

## Age as a Predictor of Burnout in Russian Public Librarians

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Article abstract

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**Methods** – The studied sample consisted of 620 public librarians from 166 public libraries of different regions (the Moscow region, Yaroslavl, Chelyabinsk, Novosibirsk, Astrakhan, and Republic of Buryatia) of the Russian Federation, who completed a self-reported online survey. For measuring burnout, a new Burnout Assessment Tool was implemented. To examine the associations of interest, we used structural equation modeling with a group correction approach. In addition, library location, general self-efficacy, and length of employment at the current workplace were utilized as predictors. All statistical analysis was performed in R.

**Results** – Findings confirmed the hypotheses partially and revealed negative links between exhaustion, mental distance, and cognitive control and age, while reduced emotional control did not relate to age. Urban librarians tended to demonstrate higher levels of mental distance and had more significant problems with emotional regulation than their rural counterparts. Also, the non-Moscow region librarians did not demonstrate correlations between age and reduced cognitive control. Moreover, they showed a positive link between age and reduced emotional control.

**Conclusion** – The current paper confirmed some previous results on the negative relations between burnout symptoms and chronological age. The results suggest the existence of higher risks of burnout for younger library workers. Potential mechanisms underlying the resilience of older workers are discussed.

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*Research Article*

**Age as a Predictor of Burnout in Russian Public Librarians**

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## Introduction

Increasing life expectancy leads to an increase in the mean age of the workforce (Adams & Shultz, 2018). The aging workforce implies new challenges for management and human resources. According to a Canadian report of 2018, for one employee of 25 to 34 years, there was one employee aged 55 and older (Statistics Canada, 2019). A similar situation is observed in the European Union. According to Eurostat (2020), in the first quarter of 2012, there were 13% of employees aged 55-64; in the first quarter of 2015, there were 15% of employees aged 55-64; and in the first quarter of 2019, there were 17% of employees aged 55-64. Librarianship is not an exception. According to Wilder's (2018) findings, the average age of employees of the Association of Research Libraries increased by 2015 as the proportion of workers aged 60 and over grew. In this sample, the mean age was 49 years. Unfortunately, in the Russian Federation, there are no appropriate library statistics; however, the situation seems analogous. According to a statistical report from the Russian State Library, the mean age of its personnel in 2019 was 48.90 years (Russian State Library, 2020). In a recent study of librarians of the Moscow region, the participants' mean age

was 48.05 (Kolachev, Osin, Schaufeli, & Desart, 2019).

Burnout amongst Russian library workers has received little attention from researchers. Librarians are not considered a part of the more socially important professions, like teachers, nurses, physicians, and social workers. However, librarianship belongs to the human services, where short-term contacts with clients are the primary source of stress (Salyers et al., 2019). Some researchers refer to librarianship as a helping profession, in which assistance to those who are staying in need, the frequency of such requirements, and the limitation of available resources often lead to stress (Smith & Nelson, 1983). In addition to general burnout factors (i.e., gender, age, personality, locus of control, expectations) and organizational factors (i.e., excessive workload, underemployment, employee conflict, role conflict), McCormack and Cotter (2013) mentioned a specific stress factor for library workers: boredom with the routine nature of library work and little intellectual stimulation. In addition to the harm of burnout for librarians themselves, it can degrade the quality of services provided, thereby affecting the satisfaction of library visitors.

## Literature Review

A crucial problem that influences an employee's performance is work-related stress and its severe form: burnout (Penz et al., 2018). To date, the most common definition of the term "burnout" is Maslach, Schaufeli, and Leiter's (2001) interpretation: burnout is a state of physical and psychological exhaustion, which develops as a reaction to stressful long-term working conditions. According to the authors, burnout consists of three separate but interrelated constructs: emotional exhaustion, cynicism/depersonalization, and lack of accomplishment (inefficacy). Emotional exhaustion is the most common symptom of burnout and is an emotional and physical sensation of exhaustion from excessive workload. Cynicism implies an excessively detached attitude to various aspects of work. Lack of accomplishment refers to a sense of incompetence and reduced production of labour. The model has been common in various studies for almost 30 years, but it is not quite up-to-date with current understandings of burnout syndrome, since we know that burnout also links to emotional and cognitive impairments (Deligkaris, Panagopoulou, Montgomery, & Masoura, 2014).

In a recently developed model by Schaufeli, De Witte, and Desart (2019), burnout syndrome is characterized by extreme fatigue, reduced ability to regulate cognitive and emotional processes, as well as detachment in solving problems, depressed mood, as well as non-specific psychological and psychosomatic symptoms. According to the authors, this is developed by an imbalance between high job demands and low levels of organizational resources (for reviewing the job demands-resources model, Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Primary symptoms include emotional exhaustion, mental distance (the same as cynicism/depersonalization in Maslach et al.'s model), reduced emotional control, and reduced cognitive control. Emotional exhaustion refers to

a feeling of either physical or mental exhaustion, or lack of energy. Mental distance is about aversion to work, such as avoiding contact with others at work. Reduced emotional control (emotional impairment) includes irritability and emotional overreacting. Reduced cognitive control (cognitive impairment) supposes attention and memory problems such as forgetfulness or concentration deficits.

In the field of burnout research, much attention has been paid to the dispositional and organizational factors that associate with this syndrome (Bakker & Demerouti, 2007; Bianchi, 2018; McManus, Keeling, & Paice, 2004). In some studies, age negatively predicted burnout symptoms such as exhaustion and cynicism/depersonalization (Maslach et al., 2001; Rutledge & Francis, 2004); however, it was usually used as a control variable, and a limited number of researchers found that it played a role.

