DeSantis & Durst, 1996). The linear view assumes a positive relationship between job satisfaction and age because older employees have more realistic expectations about their jobs and a stronger sense of achievement than the younger employees (Ng & Feldman, 2010). Research has also found that older workers' job satisfaction is more closely related to the internal rewards of work than that of younger workers (Peeters et al., 2008), implying that older employees are more satisfied with their job-related rewards than their younger counterparts (Tausif, 2012). According to the socio-emotional selectivity theory (Carstensen, 1992), as people age, they become more aware of their limited time left and put greater emphasis on positive experiences. Consequently, older workers are expected to focus more on the positive aspects of their job, which then leads to greater job satisfaction. Other studies, however, presented an inverse relationship between job satisfaction and age, suggesting that older employees' excitement about their job declines over time and with routine (Jung et al., 2007).

Workers aged 55 or more may have an option of retiring. According to Higgs et al. (2003), older workers continue to work either because of financial reasons, the job itself or their traditional work ethics. However, Lord (2004) examined the work motivation of older workers and found that the primary reasons that older workers remain in the labor market are their enjoyment of working, their satisfaction from using their skills and their sense of accomplishment from the job they perform. Regardless of the nature of the relationship between age and job satisfaction, all studies agree that job satisfaction is a significant determinant of the intention to retire later and thus prolong one's working life (Kautonen et al., 2012).

Job satisfaction is a central variable in many theories about withdrawal behavior (Spector, 1997). According to the theory of work adjustment (TWA), for example, work satisfaction is considered a predictor of continued work. The theory has been applied to retirement (Dawis et al., 1964) and suggests that career decisions are made based on the fit between the person and their environment. According to the theory, individuals tend to adjust to their workplace or seek out new employment based on their level of satisfaction with their work. Furthermore, according to this theory, employers

offer additional reinforces (e.g., retention, promotion) based on the employee's level of satisfaction. Work adjustment determines job satisfaction; hence, older adults who consider whether or not to delay their retirement may be considering the person-environment fit as part of their retirement decision (Lytle et al., 2015). Additionally, discrimination was found to negatively affect self-efficacy and predict both work satisfaction and the intention to continue working (Foley & Lytle, 2015).

On the other hand, a different study found that people with high levels of job dissatisfaction are significantly more likely to retire (Clark et al., 2014). The effect of job satisfaction on retirement was found to be slightly stronger for women. Studies have found no difference in the effect of job satisfaction between salary earners and self-employed individuals (Kautonen et al., 2012).

Since demographic trends and projections have shown that the rates of workers aged 55 or older in the labor market are expected to increase, organizations have to consider older workers' unique characteristics and career development needs when they develop policies and practices. Given that older workers may expect different types of obligations from the organization as compared to younger workers, they may use their experience when making late career-related decisions (Wang, & Zhan, 2012), like early or late retirement. Even retirees may want to engage in career bridge employment because they are satisfied with their job (Wang et al., 2009).

Therefore, our second research questions were as follows:

RQ₂: What are the effects of personal characteristics and job satisfaction on the will to work among both age groups?

Accordingly, we hypothesized that workers' job satisfaction influences their willingness to work when they can afford not to work (H_2). As in the case of the first research question, previous findings have revealed that the directions between the variables in the cross-sectional studies and longitudinal studies—although varying—still hold from one design to another (Cote & Morgan, 2002; Nagar, 2012).

3. Method and analytical strategy

3.1. Data and sample

We employed data from the Social Survey for 2016 that was conducted by the Israel Central Bureau of Statistics (ICBS). The Social Survey is an annual survey that provides up-to-date information about the Israeli population and its living conditions. The survey questionnaire consists of two main parts. The first part contains around 200 questions that cover various areas of life, such as health, employment and economic status, which are repeated each year. The second part of the survey concentrates on a new topic each year. The main topic of the 2016 survey was working conditions. It focused on the well-being of individuals and their work. Participants were asked questions about their work environment, the nature of their work, their working hours and exposure to violence.

The sample for the 2016 ICBS Social Survey included 7,048 participants. As we are interested in the impact of job satisfaction on employment decisions, we focused only on employed individuals. Thus, we have excluded from our sample all observations which were classified as unemployed in the year they were surveyed. Furthermore, we also excluded all respondents aged 24 years and younger from our sample because labor-force participation rates at these ages are lower, as many individuals in this age group in Israel are still in the military service or studying in academic institutions. Therefore, the final sample included 4,122 individuals, where 3,161 were aged 25–54 and 961 were aged 55 or more.

3.2. Measures

The dependent variable was the “will to work”, formed as a yes/no question that was based on the question: “If you could financially afford not to work at all, would you work?” Those who answered “yes” to the question in the survey (coded 1) were identified as wanting to work.

The main explanatory variable was “job satisfaction”, which can be defined as both a general feeling or a constellation of related attitudes (Spector, 1987). As we are interested in the overall attitude, we used the global approach. The ordinal variable we used was based on the question: “In general, are you satisfied with your work in your current workplace?” Respondents were asked to indicate their agreement on a four-point Likert scale (1 = not satisfied at all; 4 = very satisfied). “Job satisfaction” was designed as an ordinal variable which would help us figure out the minimum levels of job satisfaction for employees; Thus, we could determine at which point the variable “job satisfaction” begins to significantly affect their willingness to work when they can afford not to work.

“Professional courses” was a dummy variable based on the question: “Did you take any professional training courses such as bookkeeping, programming, carpentry, etc.?” The respondents coded 1 if yes and 0 if not. Unskilled was a dummy variable coded 1 if yes and 0 otherwise. It is worth noting that the proportion of unskilled workers in each group was not particularly high and amounted to about 4%. “Weekly working hours” was an ordinal variable based on a categorical self-reported item given an eight-point Likert scale (1 = 1 to 4 hours, 2 = 5 to 9 hours, 3 = 10 to 19 hours, 4 = 20 to 34 hours, 5 = 35 to 42 hours, 6 = 43 to 49 hours, 7 = 50 to 59 hours, 8 = 60 hours or more).

The variable “satisfied with income” was an ordinal variable based on the question: “Are you satisfied with your work income?” Respondents were asked to indicate their agreement on a four-point Likert scale (1 = not satisfied at all; 4 = very satisfied). “Education-related” was an ordinal variable that expressed the connection between current job and previous studies, based on the question: “To what extent is your current work related to the field of your academic studies or to your post-secondary education?” This item was measured by using an four-point Likert scale ranging between 1 (not at all) and 4 (yes, to a large extent).

The variable “new working methods” was based on the statement: “In the last three years, have any new working methods and technologies with direct impact on your work environment been introduced in the workplace?” The respondents coded 1 if yes and 0 if not. “Involved in improvement” was an ordinal variable based on the respondent’s answer to the question: “Were you involved in improving and organizing your work or work processes in the department or organization?” This item was measured by using a four-point Likert scale ranging between 1 (never) and 4 (always, often). “Influence important decisions” was an ordinal variable based on the question: “Can you influence an important decision for your work?” Respondents were asked to indicate their agreement on a four-point Likert scale (1 = never; 4 = always, often). The variable “useful work” was an ordinal variable based on the question: “Do you feel that you are doing a useful job?” with answers ranging between 1 (never) and 4 (always, often).