Existing scientific works on the connections between age and burnout emphasize that younger employees are more prone to experience burnout (Randall, 2007). In a representative sample of the Finnish population, Ahola, Honkonen, Virtanen, Aromaa, and Lönnqvist (2008) confirmed that the negative association between age and burnout is solely attributed to a subsample of young female persons. In recent research, Marchand, Blanc, and Beauregard (2018) showed that age non-linearly relates to burnout and its components. In particular, there was a positive connection between age and either burnout or exhaustion until the age of 30, then a negative one until the age of 55 (quadratic polynomial), and then again, a positive pattern (cubic polynomial). At the same time, cynicism and a lack of personal accomplishment negatively linked to age. Recent research conducted of librarians of the Moscow region showed that age was a significant predictor of general burnout, pointing out that younger workers are more prone to experience burnout (Kolachev et al., 2019).

Results concerning exhaustion and cynicism/depersonalization are quite clear. Recently discovered symptoms (reduced emotional control and reduced cognitive control) of burnout are of interest. According to Johnson, Machowski, Holdsworth, Kern, and Zapf's (2017) findings, age predicts less burnout because of emotion regulation strategies. This means that older workers who have more emotional experience apply effective coping strategies against burnout; moreover, they pay more attention to emotional states than their younger counterparts. Many other studies support the idea of higher emotional control in older people (Doerwald, Scheibe, Zacher, & Van Yperen, 2016; Mauno, Ruokolainen, & Kinnunen, 2013). One of the explanations for this phenomenon is that older people demonstrate a higher motivation to avoid negative situations and try to enjoy life more, as they realize the finiteness of existence (Johnson et al., 2017). So, we may expect that older workers are more effective when dealing with emotional disturbances associated with burnout.

Another factor that enters into this picture is the role of cognitive abilities, and it is well known that cognitive abilities decline with aging. Theorists admit that more severe changes occur in attention since performance on complex attentional tasks is worse in older people (Murman, 2015). Moreover, so-called fluid cognitive functions, such as processing speed and reasoning, also diminish with aging (Deary et al., 2009). Burnout does not improve cognitive functions either. In their systematic review, Deligkaris et al. (2014) revealed that burnout primarily links to problems with executive functions (working memory, inhibitory control, and task switching). Primarily, respondents with lower levels of burnout perform better on N-back and Stroop tasks (Diestel, Cosmar, & Schmidt, 2013); in other words, people with higher levels of burnout demonstrate less inhibitory control and working memory capacity. Therefore, we may predict that age positively correlates with reduced cognitive

control in burnout, since the older respondents are, the more cognitive deficits they have.

## Aims

In this study, we aimed to examine whether linear patterns between age and burnout symptoms are observed in librarians. In addition, we were interested in revealing whether the new constructs of reduced emotional and reduced cognitive control link to age in a manner similar to exhaustion and distance (depersonalization).

Based on the literature review, we hypothesized:

- H<sub>1</sub> – younger workers experience higher levels of exhaustion and mental distance;
- H<sub>2</sub> – younger librarians demonstrate lower emotional control than their older counterparts;
- H<sub>3</sub> – older librarians demonstrate lower cognitive control than their younger counterparts.

## Methods

### Context

According to the Federalniy zakon №78 [Federal Law №78] of 1994, the library system in Russia is represented by the following types of libraries: national, federal, regional, municipal, research, university, organizational, private, and funded by citizen groups. The four former libraries constitute the system of public libraries (Zverevich, 2014). There are 41,821 public libraries; amongst them, 79% are rural libraries, and 21% are urban (National Library of Russia, 2020). The number of registered users who visit a library 9.4 times per year was 43,371,700 persons in 2018 (Main Information and Computing Center of the Ministry of Culture of Russia, 2018), which is equal to approximately 30% of the total population (Federal State Statistics Service, 2019).

Table 1  
Descriptive Statistics of the Demographic Variables

	M/%	SD
Age	47.36	11.91
Gender (% of females)	95%	-
Education (% of those who have a higher education degree)	76%	-
Length of employment	15.09	12.47
Library location (% of participants from urban areas)	61%	-

### Participants

Initially, we sent invitation letters to library directors across the country. We got responses from 600 libraries. Then we took a random sample of 305 libraries and sent the link to the questionnaire. The invitation to participate was sent to a library director who distributed the survey to all staff in the library. In total, 620 librarians from 166 public libraries of different regions of the Russian Federation completed the survey (response rate at the library level = 54%). Sixty-six percent of the participants were from libraries in the Moscow region (central Russia), 8% from Novosibirsk (Siberia), 7% from Chelyabinsk (Ural), 12% from Yaroslavl (central Russia), 4% from Astrakhan (southern Russia), and 3% from the Republic of Buryatia (Siberia).

Participants were reached by email. Every library had a unique link to the online questionnaire created on the 1ka.si survey platform. Participation was entirely voluntary and did not involve any financial reward. Respondents were informed that, by completing the survey, they were giving consent to their inclusion in the study. All ethical standards have been followed.

Table 1 demonstrates the descriptive statistics of the sample. The mean participants' age is 47.36 (the median age is 49); the standard deviation equals to 11.91; range: 17-72. The majority of the sample consists of females (95%). Most respondents have a higher education degree (76%). Usually, the average librarian has a bachelor's degree; it is rare to have a master's or

a doctoral degree among Russian librarians. In our sample, only 3% of the participants have a master's or doctoral degree. The average length of employment at the current workplace equals 15.09 years (standard deviation = 12.47). Sixty-one percent of the participants are from urban libraries, and 39% are from rural.

### Measures

For measuring burnout, the Russian version of the Burnout Assessment Tool (Schaufeli et al., 2019) was used. It includes four subscales: exhaustion (Cronbach's  $\alpha = .89$ , McDonald's  $\omega = .89$ ), distance (Cronbach's  $\alpha = .76$ , McDonald's  $\omega = .77$ ), reduced emotional control (Cronbach's  $\alpha = .84$ , McDonald's  $\omega = .85$ ), and reduced cognitive control (Cronbach's  $\alpha = .85$ , McDonald's  $\omega = .85$ ). The response involves the five-point scale: 1 = Never, 5 = Always. The Russian version of the burnout instrument was validated on librarians of the Moscow region; the factorial validity (using confirmatory factor analysis framework), convergent validity (correlations with optimism, hardiness, and self-efficacy), and content validity were confirmed (Kolachev et al., 2019).

Age was measured in years. We also included length of employment (in years) and type of library (0 = rural, 1 = urban). Length of employment is an important predictor of burnout because less experienced employees tend to burn out more (Dimunová & Nagyová, 2012; Maslach et al., 2001). The location of the library could be important because, in urban libraries, there are more visitors than in rural

ones; it produces more stress factors, which leads to higher levels of burnout. For instance, according to Saijo et al. (2013), urban hospital physicians experience higher levels of burnout than rural hospital physicians.

Additionally, we used the general self-efficacy scale (Schwarzer & Jerusalem, 1995). It is one of the determinants of stress-related outcomes (Shoji et al., 2016). Moreover, self-efficacy is a personal resource whose lower levels connect with higher levels of burnout (Luthans, Avolio, Avey, & Norman, 2007). The instrument contains 10 items with the four-point response scale: 1 - Not at all true, 4 - Exactly true (Cronbach's  $\alpha = .91$ , McDonald's  $\omega = .91$ ). The scale was validated in many countries (Scholz, Doña, Sud, & Schwarzer, 2002): the authors demonstrated factorial validity (using confirmatory factor analysis framework), concurrent validity (correlations with optimism, anxiety, social support), and measurement invariance (also using confirmatory factor analysis framework).

Gender and education were not included in the model due to little variation in these variables.

### *Data Analysis Plan*

First, we presented bivariate correlations to examine how the variables are interrelated, not accounting for the effects of the other variables. It is also essential to demonstrate that the predictors are independent (not highly correlated) to be included in the structural model.

As a preliminary analysis, we performed confirmatory factor analysis corrected for the clustered nature of the data to examine the factor structure of the burnout measurement model before the structural model was tested. The cluster correction is needed when the observations are nested within clusters (in our case, librarians are nested within libraries). Observations within clusters are more similar

than between them (Hox, Moerbeek, & Van de Schoot, 2010). This implies that our observations are not independent, which requires correction for non-independence.

The maximum likelihood estimation with robust standard errors and a Satorra-Bentler scaled test statistic (MLM) was used, which is appropriate for five-point rating scales (Rhemtulla et al., 2012).

For observing connections of interest, structural equation modeling with cluster correction was used. Structural equation modeling is a useful technique because it estimates all parameters simultaneously, including latent variables, and provides fit indices (Kline, 2011). Structural equation modeling incorporates measurement errors so that researchers can get unbiased estimates of the effects between predictors and outcomes (Bollen & Hoyle, 2012). Structural variables included age, length of employment at the current workplace, library location, and self-efficacy variables.

All statistical analysis was performed in R version 3.6.1 (R Core Team, 2016) using such packages as lavaan (measurement and structural models; Rosseel, 2012), lavaan.survey (cluster correction for the measurement and structural models; Oberski, 2014), and sjPlot (correlational matrix; Lüdtke, 2018; Wickham, 2016).

The data described in this article are openly available in CSV format in the Open Science Framework at <https://osf.io/m7nwk/>.

### **Results**

For the confirmatory factor analysis, the following indicators are the quality criteria: RMSEA < .08, CFI and TLI > .90, SRMR < .08 (Kline, 2011). The model with four first-order factors (exhaustion, distance, reduced emotional control, and reduced cognitive control) was fitted; it was identified through fixing the variance of the latent variables to 1. The results

Table 2  
Bivariate Correlations of the Variables of Interest

Variable	1	2	3	4	5	6	7
1. Exhaustion							
2. Distance	.65***						
3. Reduced emotional control	.64***	.55***					
4. Reduced cognitive control	.59***	.63***	.61***				
5. Age	-.18***	-.17***	-.01	-.14***			
6. Length of employment	-.08*	-.07	-.00	-.12**	.60***		
7. Library location (0 = rural, 1 = urban)	.08*	.13**	.10*	.03	-.05	-.08	
8. Self-efficacy	-.43***	-.42***	-.39***	-.46***	-.05	-.06	.01

Note. Computed correlation used the Spearman method.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