“Balance” was an ordinal variable that indicated the respondents’ feelings about the balance between work and other areas of life. The question was: “How satisfied are you with the balance between the time you devote to a paid job and the time you devote to other areas of your life?” This item was measured by using a four-point Likert scale ranging between 1 (not satisfied at all) and 4 (very satisfied). The variable “job security” was an ordinal variable based on the question: “Do you have any fear that you will lose your job in the coming year?” Respondents were asked to indicate their agreement on a

four-point Likert scale (1 = very high fear; 4 = not at all). "Feel at home" is a variable that can imply a sense of belonging and commitment (Polat et al., 2017). It was based on the respondents' answer to the yes/no question: "Do you "feel at home" in your workplace?" [A common expression in Hebrew slang that indicates a feeling of belonging]. This item was coded 1 if yes and 0 otherwise.

The study also included three computed variables. The variables were calculated based on some of the survey questions, as described below. "Dangerous job" was an average of nine ordinal variables based on the respondents' answers to questions such as "Are you exposed to noise, smoke, gas, chemicals in your main job?", etc. All of these items were measured by using a five-point Likert scale ranging between 1 (never) and 5 (all the time). Therefore, the resulting covariate was a continuous variable ranging between 0 and 5. "Feeling discrimination" was calculated based on the sum of 14 yes/no questions, each referring to the respondents' feeling about any kind of discrimination in the workplace, such as verbal or physical violence, sexual harassment, etc. All items were coded 1 if yes and 0 otherwise.

The last computed variable, "additional benefits", was a sum of nine dummy variables indicating a range of benefits offered to the worker as part of his/her terms of employment, such as bonuses, profit sharing, disability and life insurance, free meals, participation in vehicle maintenance, etc. Each item was based on a yes/no question, with yes coded as 1 and no coded as 0. As a result, the computed variable ranged between 0 and 9.

We also included socio-demographic characteristics. Gender was a dummy variable coded as 1 if female and 0 if male. Married was a dummy variable designed to indicate an individual's marital status; it was coded as 1 if married and 0 otherwise. Health status was an ordinal self-rated variable on a four-point Likert scale ranging between 1 (poor) and 4 (very good). Table 1 summarizes the descriptive statistics and the differences between the two age groups, i.e., 25–54 years old and 55+ years old (Table 1).

Table 1. Descriptive statistics for variables of interest, by age group.

Variable	25–54 years old	55 years old and more	<i>T test</i>
	N=3,161	N=961	
Gender (female) ^a	48%	45%	
Married ^a	71.56%	75.96%	-2.68***
Health ^a	3.62	3.16	19.77***
<i>Poor</i>	0.44%	1.36%	
<i>Not so good</i>	4.38%	15.78%	
<i>Good</i>	27.78%	47.96%	
<i>Very good</i>	67.40%	34.90%	
Will to work (yes)	75.93%	71.38%	2.84***
Job Satisfaction	3.19	3.23	-1.43
<i>not satisfied at all^a</i>	2.04%	2.30%	
<i>not so satisfied^a</i>	10.40%	8.58%	
<i>satisfied^a</i>	52.44%	53.14%	
<i>very satisfied^a</i>	34.76%	35.98%	

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Variable	25–54 years old	55 years old and more	<i>T test</i>
Professional Courses (yes)	33.19%	41.42%	
Unskilled ^a	3.7%	4.0%	-0.50
Weekly Working Hours (Avg., SE)	5.87 (2.35)	5.67 (3.12)	3.44***
Satisfied with Income	2.59	2.56	0.75
<i>not satisfied at all</i> ^a	10.71%	12.58%	
<i>not so satisfied</i> ^a	30.36%	29.49%	
<i>satisfied</i> ^a	48.63%	47.04%	
<i>very satisfied</i> ^a	10.30%	10.89%	
Education-Related	2.93	2.86	1.16
<i>not at all</i> ^a	25.22%	29.50%	
<i>not so much</i> ^a	6.74%	5.04%	
<i>yes, to a certain extent</i> ^a	17.90%	15.47%	
<i>yes, to a large extent</i> ^a	50.14%	50.0%	
New Working Methods (yes)	35.65%	34.03%	0.92
Involved in Improvement	3.19	3.14	1.25
<i>never</i> ^a	12.4%	16.77%	
<i>rarely</i> ^a	8.61%	8.83%	
<i>sometimes</i> ^a	26.19%	18.41%	
<i>always, often</i> ^a	52.79%	55.99%	
Influence Important Decisions	2.99	2.84	3.12***
<i>never</i> ^a	16.61%	23.27%	
<i>rarely</i> ^a	11.27%	10.88%	
<i>sometimes</i> ^a	28.29%	23.67%	
<i>always, often</i> ^a	43.83%	42.18%	
Useful work	3.79	3.89	-5.07***
<i>never</i> ^a	1.37%	0.63%	
<i>rarely</i> ^a	2.10%	1.15%	
<i>sometimes</i> ^a	12.44%	7.02%	
<i>always, often</i> ^a	84.10%	91.20%	
Balance	2.53	2.78	-7.88***
<i>not satisfied at all</i> ^a	12.80%	6.86%	
<i>not so satisfied</i> ^a	31.95%	22.68%	
<i>satisfied</i> ^a	44.46%	54.54%	
<i>very satisfied</i> ^a	10.80%	13.92%	
Job Security	3.49	3.59	-3.94***
<i>very high fear</i> ^a	2.26%	2.08%	
<i>little fear</i> ^a	6.91%	5.92%	
<i>high fear</i> ^a	30.85%	22.70%	
<i>very high fear</i> ^a	59.97%	69.30%	
Feel at Home (yes ^a)	84.1%	87.5%	-2.62***
Dangerous Job ^b	1.61	1.54	2.03**
Feeling Discriminated ^b	0.20	0.14	4.25***
Additional Benefits ^b (Avg., SE)	3.14 (2.35)	2.72 (2.41)	4.79***

Note: ^a Frequency in the sample; ^b Computed Variables; *p < 0.1, **p < 0.05, ***p < 0.01.

Table 2. Pearson's correlation between variables-Coefficients and significance levels.