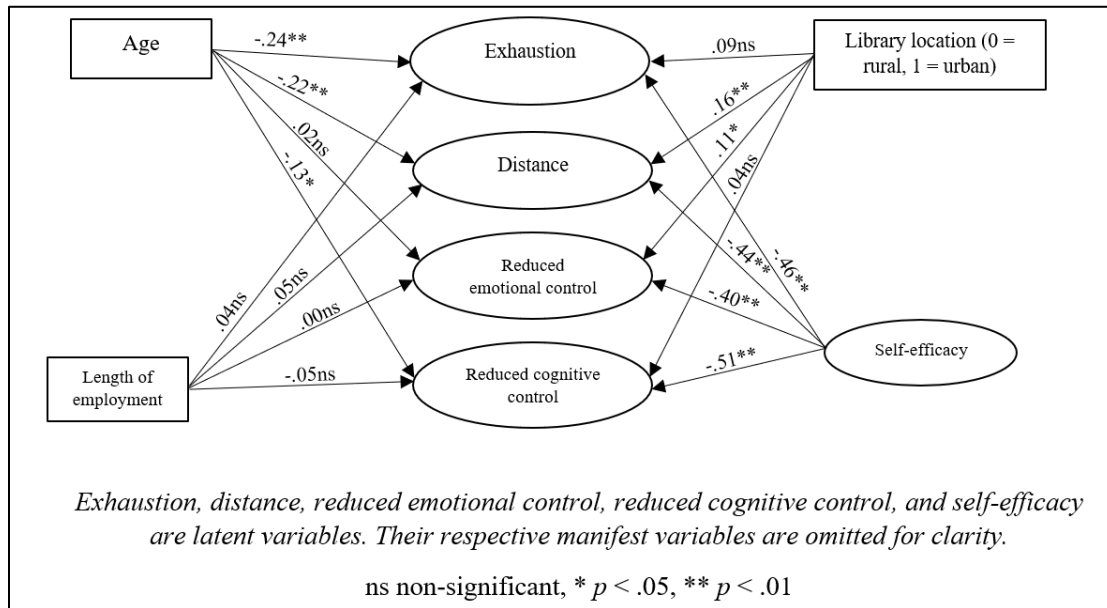


Figure 1  
Structural equation model of relations between age, length of employment, library location, self-efficacy, and the factors of burnout (standardized solution;  $n = 620$ ).



are the following:  $\chi^2$  (224, N = 620) = 418.25, scaling factor = 1.31, CFI = .96, TLI = .96, RMSEA = .04 90% CI [.04;.05], SRMR = .04. All factor loadings, except one, exceeded .60 and were significant. Therefore, the measurement model demonstrated a good fit.

Table 2 depicts the bivariate correlations between variables tested in the structural model. We can see that burnout dimensions are highly interrelated and negatively correlate with self-efficacy. Age significantly links to exhaustion, distance, and reduced cognitive control. Length of employment correlates significantly with exhaustion, reduced cognitive control, and age. Library location relates to exhaustion, distance, and reduced emotional control. Also, age, length of employment, and library location do not correlate with self-efficacy.

### **Structural Model**

Figure 1 displays the paths and coefficients of the tested model. First, authors tested the structural model of the links between age and burnout symptoms controlling for length of employment, library location, and self-efficacy.

Table 3 depicts standardized and unstandardized regression coefficients. Unstandardized coefficients are estimates of relationships in real units of measurement. Standardized coefficients are the same as the correlation coefficients. Table 3 shows that the model fits the data well because CFI and TLI > .90, RMSEA < .08, and SRMR < .08 (see note in Table 3). Among all predictors, self-efficacy significantly predicts each of the burnout dimensions, controlling for age, length of employment, and library location. Age negatively links to exhaustion and distance. Also, age predicts significantly reduced cognitive control. As in the bivariate correlations demonstrated, age does not relate to reduced emotional control. Length of employment does not predict any of the burnout factors. There is a difference in distance and reduced emotional control between rural and urban library

workers: those who work at urban libraries have higher levels of distance and a lower level of emotional control. Also, respondents from urban libraries demonstrate higher levels of distance and greater problems with emotional control compared to rural library workers. Although these differences between urban and rural librarians are small. Predictors explained 27% of the variance in exhaustion, 26% of the variance in distance, 17% of the variance in reduced emotional control, and 29% of the variance in reduced cognitive control dispersion.

Also, we conducted an additional correlational analysis on the non-Moscow region part of the sample. We found that exhaustion correlates negatively with age ( $r = -.16, p = .02$ ); there is a negative correlation between age and distance ( $r = -.14, p = .04$ ); age and impaired emotional control are linked positively ( $r = .15, p = .03$ ); there is no significant correlation between age and impaired cognitive control ( $r = .01, p = .93$ ).

### **Discussion**

In the present study, the main aim was to examine how age relates to burnout components such as exhaustion, distance, reduced emotional control, and reduced cognitive control in a librarian sample. As predicted (H<sub>1</sub>), age linearly and negatively links to exhaustion and distance. Contrary to the predictions (H<sub>2</sub>), age does not relate to reduced emotional control. Not in line with our expectations (H<sub>3</sub>), younger workers reported greater problems with cognitive control at work compared to their older colleagues. The length of employment did not predict any of the burnout factors. In addition, there is a difference between rural and urban library workers in mental distance and reduced emotional control. Urban librarians tend to demonstrate higher levels of distance and have more reduced emotional regulation than their rural counterparts.

Age more strongly predicts exhaustion; therefore, younger employees are more likely to experience emotional exhaustion. Younger

Table 3  
Unstandardized, Standardized Coefficients, and Significance Levels for the Paths of the Structural Equation Model (Standard Errors in Parentheses;  $n = 620$ )

Predictor → Outcome	Unstandardized Coefficients	Standardized Coefficients	$p$
Age → Exhaustion	-0.02 (0.005)	-.24	.00
Age → Distance	-0.02 (0.006)	-.22	.00
Age → Reduced emotional control	0.00 (0.005)	.02	.69
Age → Reduced cognitive control	-0.01 (0.006)	-.13	.03
Length of employment → Exhaustion	0.00 (0.004)	.04	.38
Length of employment → Distance	0.005 (0.003)	.05	.14
Length of employment → Reduced emotional control	0.00 (0.004)	-.00	.93
Length of employment → Reduced cognitive control	-0.005 (0.005)	-.05	.33
Library location → Exhaustion	0.20 (0.14)	.09	.14
Library location → Distance	0.38 (0.11)	.16	.00
Library location → Reduced emotional control	0.26 (0.12)	.11	.03
Library location → Reduced cognitive control	0.09 (0.15)	.04	.54
Self-efficacy → Exhaustion	-0.53 (0.06)	-.46	.00
Self-efficacy → Distance	-0.51 (0.06)	-.44	.00
Self-efficacy → Reduced emotional control	-0.44 (0.05)	-.40	.00
Self-efficacy → Reduced cognitive control	-0.61 (0.06)	-.51	.00