	Satisfied with Job	Professional Courses	Unskilled	Weekly Working Hours	Dangerous Job	Satisfied with Income	Additional Benefits	Education-Related	New Working Methods	Involved in Improvement	Influence Important Decisions	Useful Work	Balance	Job Security	Feel at Home	Feeling Discriminated
Satisfied with Job	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Professional Courses	0.040	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Unskilled	-0.1	-0.0726	1	---	---	---	---	---	---	---	---	---	---	---	---	---
	118*	***														
Weekly Working Hours	0.033	0.0006	-0.084	1	---	---	---	---	---	---	---	---	---	---	---	---
	8**		9***													
Dangerous Job	-0.1	0.0036	0.0920	0.0543	1	----	----	----	----	----	----	----	----	----	----	----
	340*	***	***	***												
Satisfied with Income	0.435	-0.0294	-0.065	0.0918	-0.107	1	----	----	----	----	----	----	----	----	----	----
	2***	**	3***	***	4***											
Additional Benefits	0.170	0.0722*	-0.120	0.1174	-0.032	0.2101	1	----	----	----	----	----	----	----	----	----
	8***	**	5***	***	9**	***										
Education-Related	0.179	-0.0408	-0.167	0.0071	-0.074	0.1269	-0.182	1	----	----	----	----	----	----	----	----
	7***	**	7***		0***	***	1***									
New Working Methods	0.151	0.0983*	-0.114	0.1112	0.0216	0.1347	0.3605	0.142	1	----	----	----	----	----	----	----
	8***	**	7***	***		***	***	6***								
Involved in Improvement	0.280	0.0859*	-0.190	0.1074	-0.057	0.1744	0.3274	0.153	0.2052**	1	----	----	----	----	----	----
	8***	**	3***	***	7***	***	***	9***	*							
Influence Important Decisions	0.288	0.1079*	-0.238	0.1489	-0.112	0.2048	0.3497	0.221	0.2218**	0.5907**	1	----	----	----	----	----
	7***	**	5***	***	4***	***	***	0***	*	*						
Useful work	0.238	0.0580*	-0.116	0.0092	-0.0218	0.1195	0.1098	0.132	0.1045**	0.2698**	0.2574***	1	----	----	----	----
	5***	**	5***		***	***	***	8***	*	*						
Balance	0.263	-0.0401	-0.027	-0.202	-0.083	0.2310	-0.046	0.024	-0.0934*	0.0308*	0.0141	0.069	1	----	----	----
	1***	***	0*	4***	2***	***	7***		**				3***			
Job Security	0.262	0.0775*	-0.057	-0.000	-0.086	0.1938	0.1875	0.070	0.1259**	0.1558**	0.1931***	0.155	0.0932*	1	----	----
	9***	**	1***	3	0***	***	***	6***	*	*			9***	**		
Feel at Home	0.341	0.0681*	-0.107	0.0143	0.0021	0.1853	0.1488	0.076	0.1273**	0.2764**	0.2961***	0.241	0.1208*	0.2092*	1	----
	9***	**	8***		***	***	***	5***	*	*			8***	**	**	
Feeling Discriminated	-0.14	0.0590*	-0.003	0.0524	0.1939	-0.126	0.0208	-0.00	0.0664**	-0.0500*	-0.0741*	-0.06	-0.1548	-0.0888	-0.10	1
	63***	**	1	***	***	5***	5***	14	*	**	**	66***	***	***	44***	

Notes: *, ** and *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

3.3 Preliminary analysis

Since many of the measures are new, during the initial analysis of the data, we examined each of the variables separately. We first ensured that there was no multicollinearity between the variables. We then conducted a confirmatory factor analysis that included relevant variables. As a result, we could use the selected measures while also including the three calculated variables (dangerous job, feeling discrimination and additional benefits) mentioned before. For example, the scale reliability coefficient of the variable “dangerous job” was 0.92. Table 2 presents correlations between variables.

3.4 Empirical framework

Taking job satisfaction as an exogenous variable may bias the regression coefficient estimates. We considered that the possible reason for this bias is that job satisfaction may be a variable correlated with personal attributes and sense-feelings or job characteristics, such as income satisfaction, weekly working hours, etc. We therefore assumed that job satisfaction is an endogenous covariate (Keon & McDonald, 1982). Mediation analysis was not calculated because the current study did not examine the direct causal relationship between each independent variable (such as job characteristics and workplace practices) and the dependent variable “will to work”. Rather, we examined whether and how the outcome variable “will to work” is affected by employees’ job satisfaction, which, in turn, is influenced by exogenous covariates (such as job characteristics and workplace practices). In other words, the variable “job satisfaction” can be considered endogenous, since it can be explained by other factors.

In order to solve the potential problem of endogeneity of the explanatory variable and obtain the consistent and unbiased estimates of the model parameters, we used the instrumental variables (IVs) method, which is processed by the two-stage estimation technique. This method is also the most appropriate econometric method, as “job satisfaction” is an ordinal variable, with answers on a four-point Likert scale (Greene, 2018).

3.5 Method of Instrumental Variables (IVs)

To understand how the IV estimation works (Hill, Griffiths, & Lim, 2018), consider the following multiple regression model, which is known as a structural equation model:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_{k-1} x_{k-1} + \beta_k x_k + \varepsilon \quad (1)$$

Suppose we know, or suspect, that there are two types of covariates among the explanatory variables: exogenous (x_1, x_2, \dots, x_{k-1}) and endogenous (x_k). This means that the first group of variables is uncorrelated with the residual term ε , while x_k is correlated with the regression error, and thus is endogenous.

As mentioned above, IV estimation can be carried out using a two-step procedure, with an appropriate econometric model at each step, such as least squares regression, a logistic function, a probit model, etc. The function of the first stage has the endogenous covariate x_k on the left-hand side, all $K-1$ exogenous regressors (x_1, x_2, \dots, x_{k-1}) are included in the structural model (1) and L potential “external” IVs (z_1, z_2, \dots, z_L) are external to the structural model (1) on the right-hand side. Notice that there are necessary conditions without which IV estimation is ineffective: (I) z_1, z_2, \dots, z_L are not correlated with the residual term ε of the structural equation. They must also be exogenous; (II)

z_1, z_2, \dots, z_L affect the outcome variable y only through x_k (i.e., IVs do not have a direct effect on y , which is known as exclusion restriction); (III) z_1, z_2, \dots, z_L are strongly (or at least not weakly) correlated with x_k (assessing the strength of instruments is discussed in the next section). This equation is defined as follows:

$$x_k = \gamma_0 + \gamma_1 x_1 + \gamma_2 x_2 + \dots + \gamma_{k-1} x_{k-1} + \theta_1 z_1 + \theta_2 z_2 + \dots + \theta_L z_L + \nu \quad (2)$$

where ν is a random error term that is uncorrelated with all explanatory variables.

Then, we estimate the first-stage regression (2) via an appropriate econometric approach and obtain the fitted value (\hat{x}_k), as shown below:

$$\hat{x}_k = \hat{\gamma}_0 + \hat{\gamma}_1 x_1 + \hat{\gamma}_2 x_2 + \dots + \hat{\gamma}_{k-1} x_{k-1} + \hat{\theta}_1 z_1 + \hat{\theta}_2 z_2 + \dots + \hat{\theta}_L z_L \quad (3)$$

The fitted value \hat{x}_k is a linear combination of all of the right-hand side covariates that we have available.

Then, we estimate the second-stage equation, which is based on the original specification of the structural model (1) with \hat{x}_k replacing x_k . Formally, the equation to be estimated is:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_{k-1} x_{k-1} + \beta_k \hat{x}_k + \varepsilon^* \quad (4)$$

where ε^* is an error term in the second-stage regression. The estimation of Function (4) is justified because, in large samples, ε^* is uncorrelated with the explanatory variables, including \hat{x}_k . The estimated coefficients of this equation, $\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2, \dots, \hat{\beta}_k$, are generally unbiased and consistent. These estimates are also commonly known as the IV estimators.

In the first stage, we estimated job satisfaction, where this endogenous variable was expressed as a function of both exogenous regressors and IVs. The exogenous variables were the socio-demographic characteristics and skills of the individuals. The IVs represented a set of job characteristics, workplace practices and personal sense-feelings. In the second stage, we estimated the employment equation by using the exogenous variables and the predicted values of the individual's job satisfaction that we calculated in the previous step, where the will to work was the dependent variable. We used the extended probit approach to estimate this two-stage model (StataCorp, 2019).

4. Findings

Before evaluating the marginal effects of the explanatory variables, we conducted diagnostic testing to explore whether job satisfaction is indeed significantly endogenous and then assess the strength of the chosen instruments. These tests allowed us to know if the use of the two-stage estimation technique is legitimate.

4.1. Diagnostic testing

When we estimated the simple probit regression for each age group, the variable "job satisfaction" was found to be significantly correlated with the residual term $\rho = -0.3755$ ($P < 0.01$) for ages 25–54 and $\rho = -0.3346$ ($P < 0.01$) for older adults (55+). Furthermore, the Hausman specification test (Hausman, 1978) also indicated the presence of the endogeneity of "job satisfaction".