Note.  $\chi^2(572) = 1070.38, p < .001$ , scaling factor = 1.23; CFI = .94; TLI = .93; RMSEA = .04, 90% CI [.04, .05]; SRMR = .04.

librarians are also more prone to distance themselves from work than their older counterparts. These results are in correspondence with Salyers et al. (2019), who in a sample of librarians of the Indiana State Library, found that emotional exhaustion and cynicism were related negatively to burnout:  $r = -.19$  and  $r = -.15$ , respectively. In our sample, the correlation of exhaustion and age was  $-.18$ , between distance (the same as cynicism) and age

was  $-.17$ . Wood, Guimaraes, Holm, Hayes, and Brooks (2020), in a sample of 1,628 academic librarians employed within the United States, found that age was related to burnout significantly and negatively. However, Martini, Viotti, Converso, Battaglia, and Loera (2019), in a sample of 167 Italian public library workers, found that controlling for job demands, job resources, and some demographic variables age

was linked to exhaustion positively while the link between age and cynicism was insignificant.

Also, our results overlap Marchand et al.'s (2018) findings partially. In Canadian employees of the private sector, they found that age was linearly and negatively linked to cynicism ( $b = -0.12$ , 95% CI [-0.17, -0.07]). However, the authors found that age was non-linearly related to exhaustion (cubic predictor was significant). Moreover, they revealed that the relations are different for males and females, demonstrating non-linear pattern with exhaustion and cynicism in women. In men, associations were linear. A similar non-linear pattern of results in women was obtained by Ahola et al. (2008). Probably, their results are attributable to the higher heterogeneity in terms of different professions of the representative sample. Instead, Brewer and Shapard (2004), in a meta-analysis dedicated to employees' burnout, found that the mean correlation between age and exhaustion was  $-0.18$ , corrected for heterogeneity of the sample equaled to  $-0.23$ . Our results confirm linear relations of exhaustion, distance (the same as cynicism), and impaired cognitive control with age.

The only study of Russian librarians dedicated to burnout showed linear relations between age and composite burnout accounting for gender, length of employment, personal resources, and library location (Kolachev et al., 2019). However, in this study, the authors did not pay attention to the relations between age and the four factors of burnout. Although our sample partially overlaps the sample in Kolachev et al. (2019) in terms of regions, our data include librarians from other regions. Moreover, our correlational analysis conducted in librarians from regions other than Moscow revealed that there are no differences between librarians from the Moscow region and librarians from other regions in our sample in the correlation pattern of age with exhaustion and distance. However, there is a difference in relations with reduced emotional control: older librarians not from the Moscow region tend to report more problems with

emotional control than their younger colleagues. Also, in non-Moscow region librarians, there is no age difference in reduced cognitive control. This is another characteristic that differentiates the librarians of the Moscow region.

Concerning reduced emotional control, participants of different ages reported similar levels of emotional regulation. The relationship between emotion, age, and burnout appears to be complex. Several researchers suggest that older adults are more likely to suppress affect and inhibit emotional responses due to increased cognitive complexity (McConatha & Huba, 1999; Orgeta, 2009). However, modern studies mention the role of culture in emotional expression. Sheldon et al. (2017) claimed that Russian people tend to inhibit their emotions no matter whom they encounter – themselves or their countrymen. Russians are more emotionally self-distanced than their western counterparts and are less prone to reflect in the case of experiencing negative situations (Grossmann & Kross, 2010). According to the results obtained on the non-Moscow region part of our sample, older workers are more prone to experience problems with emotional control. This could mean that for this population, the idea that older workers are more successful in emotional regulation is applicable, but it requires further investigation. These results contradict Mauno et al.'s (2013) conclusions that older workers have better emotional regulation in relation to negative feelings.

Regarding the relations of reduced cognitive control and age, it can be assumed that, according to Socioemotional Selectivity Theory, older people may pay little attention to negative stimuli (Martins, Florjanczyk, Jackson, Gatz, & Mather, 2018). At the same time, younger respondents tend to focus on negative stimuli that distract them during the work. The increased engagement with negative information leads to more problems with cognitive control in younger workers. Research conducted by Martins, Sheppes, Gross, and Mather (2016) confirmed that older people

become less distracted when exposed to positive stimuli and more distracted when exposed to negative ones. The non-Moscow region part of our sample demonstrates an absence of the significant link between age and reduced cognitive control. Potentially it could be another specific feature of the non-Moscow region librarians and requires more empirical evidence.

Comparing the present results with those obtained from studies of other professions demonstrates that the relationship between age and burnout is complex and may be situation-dependent. For instance, Thomas, Kohli, and Choi (2014), on a sample of Californian human service workers, found that when controlling for education and caseload size, age was a positive predictor of burnout (the standardized regression coefficient was .18) while years of experience did not link to burnout. However, Chou, Li, and Hu (2014), on a sample of the medical staff of a hospital in Taiwan, revealed that older employees were less prone to experience burnout. Therefore, it would appear that the relationship between burnout and age may differ by profession.