Further on, we tested the relevance and validity of the instruments we have chosen. In terms of the required conditions for the IV estimation mentioned above, we assumed that the IVs were not

correlated with the residual term ε of the structural model, which addresses the exclusion restriction. In addition, it is worth noting that assessing the instrument's strength is no less important. If this condition is met, the IVs are defined as having a strong first stage. The F-statistic value for each age group was greater than the rule-of-thumb threshold of 10 (Staiger & Stock, 1997). Hence, we concluded that at least one of the instruments was strong (or at least not weak), and that we could therefore proceed with IV estimation using the extended probit approach (Cardozo et al., 2019; Saloniki et al., 2019; Ünlü & Alshebami, 2022).

Note that analyses were not subject to the alpha inflation risk and Bonferroni correction was not required, as Bonferroni correction (1936) may be used in the case of simultaneous testing of several hypotheses (i.e., the number of hypotheses must be above two). Furthermore, this method is used when making multiple comparisons among means (Dunn, 1959; 1961). Yet, in our study, we tested several hypotheses (H_0 vs. H_1), non-simultaneously, to check the statistical significance of each regression coefficient separately. Therefore, the alpha error would not be a concern here and the Bonferroni correction is not required.

4.2. Workplace practices, job conditions and the will to work

The effects of workplace practices, job satisfaction and the will to work are presented in Table 3. The first and second columns contain estimates of this two-stage method for workers aged 25–54, while the third and fourth columns show the estimation results for the older group (55+). The reported coefficient estimates represent the marginal effects of the explanatory variables. In order to remove the possibility of heteroscedasticity, which may lead to inefficient estimates (e.g., Hill et al., 2018), the standard errors were estimated via a robust technique (also known as White's robust standard errors).

4.2.1 Workplace practices, job conditions and job satisfaction

The first research question was: "What is the effect of workplace practices, personal sense-feelings, job characteristics and conditions on workers' job satisfaction?" The first stage of the extended probit regression revealed that gender has a significant effect only in the younger age group ($\beta = 0.135, P < 0.05$). Thus, among workers aged 25 to 54, women's job satisfaction was found to be higher by 13.5% compared to that of men. Numerous studies have also shown that women report higher levels of job satisfaction than their male counterparts (Sloane and Williams, 2000; Carrillo-García et al., 2013; Zou, 2015). This might be explained by the notion that women are better able to juggle demands, or place less importance on work, so conflicts and problems bother them less than men (Spector, 1997). In contrast, the dummy variable for marital status was found to affect job satisfaction only in the group of workers aged 55 years and older. In this age group, the job satisfaction of married individuals was found to be lower than that of unmarried ones by about 40% ($P < 0.05$). Health status was found to have a significant and positive affect on job satisfaction in both age groups.

As for job characteristics and practices (Table 3), more working hours per week (H_{1a}) was found to carry a weak negative effect on the job satisfaction of workers aged 55 years and older ($\beta = -0.089, P < 0.1$) (Groot & Maassen van den Brink, 1999). "Dangerous job" (H_{1b}) was found to have a weak negative effect on the job satisfaction of employees aged 25–54 years ($\beta = -0.067, P < 0.1$). This finding is in line with Maslow's theory, as dangerous jobs do not fulfill the need for safety (Maslow, 1981).

Table 3. Estimations of the extended probit model, by age group.

Variables	Aged 25–54 years		Aged 55 years or over	
	First Stage	Second Stage	First Stage	Second Stage
	Worker's Job Satisfaction	Employee's will to work	Worker's Job Satisfaction	Employee's will to work
Female	0.135** (2.16)	-0.076 (1.10)	-0.122 (0.78)	-0.001 (0.01)
Married	-0.081 (1.24)	-0.119 (1.55)	-0.394** (2.35)	-0.184 (0.96)
Health Status	0.145*** (2.74)	0.125* (1.90)	0.175* (1.80)	0.284** (2.36)
Professional Courses	0.044 (0.68)	0.149* (1.89)	-0.190 (1.37)	-0.024 (0.15)
Unskilled	-0.215 (0.83)	-0.598** (2.08)	0.013 (0.04)	0.312 (0.60)
Satisfied with Job:				
not satisfied at all		Reference Group		Reference Group
not so satisfied		0.152 (0.60)		0.601 (1.06)
satisfied		0.427* (1.68)		0.807 (1.41)
very satisfied		0.659** (2.11)		1.418** (2.11)
Weekly Working Hours	0.002 (0.08)		-0.089* (1.69)	
Dangerous Job	-0.067* (1.83)		-0.024 (0.24)	
Satisfied with Income	0.549*** (12.01)		0.496*** (4.78)	
Additional Benefits	0.022 (1.32)		0.096** (2.37)	
Education-Related	0.068*** (2.70)		-0.049 (0.76)	
New Working Methods	0.042 (0.66)		0.452*** (2.97)	
Involved in Improvement	0.053 (1.36)		0.233** (2.47)	
Influence Important Decisions	0.092** (2.45)		0.106 (1.25)	
Useful Work	0.330*** (4.54)		0.459*** (3.17)	
Balance	0.227*** (5.64)		0.333*** (3.17)	
Job Security	0.248*** (5.01)		0.161 (1.47)	
Feel at Home	0.541*** (5.96)		0.383* (1.85)	
Feeling Discriminated	-0.219*** (2.70)		-0.242 (1.37)	
Number of Observations	3,161		961	

Notes: *, ** and *** denote statistical significance at the 10%, 5% and 1% levels, respectively. Absolute value of asymptotic Z-statistic in parentheses.

The variable “satisfied with income” (H_{lc}) was found to be positively associated with job satisfaction in both age groups. However, “additional benefits” (H_{ld}) was found to have a positive effect

on job satisfaction only for workers aged 55 and over ($\beta = 0.096, P < 0.05$). The variable “education-related” (H_{Ie}) suggests that a linkage between one’s job and their field of study carries a positive effect on job satisfaction only for workers aged 25–54 ($\beta = 0.068, P < 0.01$). According to the TWA theory, career decisions are made based on the fit between the employee and their environment, and estimations of fit often determine job satisfaction (Lytle et al., 2015). Our finding is in line with the TWA theory, as well as those of Hur et al. (2019), who found that, in the transition to employment for behavioral and social sciences graduates, a mismatch between a worker’s degree and occupational field negatively affects job satisfaction. Mismatched graduates were much more vulnerable and experienced lower levels of job satisfaction than those employed in jobs that aligned with their field of study.

“New working methods” ($\beta = 0.452, P < 0.01$) and “involved in improvement” ($\beta = 0.233, P < 0.05$), H_{If} and H_{Ig} , respectively, were found to have a significant and positive partial effect on the job satisfaction of older workers. These findings are in line with those of Armstrong-Stassen and Ursel (2009), who found that development practices targeted toward older workers and tailored to their needs are important to career satisfaction and, ultimately, to the retention of older workers. “Influence on important decisions” (H_{Ih}) was found to have a significant effect on job satisfaction only among the age group of 25–54 ($\beta = 0.092, P < 0.05$) (Wheatley, 2017).