### *Practical Implications*

The present findings have some practical implications. It is of use to implement burnout screening in personnel so that supervisors could propose some psychological or even medical assistance to those who are at risk of burnout. There are national and European laws and regulations that oblige employers to assess psychosocial risks among their employees periodically and to implement policies to prevent burnout and work stress (Schaufeli et al., 2019). In several European countries, burnout is acknowledged as an occupational disease or work-related disorder, and there is some compensation for workers included in social insurance (Lastovkova et al., 2017). In the context of librarianship, two directions can be distinguished. First, it is essential to organize an annual program for monitoring employees' emotional state in order to prevent attrition or

reduced job performance. In the absence of a specialized HR department, this program can be implemented by library methodologists. Second, if alarming indicators of stress or burnout are found, job rotation might be applied. For example, a service department employee could work in the acquisition department. Caputo (1991) claims that librarians would appreciate a work rotation that equitably distributes unpopular tasks, such as a particularly heavy reference shift or equipment service calls. Also, if possible, it could be beneficial to give some professional and psychological guidance to newcomers so that they adapt successfully to working conditions. For instance, as Smith, Bazalar, and Wheeler (2020) point out, "pre-service librarians might shadow a public librarian who works at the reference desk or a staff member with administrative duties to get a first-hand glimpse into how to navigate job duties" (p. 426-7).

### *Limitations*

The current research is not free of several limitations. First, the study included a voluntary sample of participants, which means that the results may reflect self-selection bias. This may lead to another explanation of the results by the phenomenon of the survivor's bias, since if older employees experience lower levels of burnout, this may mean that only the most persistent and resilient ones have remained at work (Maslach et al., 2001). Second, there are many potential explanations of the results due to the absence of control for cohort differences. Cohort differences may reflect different work attitudes and values. Finally, results may not be generalizable; as data mostly came from libraries in the central region of the Russian Federation, these librarians may differ from the rest of the country, as we noticed differences concerning reduced emotional and reduced cognitive control.

### *Conclusion*

Despite the limitations mentioned above, the current paper confirms some previous results on

negative relations between burnout symptoms and chronological age. This study is a first attempt to scrutinize burnout in librarians using the instrument based on a new burnout framework that better describes the phenomenon. The results obtained indicate that young employees are at risk not only for exhaustion and depersonalization at work but also for problems with cognitive functions, in particular with attention. They may need psychological help not only in terms of rest to diminish exhaustion and mental distance but a strengthening of attentional skills. Also, in relation to the aging workforce problem, the current study proposes a new challenge for the management and human resources fields in librarianship: how to help young workers experience less burnout or avoid it altogether? If we account for self-reporting bias, it is of practical importance to maintain and boost subjective well-being in younger employees. Moreover, the resilient potential of older workers remains unclear and requires further investigation.

## References

- Adams, G. A. & Shultz, K. S. (2018). Introduction and Overview. In G.A. Adams & K. S. Shultz (Eds.), *Aging and work in the 21st century* (pp. 34-58). Routledge.  
<https://doi.org/10.4324/9781315167602-1>
- Ahola, K., Honkonen, T., Virtanen, M., Aromaa, A., & Lönnqvist, J. (2008). Burnout in relation to age in the adult working population. *Journal of Occupational Health*, 50(4), 362-365.  
<https://doi.org/10.1539/joh.m8002>
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328.  
<https://doi.org/10.1108/02683940710733115>
- Bianchi R. (2018). Burnout is more strongly linked to neuroticism than to work-contextualized factors. *Psychiatry Research*, 270, 901-905.  
<https://doi.org/10.1016/j.psychres.2018.11.015>
- Bollen, K. A., & Hoyle, R. H. (2012). *Latent variables in structural equation modeling*. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (p. 56-67). The Guilford Press.
- Brewer, E. W., & Shapard, L. (2004). Employee burnout: A meta-analysis of the relationship between age or years of experience. *Human resource development review*, 3(2), 102-123.  
<https://doi.org/10.1177/1534484304263335>
- Caputo, J. S. (1991). *Stress and Burnout in Library Service*. Oryx Press.
- Chou, L. P., Li, C. Y., & Hu, S. C. (2014). Job stress and burnout in hospital employees: comparisons of different medical professions in a regional hospital in Taiwan. *B.M.J. Open*, 4(2).  
<https://doi.org/10.1136/bmjopen-2013-004185>
- Deary, I.J., Corley, J., Gow, A.J., Harris, S.E., Houlihan, L.M., Marioni, R.E., Penke, L., Rafnsson, S.B., & Starr, J.M. (2009). Age-associated cognitive decline. *British Medical Bulletin*, 92(1), 135-152.  
<https://doi.org/10.1093/bmb/ldp033>
- Deligkaris, P., Panagopoulou, E., Montgomery, A. J., & Masoura, E. (2014). Job burnout and cognitive functioning: A systematic review. *Work & Stress*, 28(2), 107-123.
- Diestel, S., Cosmar, M., & Schmidt, K. H. (2013). Burnout and impaired cognitive