“Useful work”, i.e., the feeling that one’s job is useful and meaningful (H_{Ii}), was found to have a positive effect on job satisfaction, which is in line with Herzberg’s (1966) motivator-hygiene theory. “Work-life balance” (H_{Ij}) and “satisfaction with income” were found to be associated with higher levels of job satisfaction for workers of all ages (Shacklock & Brunetto, 2011). According to Maslow’s (1981) hierarchy of needs theory, these determinants fulfill the basic physiological needs of workers. Furthermore, statistical tests that compared the two independent coefficients (Howell, 2012) showed that there is no significant difference between the effects in the two age groups. Thus, each IV was found to have a relatively similar partial effect on the job satisfaction of each group.

“Job security” ($\beta = 0.248, P < 0.01$) and “feeling discrimination” ($\beta = -0.219, P < 0.01$) were found to be significantly related only to the job satisfaction of those aged 25–54. Thus, job security increases job satisfaction (Artz & Kaya, 2014) and discrimination decreases the job satisfaction of 25–54 years old workers (Ensher et al., 2001). In our sample, job security was found to have no significant effect for 55+ workers. This finding might imply that job security is less important for those who are at the end of their careers and working life. Feeling discrimination was also not found to be significant for the 55+ years old group. The TWA perspective may help to examine the role of perceived age discrimination in person–organization fit and job satisfaction (Lytle et al., 2015; Foley & Lytle, 2015). Our finding concerning the insignificance of “feeling discrimination” in relation to job satisfaction contradicts that of previous studies, which found a direct negative effect of perceived discrimination directed at older workers on both job satisfaction and actual job withdrawal (but not on actual retirement) (Griffin et al., 2016). One possible explanation for this gap is a bias in the sample, in the sense that older individuals who had felt discrimination may have already retired or left the workplace before the survey.

“Feel at home” was found to be statistically significant for the younger age group ($\beta = 0.541, P < 0.01$), with only a weak marginal effect on the older age group ($\beta = 0.383, P < 0.1$). Thus, we may conclude that the sense of belonging and commitment to the workplace contributes more to the job satisfaction of employees aged 25–54 than older workers. “Feeling at home” in the workplace means that employees feel a sense of belonging, they feel at ease with the people around them and have good social relationships with them. Recognition and attention to the unique needs of each employee, as

well as remembering and noticing occasions in the employee's life, such as their birthday or the birth of a child, may help employees feel more at home in the workplace and increase job satisfaction. Such organizational rituals and ceremonies, as well as work-based social support (i.e., the degree to which employees perceive that they have positive social relationships in the workplace), were also found to be positively related to the strength of individuals' identification within organizations and reinforce organizational identification (Wiesenfeld et al., 2001).

These findings are consistent with the job characteristics model (Hackman & Oldham, 1975) and illustrate that task identity, task significance, autonomy and feedback influence people's perceptions of the meaningfulness of work and lead to job satisfaction. It is also consistent with Maslow's (1981) hierarchy of needs theory, which highlights safety, belongingness, esteem and self-actualization when applied to job satisfaction.

4.2.2 Job satisfaction and the will to work

To answer the second research question: "What are the effects of personal characteristics and job satisfaction on the will to work?", we examined the second-stage results. Employees' health status was found to have a significant effect on job satisfaction, as well as participants' willingness to work even if there is no need (will to work). The dummy variables of "professional courses" and "unskilled workers" were found to affect the will to work only among the younger age group. Thus, the lack of vocational training or any other profession may reduce the will to work among workers aged 25–54. The variables were not found to be significant for older workers, perhaps because training motivation declines with age, as older people are less motivated by novel situations and prefer to be in their comfort zone, building on their existing knowledge (Kanfer & Ackerman, 2004). Therefore, courses were not found to affect their will to work.

As for the endogenous variable "job satisfaction", partial effects analysis revealed that high levels of job satisfaction have a positive effect on the will to work (H_2) among 25–45-year-old workers ($\beta = 0.659, P < 0.05$) as well as 55+year-old workers ($\beta = 1.418, P < 0.05$). Our finding is in line with that of previous studies, which argue that job satisfaction increases with age (DeSantis & Durst, 1996; Ng & Feldman, 2010). We used a statistical test to compare two independent coefficients and thus estimate the difference between two regression coefficients of the same variable, as obtained from two independent samples (Howell, 2012). The test revealed that, among workers aged 55 and older, this marginal effect is more pronounced than among employees aged 25–54 (results available upon request). Thus, we can conclude that workplace practices are associated with job satisfaction of older workers, which, in turn, contributes to their will to work longer (Kooij, 2015).

5. Discussion

The goal of the current research was to examine the effects of workplace practices on job satisfaction and the will to work, comparing between younger and older workers. To that end, we used the extended probit approach to analyze data from a sample of 4,122 Israeli workers. Our findings revealed that implementing various practices, such as allowing employees to influence important decisions at the workplace or enabling a good life-work balance, can play an important role in creating a perception of organizational support and job satisfaction.

When focusing on older workers, this may ultimately lead to their retention (Armstrong-Stassen & Ursel, 2009) and prolong their working life. A longer career is a desirable result from the point of view of many older workers (Axelrad et al., 2016), as well as from the perspective of the economy and public pension systems (Axelrad & Mahoney, 2017). Our analysis focused on workers aged 55 and over, while differentiating between those who want to work (would work even if they could afford to retire) and those who need to work. This distinction allows us to reflect on the importance of work from the employee's perspective, which was found to be a key factor in predicting older workers' intentions to continue paid work (Shacklock & Brunetto, 2011). Good health status and higher levels of job satisfaction were both found to be extremely important when it comes to the will to work among workers aged 55 and over. Furthermore, it was found that the effect of job satisfaction on the will to work among workers aged 55 and older is more pronounced than among workers aged 25–54. This finding is in line with that of a previous study about job lock (workers who would like to retire but feel they cannot afford it), which argues that job lock due to financial need is negatively related to job satisfaction (Fisher et al., 2016).

“Professional courses” was found to be positively associated with the will to work only in the younger age group. Moreover, unskilled workers were less likely to desire to work. These two findings complement each other and imply that organizations can enhance the will to work among unskilled workers by offering and providing professional training courses, which might strengthen and enhance their human capital. Previous studies indeed found that participation in human resource development was negatively related to turnover intention (Shuck et al., 2014). These two variables were not found to be significant among the older age group, and contrary to the conclusion of Armstrong-Stassen and Ursel (2009), implementing training was not found to be associated with career satisfaction or the retention of older workers.

The findings about practices that increase job satisfaction among all workers are interesting and important. Job satisfaction affects workers' turnover intent (Lambert & Hogan, 2009) and predicts organizational commitment (Igbaria & Guimaraes, 1993) and performance (Jalagat, 2016); hence, it is of great importance for any organization. The job satisfaction of older workers is particularly important for both policymakers and employers. Our findings indicate what working conditions and characteristics may contribute to the will of individuals aged 55 and over to remain in the labor market, and they can thus be used by organizations and policymakers to implement policies and work practices accordingly. Our examination of the associations between the workplace practices and job satisfaction of 55+-year-old workers shows that weekly working hours, additional benefits (Axelrad et al., 2017), implementing new working methods and involvement in improvement all have a positive effect on older workers' job satisfaction, while they have no effect on younger workers' job satisfaction. Other practices like income, work-life balance (Andresen et al., 2007) and doing useful work are important to both younger and older workers.

Some practices were found to be important to younger workers, but not to older ones. Job security, for example, was found to be very important to younger workers, as a strong fear of losing one's job in the coming year was negatively associated with the will to work (King et al., 2013). This finding is consistent with Maslow's hierarchy of needs theory (Maslow, 1981), as job security can be seen as fulfilling safety needs and is thus necessary for job satisfaction. Yet, among older workers, job security was not found to have a significant effect on job satisfaction, perhaps because older workers are getting closer to the end of their careers. Feeling at home in the workplace was found to be more important to younger workers, with only a weak significance found when analyzing the older group, as compared

to a stronger one among younger employees. If an employer makes the workplace feel a little more like home by encouraging personal attachment among employees, they will feel more invested in the company, feel a stronger organizational identification (Zhu, 2012) and want to work there. The difference between the two age groups may stem from the fact that many older workers disengage from work when getting closer to their planned retirement age (Damman et al., 2013); therefore, this component becomes less important to their overall job satisfaction. Future research could make use of longitudinal data in order to analyze the same employees in two-time period, and thus examine not only their will to work longer, but also their actual retirement or working behavior.

Additionally, future research could also test the idea that job satisfaction mediates the relationship between workplace practices and the desire to work longer, as well as the differences when using dichotomization versus Likert scale metrics to assess the effects of practices on job satisfaction. Further research could also differentiate between older workers before retirement age and beyond retirement age. We know that, today, there is a growing number of workers who want to work even after the official retirement age (Axelrad et al., 2021), so it is wrong to treat all workers over the age of 55 as one group.

6. Limitations

One limitation of the current research is the fact that we did not have longitudinal data; therefore, we could not examine the effects of different practices over time. However, the current study has allowed us to take a snapshot and analyze workers' current situation. We also could not demonstrate the causal nature of the relationship between variables. We argued that workers' job satisfaction might explain their desire to work longer. Is it possible, however, that the desire to work longer explains why some people are more satisfied with their jobs than others. Indeed, there is evidence that the length of service increases satisfaction (Muñoz de Bustillo Llorente & Macias, 2005). Yet, in the current study, we did not address tenure, but rather the will to work longer, as based on the question: "If you could financially afford not to work at all, would you work?" Therefore, we argue that, at least conceptually, the opposite relationship makes less sense. Since studying the relationship between job satisfaction and the will to work using cross-sectional data may not demonstrate the causal nature of the relationship, a causal model that involves simultaneous consideration of the cross-sectional and longitudinal effects between the variables will allow a stronger conclusion regarding the causality between these constructs (Judge & Watanabe, 1993; Grandey et al., 2005). Longitudinal data will provide stronger support for causal relationships than what can be concluded from a cross-sectional data analysis (Menard, 1991), and such data will also allow more understanding about the development of job satisfaction over time. As mentioned above, longitudinal data were not available in the current study.

Self-selection bias is another limitation of the current study, as some of those individuals with lower levels of job satisfaction may not be working any longer, and therefore were not included in our sample. Common variance bias may be another limitation (Podsakoff et al., 2013), as it may be a source of measurement error, which threatens the validity of the conclusions about the relationships between measures. The measurement error may provide an alternative explanation for the observed relationships between the measures that is independent of the one hypothesized. However, we believe that we can be less concerned regarding this issue because we used statistical remedies for common method biases, such as factor analysis and partial correlation (Zhou & Long, 2004), as explained in the

Preliminary analysis and Empirical framework sections. Lastly, we should mention the fact that the validity of several measures used was not examined up until today, and due to the exploratory nature of this study, caution is required when interpreting conclusions.

7. Conclusions

The current study was aimed to pinpoint the factors that affect individuals' will to work, while comparing between younger (25–54 years old) and older (55+ years old) age groups. The findings may help organizations and policymakers to implement practices and measures that can prolong working life. Thus, for example, organizations looking to improve employee job satisfaction should first attempt to meet the basic needs of employees (Maslow, 1981), such as income and belongingness. By offering fair wages, developing personal relationships to strengthen the sense of belonging and implementing other practices, employers can increase job satisfaction and encourage employees aged 55 and above to continue working. Policymakers can and should invest in preventative medicine and public health. They can also support employers and help to finance the implementation of new working methods and technologies, reduce working hours, advocate against discriminatory behavior and more.

As for the younger age group, employers have a relatively low impact on the health status of their employees, but they can certainly offer courses and development opportunities in the workplace. Such opportunities are likely to have a positive impact and reduce the chance that employees aged 25–54 will prefer not to work.

The contributions of the current study are not limited to the practices that may enhance younger and older workers' job satisfaction, but they also include proving the importance of this issue for older workers as compared to younger workers. Hence, this study emphasizes the importance of implementing such practices to raise the employment rates of older workers. As for courses and training, while studies highlight the importance of lifelong learning and training to the employment and employability of older workers (Wilckens et al., 2020), the contribution of our findings is that we have showed that such practices have no effect on older workers' will to work. Nevertheless, organizations should consider employee age when initiating training efforts to promote employees' health and well-being (Peng et al., 2018), as older workers do appreciate new working methods and technologies in the workplace that have a direct impact on their work environment, as well as being involved in improving and organizing their work or work processes. Both variables, albeit indirectly, affect the willingness of older workers to keep working through their positive impact on job satisfaction.

In conclusion, by mapping the practices that may enhance the will to work among younger and especially older workers, we have contributed to the understanding of ways to increase employees' job satisfaction and their will to remain in the labor market. This is a desirable consequence, in light of a global trend of aging populations, that is caused by a steady increase in life expectancy and declining fertility, as well as the need of elderly workers to continue to work. Hence, we would also suggest that policymakers cooperate with organizations and concentrate their efforts on those practices that are important to older workers and can prolong their working life.

Conflict of interest

All authors declare no conflicts of interest regarding this study.

References

Andresen M, Domsch ME, Cascorbi AH (2007) Working unusual hours and its relationship to job satisfaction: a study of European maritime pilots. *J Labor Res* 28: 714–734. <https://doi.org/10.1007/s12122-007-9010-5>

Armstrong-Stassen M, Ursel ND (2009) Perceived organizational support, career satisfaction, and the retention of older workers. *J Occup Organ Psychol* 82: 201–220. <https://doi.org/10.1348/096317908X288838>

Artz B, Kaya I (2014) The impact of job security on job satisfaction in economic contractions versus expansions. *Appl Econ* 46: 2873–2890. <https://doi.org/10.1080/00036846.2014.914148>

Axelrad H, Eckstein Z, Larom T (2021) *Economic Benefits of Employing Older Workers, Policy Paper 12.2021*, Aaron Institute for Economic Policy.

Axelrad H, Luski I, Malul M (2016) Behavioral biases in the labor market, differences between older and younger individuals. *J BehavExp Econ* 60: 23–28. <https://doi.org/10.1016/j.soc.2015.11.003>

Axelrad H, Luski I, Malul M (2017) Reservation wages and unemployment among older workers. *J Labor Res* 38: 206–227. <https://doi.org/10.1007/s12122-017-9247-6>

Axelrad H, Mahoney JK (2017) Increasing the pensionable age: What changes are OECD countries making? What considerations are driving policy? *Open J Soc Sci* 5: 56–70. <https://doi.org/10.4236/jss.2017.57005>

Aziri B (2011) Job satisfaction: A literature review. *Manag Res Prac* 3: 77–86.

Bruck CS, Allen TD, Spector PE (2002) The relation between work–family conflict and job satisfaction: A finer-grained analysis. *J Vocat Behav* 60: 336–353. <https://doi.org/10.1006/jvbe.2001.1836>

Cardozo AR, Nowak-Lehmann DF, Zebaze Djiofack C (2019) Migration and Remittances in Haiti: Their Welfare Impact on Poor and Non-Poor Households.