- functioning: The role of executive control in the performance of cognitive tasks. *Work & Stress*, 27(2), 164-180.  
<https://doi.org/10.1080/02678373.2013.790243>
- Dimunová, L., & Nagyová, I. (2012). The relationship between burnout and the length of work experience in nurses and midwives in the Slovak Republic. *Profese Online*, 5(1), 1-4.  
<https://doi.org/10.5507/pol.2012.001>
- Doerwald, F., Scheibe, S., Zacher, H., & Van Yperen, N. W. (2016). Emotional competencies across adulthood: State of knowledge and implications for the work context. *Work, Aging and Retirement*, 2(2), 159-216.  
<https://doi.org/10.1093/workar/waw013>
- Eurostat. (2020). Employees by sex, age and occupation (1,000). Retrieved from  
[https://ec.europa.eu/eurostat/databrowser/view/lfsq\\_eegais/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/lfsq_eegais/default/table?lang=en)
- Federal State Statistics Service. (2019). Chislennost' postoyannogo naseleniya na 1 yanvarya [Total population number as of January 1]. Retrieved from  
<https://showdata.gks.ru/report/278928/>
- Federalniy zakon №78 "O bibliotechnom dele" [Federal Law №78 "On librarianship"]. (1994 & Supp. 2019). Retrieved from  
[http://www.consultant.ru/document/cons\\_doc\\_LAW\\_5434/c..](http://www.consultant.ru/document/cons_doc_LAW_5434/c..)
- Grossmann, I., & Kross, E. (2010). The impact of culture on adaptive versus maladaptive self-reflection. *Psychological Science*, 21(8), 1150-1157.  
<https://doi.org/10.1177/0956797610376655>
- Hox, J. J., Moerbeek, M., & van de Schoot, R. (2010). *Multilevel analysis: Techniques and applications*. Routledge.
- Johnson, S. J., Machowski, S., Holdsworth, L., Kern, M., & Zapf, D. (2017). Age, emotion regulation strategies, burnout, and engagement in the service sector: Advantages of older workers. *Journal of Work and Organizational Psychology*, 33(3), 205-216.  
<https://doi.org/10.1016/j.rpto.2017.09.001>
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). Guilford Press.
- Kolachev, N., Osin, E., Schaufeli, W., & Desart, S. (2019). Personal resources and burnout: Evidence from a study among librarians of Moscow Region. *Organizational Psychology*, 9(2), 129-147.
- Lastovkova, A., Carder, M., Rasmussen, H. M., Sjöberg, L., de Groene, G. J., Sauni, R., Vevoda, J., Vevodova, S., Lasfargues, G., Svartengren, M., Varga, M., Colosio, C., & Pelclova, D. (2018). Burnout syndrome as an occupational disease in the European Union: An exploratory study. *Industrial Health*, 56(2), 160-165.  
<https://doi.org/10.2486/indhealth.2017-0132>
- Lüdecke, D. (2018). *sjPlot: Data visualization for statistics in social science*. Retrieved from  
<https://cran.r-project.org/package=sjPlot>
- Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel Psychology*, 60(3), 541-572.  
<https://doi.org/10.1111/j.1744-6570.2007.00083.x>

- Marchand, A., Blanc, M. E., & Beaugerard, N. (2018). Do age and gender contribute to workers' burnout symptoms? *Occupational Medicine*, 68(6), 405-411. <https://doi.org/10.1093/occmed/kqy088>
- Martini, M., Viotti, S., Converso, D., Battaglia, J., & Loera, B. (2019). When social support by patrons protects against burnout: A study among Italian public library workers. *Journal of Librarianship and Information Science*, 51(4), 1091-1102. <https://doi.org/10.1177/0961000618763716>
- Martins, B., Florjanczyk, J., Jackson, N. J., Gatz, M., & Mather, M. (2018). Age differences in emotion regulation effort: Pupil response distinguishes reappraisal and distraction for older but not younger adults. *Psychology and Aging*, 33(2), 338-349. <https://doi.org/10.1037/pag0000227>
- Martins, B., Sheppes, G., Gross, J. J., & Mather, M. (2016). Age differences in emotion regulation choice: Older adults use distraction less than younger adults in high-intensity positive contexts. *The Journals of Gerontology: Series B*, 73(4), 603-611. <https://doi.org/10.1093/geronb/gbw028>
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52(1), 397-422. <https://doi.org/10.1146/annurev.psych.52.1.397>
- Mauno, S., Ruokolainen, M., & Kinnunen, U. (2013). Does aging make employees more resilient to job stress? Age as a moderator in the job stressor-well-being relationship in three Finnish occupational samples. *Aging & Mental Health*, 17(4), 411-422. <https://doi.org/10.1080/13607863.2012.747077>
- McConatha, J. T., & Huba, H. M. (1999). Primary, secondary, and emotional control across adulthood. *Current Psychology*, 18(2), 164-170. <https://doi.org/10.1007/s12144-999-1025-z>
- McCormack, N., & Cotter, C. (2013). *Managing burnout in the workplace: A guide for information professionals*. Elsevier. <https://doi.org/10.1016/B978-1-84334-734-7.50010-4>
- McManus, I. C., Keeling, A., & Paice, E. (2004). Stress, burnout and doctors' attitudes to work are determined by personality and learning style: A twelve year longitudinal study of UK medical graduates. *BMC Medicine*, 2, 29. <https://doi.org/10.1186/1741-7015-2-29>
- Murman, D. L. (2015). The impact of age on cognition. *Seminars in Hearing*, 36(3), 111-121. <https://doi.org/10.1055/s-0035-1555115>
- National Library of Russia. (2020). Yezhegodnyy doklad o sostoyanii seti obshchedostupnykh bibliotek Rossiyskoy Federatsii: po itogam monitoringa 2019 g. [Annual report on the state of the network of public libraries in the Russian Federation: Based on the results of monitoring in 2019]. Retrieved from [http://clrf.nlr.ru/images/SiteDocum/News/2020/ed\\_set\\_bibliotek\\_19.pdf](http://clrf.nlr.ru/images/SiteDocum/News/2020/ed_set_bibliotek_19.pdf)
- Oberski, D. (2014). lavaan. survey: An R package for complex survey analysis of structural equation models. *Journal of Statistical Software*, 57(1), 1-27. <https://doi.org/10.18637/jss.v057.i01>
- Orgeta, V. (2009). Specificity of age differences in emotion regulation. *Aging and Mental Health*, 13(6), 818-826. <https://doi.org/10.1080/13607860902989661>