Carstensen LL (1992) Social and emotional patterns in adulthood: Support for socioemotional selectivity theory. *Psychol Aging* 7: 331–338. <https://doi.org/10.1037/0882-7974.7.3.331>

Carrillo-García C, Solano-Ruiz MDC, Martínez-Roche ME, et al. (2013) Job satisfaction among health care workers: the role of gender and age. *Rev Lat Am Enfermagem* 21: 1314–1320. <https://doi.org/10.1590/0104-1169.3224.2369>

Clark AE, Mavromaras K, Wei Z (2014) Happy to stay: Job satisfaction and retirement. *NILS Working Paper Series Working Paper No:* 211.

Cote S, Morgan LM (2002) A longitudinal analysis of the association between emotion regulation, job satisfaction, and intentions to quit. *J Organ Behav* 23: 947–962. <https://doi.org/10.1002/job.174>

Damman M, Henkens K, Kalmijn M (2013) Late-career work disengagement: The role of proximity to retirement and career experiences. *J Geron Ser B: Psychol Sci Soc Sci* 68: 455–463. <https://doi.org/10.1093/geronb/gbt001>

Muñoz de Bustillo Llorente R, Macias EF (2005) Job satisfaction as an indicator of the quality of work. *J Soc-Econ* 34: 656–673. <https://doi.org/10.1016/j.soc.2005.07.027>

DeSantis VS, Durst SL (1996) Comparing job satisfaction among public-and private-sector employees. *Am Rev Pub Admin* 26: 327–343. <https://doi.org/10.1177/027507409602600305>

Dobrow Riza S, Ganzach Y, Liu Y (2018) Time and job satisfaction: A longitudinal study of the differential roles of age and tenure. *J Manage* 44: 2558–2579. <https://doi.org/10.1177/0149206315624962>

Dunn OJ (1959) Estimation of the medians for dependent variables. *Ann Math Statist* 30: 192-197. <https://doi.org/10.1214/aoms/1177706374>

Dunn OJ (1961) Multiple comparisons among means. *J Am Stat Assoc* 56: 52–64. <https://doi.org/10.1080/01621459.1961.10482090>

Ellickson MC, Logsdon K (2002). Determinants of job satisfaction of municipal government employees. *Pub Person Manag* 31: 343–358. <https://doi.org/10.1177/009102600203100307>

Ensher EA, Grant-Vallone EJ, Donaldson SI (2001) Effects of perceived discrimination on job satisfaction, organizational commitment, organizational citizenship behavior, and grievances. *Hum Resour Dev Q* 12: 53–72. [https://doi.org/10.1002/1532-1096\(200101/02\)12:1<53::AID-HRDQ5>3.0.CO;2-G](https://doi.org/10.1002/1532-1096(200101/02)12:1<53::AID-HRDQ5>3.0.CO;2-G)

Fisher GG, Ryan LH, Sonnega A, et al. (2016) Job lock, work, and psychological well-being in the United States. *Work Aging Ret* 2: 345–358. <https://doi.org/10.1093/workar/waw004>

Foley PF, Lytle MC (2015) Social cognitive career theory, the theory of work adjustment, and work satisfaction of retirement-age adults. *J Career Dev* 42: 199–214. <https://doi.org/10.1177/0894845314553270>

Franěk M, Večeřa J (2008) Personal characteristics and job satisfaction. *E M Ekon Manag* 1: 63–76.

Gazioglu S, Tansel A (2006) Job satisfaction in Britain: Individual and job related factors. *Appl Econ* 38: 1163–1171. <https://doi.org/10.1080/00036840500392987>

Grandey AA, Cordeiro BL, Crouter AC, (2005) A longitudinal and multi-source test of the work–family conflict and job satisfaction relationship. *J Occup Organ Psychol* 78: 305–323. <https://doi.org/10.1348/096317905X26769>

Greene WH, (2018) *Econometric Analysis/Limdep Users Manual*. Available from: http://cee.eng.usf.edu/faculty/flm/CE697N_files/ealimdep.pdf.

Griffin B, Bayl-Smith P, Hesketh B (2016) The longitudinal effects of perceived age discrimination on the job satisfaction and work withdrawal of older employees. *Work Aging Ret* 2: 415–427. <https://doi.org/10.1093/workar/waw014>

Groot W, Maassen van den Brink M (1999) Job satisfaction of older workers. *Inte J Manpower* 20: 343–360. <https://doi.org/10.1108/01437729910289701>

Hackman JR, Oldham GR (1975) Development of the job diagnostic survey. *J Appl Psychol* 60: 159–170. <https://doi.org/10.1037/h0076546>

Hausman JA (1978) Specification tests in econometrics. *Econometrica* 46: 1251–1271.

Herzberg FI (1966) *Work and the Nature of Man*. World Publishing Company.

Higgs P, Mein G, Ferrie J, et al. (2003) Pathways to early retirement: Structure and agency in decision-making among British civil servants. *Ageing Soc* 23: 761–778. <https://doi.org/10.1017/S0144686X03001326>

Hill EJ, Erickson JJ, Fellows KJ, et al. (2014) Work and family over the life course: Do older workers differ? *J Fam Econ Issues* 35: 1–13. <https://doi.org/10.1007/s10834-012-9346-8>

Hill RC, Griffiths WE, Lim GC (2018) *Principles of Econometrics*. John Wiley & Sons.

Howell DC (2012) *Statistical Methods for Psychology*. Cengage Learning.

Hur H, Maurer JA, Hawley J (2019) The role of education, occupational match on job satisfaction in the behavioral and social science workforce. *Hum Resour Dev Q* 30: 407–435. <https://doi.org/10.1002/hrdq.21343>

Igbaria M, Guimaraes T (1993) Antecedents and consequences of job satisfaction among information center employees. *J Manag Info Sys* 9:145–174. <https://doi.org/10.1080/07421222.1993.11517983>

Judge TA, Watanabe S (1993) Another look at the job satisfaction-life satisfaction relationship. *J Appl Psychol* 78: 939. <https://doi.org/10.1037/0021-9010.78.6.939>

Jalagat R (2016) Job performance, job satisfaction, and motivation: A critical review of their relationship. *Int J Adv Manag Econ* 5: 36–42.

Jung K, Jae Moon M, Hahm SD (2007) Do age, gender, and sector affect job satisfaction? Results from the Korean labor and income panel data. *Rev Pub Person Admin* 27:125–146. <https://doi.org/10.1177/0734371X06289229>

Kaliski BS (2007) *Encyclopedia of Business and Finance* (2nd ed.). Thompson Gale.

Kanfer R, Ackerman PL (2004) Aging, adult development, and work motivation. *Acad Manag Rev* 29: 440–458. <https://doi.org/10.5465/amr.2004.13670969>

Kautonen T, Hytti U, Bögenhold D, et al. (2012) Job satisfaction and retirement age intentions in Finland: Self-employed versus salary earners. *Int J Manpower* 33: 424–440. <https://doi.org/10.1108/01437721211243778>

Keon TL, McDonald B (1982) Job satisfaction and life satisfaction: An empirical evaluation of their interrelationship. *Hum Relat* 35: 167–180.