- Penz, M., Wekenborg, M. K., Pieper, L., Beesdo-Baum, K., Walther, A., Miller, R., Stadler, T., & Kirschbaum, C. (2018). The Dresden Burnout Study: Protocol of a prospective cohort study for the biopsychological investigation of burnout. *International Journal of Methods in Psychiatric Research*, 27(2), e1613. <https://doi.org/10.1002/mpr.1613>
- R Core Team. (2016). *R: A language and environment for statistical computing*. Retrieved from <https://www.R-project.org/>
- Randall, K. J. (2007). Examining the relationship between burnout and age among Anglican clergy in England and Wales. *Mental Health, Religion & Culture*, 10(1), 39-46. <https://doi.org/10.1080/13674670601012303>
- Rhemtulla, M., Brosseau-Liard, P. É., Savalei, V. (2012). When can categorical variables be treated as continuous? A comparison of robust continuous and categorical SEM estimation methods under suboptimal conditions. *Psychological Methods*, 17(3), 354-373. <https://doi.org/10.1037/a0029315>
- Rosseel, Y. (2012). lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software*, 48(2), 1-36. <http://dx.doi.org/10.18637/jss.v048.i02>
- Russian State Library. (2020). Kratkaya statisticheskaya spravka o Rossiyskoy gosudarstvennoy biblioteke v 2019 godu (po sostoyaniyu na 01.01.2020) [Brief statistical information about the Russian State Library in 2019 (as of 01.01.2020)]. Retrieved from <https://www.rsl.ru/ru/about/documents/statisticheskaya-spravka-o-rabotegb/spravka-2019>
- Saijo, Y., Chiba, S., Yoshioka, E., Kawanishi, Y., Nakagi, Y., Ito, T., Sugioka, Y., Kitaoka-Higashiguchi, K., & Yoshida, T. (2013). Job stress and burnout among urban and rural hospital physicians in Japan. *The Australian Journal of Rural Health*, 21(4), 225-231. <https://doi.org/10.1111/ajr.12040>
- Salyers, M. P., Watkins, M. A., Painter, A., Snajdr, E. A., Gilmer, L. O., Garabrant, J. M., & Henry, N. H. (2019). Predictors of burnout in public library employees. *Journal of Librarianship and Information Science*, 51(4), 974-983. <https://doi.org/10.1177/0961000618759415>
- Schaufeli, W.B., De Witte, H. & Desart, S. (2019). Manual Burnout Assessment Tool (BAT). KU Leuven, Belgium: Unpublished internal report.
- Scholz, U., Doña, B. G., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment*, 18(3), 242-251. <https://doi.org/10.1027/1015-5759.18.3.242>
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio*. (pp. 35-37). NFER-NELSON.
- Sheldon, K. M., Titova, L., Gordeeva, T. O., Osin, E. N., Lyubomirsky, S., & Bogomaz, S. (2017). Russians inhibit the expression of happiness to strangers: Testing a display rule model. *Journal of Cross-Cultural Psychology*, 48(5), 718-733. <https://doi.org/10.1177/0022022117699883>



- Shoji, K., Cieslak, R., Smoktunowicz, E., Rogala, A., Benight, C. C., & Luszczynska, A. (2016). Associations between job burnout and self-efficacy: A meta-analysis. *Anxiety, Stress, & Coping*, 29(4), 367-386.  
<https://doi.org/10.1080/10615806.2015.1058369>
- Smith, N. M., & Nelson, V. C. (1983). Burnout: A survey of academic reference librarians (Research Note). *College & Research Libraries*, 44(3), 245-250.  
[https://doi.org/10.5860/crl\\_44\\_03\\_245](https://doi.org/10.5860/crl_44_03_245)
- Smith, D. L., Bazalar, B., & Wheeler, M. (2020). Public librarian job stressors and burnout predictors. *Journal of Library Administration*, 60(4), 412-429.  
<https://doi.org/10.1080/01930826.2020.1733347>
- Statistics Canada. (2019). Study: Occupations with older workers. Retrieved from <https://www150.statcan.gc.ca/n1/en/daily-quotidien/190725/dq190725b-eng.pdf?st=UGDkvR71>
- Thomas, M., Kohli, V., & Choi, J. (2014). Correlates of job burnout among human services workers: Implications for workforce retention. *The Journal of Sociology and Social Welfare*, 41(4), 69-90.  
<https://scholarworks.wmich.edu/jssw/vol41/iss4/5>
- Wickham, H. (2016). *ggplot2: Elegant graphics for data analysis* (2nd ed.). Springer.  
[https://doi.org/10.1007/978-3-319-24277-4\\_9](https://doi.org/10.1007/978-3-319-24277-4_9)
- Wilder, S. (2018). Delayed retirements and the youth movement among ARL library professionals. *Research Library Issues*, 295, 6-16.  
<https://doi.org/10.29242/rli.295.2>
- Wood, B. A., Guimaraes, A. B., Holm, C. E., Hayes, S. W., & Brooks, K. R. (2020). Academic librarian burnout: A survey using the Copenhagen Burnout Inventory (CBI). *Journal of Library Administration*, 60(5), 512-531.  
<https://doi.org/10.1080/01930826.2020.1729622>
- Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International Journal of Stress Management*, 14(2), 121-141.  
<https://doi.org/10.1037/1072-5245.14.2.121>
- Zverevich, V. (2014). Developing the library network in postcommunist Russia: Trends, issues, and perspectives. *Library Trends*, 63(2), 144-160.  
<https://doi.org/10.1353/lib.2014.0039>