King D, Wei Z, Howe A (2013) Work satisfaction and intention to leave among direct care workers in community and residential aged care in Australia. *J Aging Soc Pol* 25: 301–319. <https://doi.org/10.1080/08959420.2013.816166>

Kooij DT (2015) Successful aging at work: The active role of employees. *Work Aging Ret* 1: 309–319. <https://doi.org/10.1093/workar/wav018>

Lambert E, Hogan N (2009) The importance of job satisfaction and organizational commitment in shaping turnover intent: A test of a causal model. *Crim Justice Rev* 34: 96–118. <https://doi.org/10.1177/0734016808324230>

Leppel K, Brucker E, Cochran J (2012) The importance of job training to job satisfaction of older workers. *J Aging Soc Pol* 24: 62–76. <https://doi.org/10.1080/08959420.2012.629136>

Lord RL (2004) Empirical Evaluation of Classical Behavioral Theories with Respect to the Motivation of Older Knowledge Workers (Publication No. 3122318).

Lu H, Barriball KL, Zhang X, et al. (2012) Job satisfaction among hospital nurses revisited: A systematic review. *Int J Nurs Stud* 49: 1017–1038. <https://doi.org/10.1016/j.ijnurstu.2011.11.009>

Lytle MC, Foley PF, Cotter EW (2015) Career and retirement theories: Relevance for older workers across cultures. *J Career Dev* 42: 185–198. <https://doi.org/10.1177/0894845314547638>

Maslow AH (1981) *Motivation and Personality*. Prabhat Prakashan.

Menard S (1991) *Longitudinal research. Sage university paper series on quantitative applications in the social sciences*. SAGE Publications.

Mermin GB, Johnson RW, Murphy DP (2007) Why do boomers plan to work longer? *J Geron Ser B: Psychol Sci Soc Sci* 62: S286–S294. <https://doi.org/10.1093/geronb/62.5.S286>

Mottaz CJ (1987) Age and work satisfaction. *Work Occup* 14: 387–409. <https://doi.org/10.1177/0730888487014003004>

Nagar K (2012) Organizational commitment and job satisfaction among teachers during times of burnout. *Vikalpa* 37: 43–60. <https://doi.org/10.1177/0256090920120205>

Ng TWH, Feldman DC (2010) The relationships of age with job attitudes: A meta-analysis. *Person Psychol* 63: 677–718. <https://doi.org/10.1111/j.1744-6570.2010.01184.x>

Ng ES, Law A (2014) Keeping up! Older workers' adaptation in the workplace after age 55. *Can J Aging* 33: 1–14. doi:10.1017/S0714980813000639

OECD (2022) LFS by sex and age-indicators: *Employment-population ratios* Data extracted on 10 Aug 2022 11: 36 UTC (GMT) from OECD.Stat.

Peng Y, Jex SM, Wang M (2018) Aging and occupational health. In: Schultz, K.S., Adams, G.A., *Aging and Work in the 21st Century*, 2nd Edition, Routledge, 213–233.

Peeters M, van Emmerik H, Kooij D, et al. (2008) Older workers' motivation to continue to work: Five meanings of age. *J Manag Psychol* 23(4): 364–394. <https://doi.org/10.1108/02683940810869015>

Podsakoff PM, MacKenzie SB, Lee JY, et al. (2003) Common method biases in behavioral research: a critical review of the literature and recommended remedies. *J App Psychol* 88: 879. <https://doi.org/10.1037/0021-9010.88.5.879>

Polat T, Bal PM, Jansen PG (2017) How do development HR practices contribute to employees' motivation to continue working beyond retirement age? *Work Aging Ret* 3: 366–378. <https://doi.org/10.1093/workar/wax007>

Probst TM, Brubaker TL (2001) The effects of job insecurity on employee safety outcomes: Cross-sectional and longitudinal explorations. *J Occup Health Psychol* 6: 139. <https://doi.org/10.1037//1076-8998.6.2.139>

Saloniki EC, Nizalova O, Malisauskaitė G, et al. (2019) *The Impact of Formal Care on Informal Care for People Over 75 in England*. University of Kent and London School of Economics.

Shacklock K, Brunetto Y (2011) A model of older workers' intentions to continue working. *Person Rev* 40:252–274. <https://doi.org/10.1108/0048348111106110>

Shuck B, Twyford D, Reio Jr TG, et al. (2014) Human resource development practices and employee engagement: Examining the connection with employee turnover intentions. *Hum Resour Dev Q* 25: 239–270 <https://doi.org/10.1002/hrdq.21190>

Sloane PJ, Williams H (2000) Job satisfaction, comparison earnings, and gender. *Labour* 14: 473–502.

Smerek RE, Peterson M (2007) Examining Herzberg's theory: Improving job satisfaction among non-academic employees at a university. *Res Higher Ed* 48: 229–250. <https://doi.org/10.1007/s11162-006-9042-3>

Spector PE (1997) *Job Satisfaction: Application, Assessment, Causes, and Consequences*. Sage Publications. <https://doi.org/10.4135/9781452231549>

Staiger D, Stock JH (1997) Instrumental variables with weak instruments. *Econometrica* 65: 557–586.

StataCorp (2019) *Stata: Release 16. Statistical Software*. College Station, TX: StataCorp LLC.

Tausif M (2012) Influence of non-financial rewards on job satisfaction: A case study of educational sector of Pakistan. *Asian J Manag Res* 2.

Toropova A, Myrberg E, Johansson S (2021) Teacher job satisfaction: the importance of school working conditions and teacher characteristics. *Educ Rev* 73: 71–97. <https://doi.org/10.1080/00131911.2019.1705247>

Ünlü H, Alshebami AS (2022) Source of fund, financial constraints, political instability, and firm innovation: Empirical evidence from Arab Spring countries. *J Sustain Fin Invest* 12: 195–213.

Wang M, Adams GA, Beehr TA, et al. (2009) Bridge employment and retirement. In Gayle-Baughh, S., Sullivan, S.E., Eds., *Maintaining Focus, Energy, and Options Over the Career*, 1: 135, Charlotte, NC: IAP.

Wang M, Zhan Y (2012) Employee–organization relationship in older workers. In: Lynn, M., Shore, L.M., Coyle-Shapiro, J., Tetrick, L.E., Eds., *The Employee-Organization Relationship*, Routledge, 469–494.

Wilckens MR, Wöhrmann AM, Deller J, et al. (2020) Organizational practices for the aging workforce: Development and validation of the later life workplace index. *Work, Aging and Retirement* 7: 352–386 <https://doi.org/10.1093/workar/waaa012>

Wheatley D (2017) Autonomy in paid work and employee subjective well-being. *Work Occup* 44: 296–328. <https://doi.org/10.1177/0730888417697232>

White H (1980) A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica: J Econ Soc* 48: 817–838.

Wiesenfeld BM, Raghuram S, Garud R (2001) Organizational identification among virtual workers: The role of need for affiliation and perceived work-based social support. *J Manag* 27: 213–229. <https://doi.org/10.1177/014920630102700205>

Wooldridge JM (2010) *Econometric Analysis of Cross Section and Panel Data*. MIT press.

Zhou H, Long L (2004) Statistical remedies for common method biases. *Advances Psychol Sci* 12: 942.

Zhu Y (2012) A review of social exchange relationship. *Stud Soc Sci* 3: 57. <https://doi.org/10.3968/j.sss.1923018420120303.1658>

Zou M (2015) Gender, work orientations and job satisfaction. *Work Employ Soc* 29: 3–22. <https://doi.org/10.1177/0950017014559267>

Dawis RV, England G, Lofquist LH (1964) A theory of work adjustment. Available from: <https://files.eric.ed.gov/fulltext/ED018590.pdf>.



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