

THE LINK BETWEEN PERCEIVED ORGANIZATIONAL SUPPORT, JOB SATISFACTION AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR – DOES EMPLOYEE AGE MAKE A DIFFERENCE?

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Purpose: The purpose of this study is to explain the relationship between perceived organizational support (POS) and organizational citizenship behavior (OCB) in the public sector. We test to see if there is a mediating effect of job satisfaction (JS) on the relationship, and a moderating influence of employees' age on the relationship.

Design/methodology/approach: Data were collected from 1310 employees of public organizations in Poland. The current study used SPSS Amos for data analysis purposes.

Findings: The key statistical results in this study reveal that POS has a positive influence on employees' OCB. Furthermore, job satisfaction mediates this relationship. The research also shows that age moderates the relationship between perceived organizational support and organizational citizenship behavior. These relationships are stronger in older workers.

Research limitations/implications: The data were collected from a single source by conducting surveys among employees of public organizations. The cross-sectional nature of the research may therefore constitute a limitation, so it is worth considering a longitudinal research project that might capture changes in such constructs as job satisfaction over time. The results may also be difficult to generalize because the research was conducted within a single culture. This highlights potential future directions of research in this area that would take other contexts into account.

Practical implications: The research results can contribute to a better understanding by managers and HR professionals of the importance of organizational support for the development of employees' citizenship behavior and encourage them to use activities and HR practices that would bring about such support.

Originality/value: This research enriches the literature on public organizations with an analysis of the relationships between perceived organizational support and organizational citizenship behavior taking into account job satisfaction as a mediator of this relationship. The work is a response to the researchers' call to include the age of employees as a moderator in the relationship between POS and OCB.

Keywords: organizational citizenship behavior, perceived organizational support, job satisfaction, age group.

Category of the paper: Research paper.

1. Introduction

Although we rely in the 21st century on advanced technologies and modern innovative solutions, human resources still determine the effectiveness of many organizations. Employees can increase the efficiency of an organization and should therefore feel that organization's ongoing support. Perceived organizational support (POS) theory was introduced by Eisenberger and colleagues in the 1980s and is defined as "an employee's perception of being valued and cared about by the organization" (Eisenberger et al., 1990, p. 52). Perceived Organizational Support is also valued as the assurance that aid will be available from the organization when it is needed to carry out one's job effectively and to deal with stressful situations (Shanock, Eisenberger, 2002). As Firmansyah et al. (2022, p. 2) claimed, POS is "a member's perception of the extent to which the organization values their contribution and cares about their well-being". Liu (2004) indicated that, if employees perceive greater support from an organization, they are likely to make additional efforts leading to better organizational performance. These considerations were also confirmed by Blancero (2009).

The consequences of POS can be found in organizational support theory. In line with the reciprocity norm, POS contributes to employees' sense of caring for the organization and to their striving to achieve its goals. Furthermore, as Demir (2015, p. 134) writes, "the care, approval, and respect connoted by Perceived Organizational Support should fulfill socio-emotional needs, leading workers to incorporate organizational membership and role status into their social identity". Third, POS should lead employees to believe that their organization appreciates their improved performance. Therefore, it can be assumed that POS and its consequences are related to the theory of social exchange, according to which employees, in return for the support received, will reciprocate with other positive behaviors or attitudes (Shanock, Eisenberger, 2002). Mentioned prominently among these is citizenship behavior, which is understood as individual workplace behavior not directly recognized by an organization's formal reward system but that serves to promote the general well-being of the organization (Kandeepan, 2016). The influence of POS on OCB has been demonstrated by, among others, Singh et al. (2015), Osman et al. (2015) and Andrade and Neves (2022). So too, Kapela and Pohl (2020), Kurtessis et al. (2015) and Muhammad (2014) found that, when employees perceive their organization as supporting them, they show more OCB.

However, as Meiske (2018) argues, for employees to feel the urge to exhibit out-of-role behavior, including OCB, the focus should also be on their work-related attitudes. Among these attitudes, Greenberg and Baron (2003) mention job satisfaction. “Job satisfaction” is a term that defines an optimistic feeling and affective reaction towards a job, occasioned from an assessment of its characteristics (Yuen et al., 2018). Mushtaq et al. (2014) opine that contented employees have a greater tendency to display positive behaviors that can effectively contribute to the overall performance of the organization. Thus, personal job satisfaction (JS), just like POS, encourages an employee to undertake work that exceeds the formal role, and thus to display citizenship behaviors (Meiske, 2018).

On the other hand, when members of the organization feel well-treated and receive adequate support from their organization, they will feel satisfaction (Witt, 1991). The impact of poorly perceived organizational support results in low satisfaction (Meiske, 2018). Thus, POS results in both OCB and JS.

The positive impact of POS on both OCB and job satisfaction has been confirmed in the meta-analysis of Rhodes and Eisenberger (2002). There are many studies that have analyzed the relationship between these variables (Biswas, Mazumder, 2017; Fatimah et al., 2011; Islam et al., 2014; Linda et al., 2019). However, the relationship between POS and OCB, taking into account job satisfaction, has been subjected to very little analysis, and the results of these analyses are not clear. For example, Linda et al. (2019) surveyed 80 employees of the Regional Revenue and Asset Agency of West Pasaman Regency. Their results indicated that POS had a negative effect on OCB, while the effect of job satisfaction was positive. In turn, Wei and Hongli's research (2017) conducted among employees of Chinese companies proved that POS and JS have significant correlations with OCB, and JS plays a mediating role between POS and OCB. Other results were achieved by Meiske (2018), who conducted research among lecturers employed at University of Lambung Mangkurat. The findings of that study suggest that POS indirectly affects OCB lecturers through job satisfaction, but that there is no significant negative direct relationship between POS and OCB. The differences in research results provide an impetus to conduct further analyses in this area. Additionally, our research focuses on a specific group of entities – public institutions, specifically local government units.

Sridhar & Thiruvankadam (2014) posit that every organization must foster unlimited support, without which the structure would be disrupted. It is therefore worth looking at the relationship between POS and its outcomes also in institutions that operate differently from companies. This is particularly true of public organizations. Indeed, as the results of the analysis by de Geus et al. (2020) indicate, the picture of organizational behavior and attitudes among employees of public institutions is fragmented and unclear, hence the need for research within this group of actors. Our research attempts to address this need. We focus on public institutions that have particular characteristics, e.g. usually a formal structure – and what follows is bureaucracy, whose formal structures, as Amah (2017) writes, are not an embodiment of excellence. They often experience weak leadership and administrative authorities, which can

have a negative impact on employee attitudes and behavior, e.g. innovativeness. Very often, they are faced with multiple and sometimes contradictory goals (Rainey, 2009). Moreover, a public organization cannot always use such diverse sources of support as can a private organization. Unlike private companies that offer goods and services, public organizations interact with customers as citizens, an interaction governed by different laws and constraints (Pandey, Moynihan, 2008; Rosenbloom, 2013). These constraints can affect both role-based and non-role-based behavior (de Geus et al., 2020). However, OCB findings have encouraged public organizations to use citizenship behavior to increase organizational performance (Vigoda-Gadot, Golembiewski, 2001) and the welfare of citizens, as well as to improve the image of public organizations (Mahfudz et al., 2021). Indeed, public institutions are increasingly subjected to public scrutiny and performance demands from citizens, while also struggling to sustain service levels in the face of decreased funding (Hassan, 2015; Vigoda-Gadot, Golembiewski, 2001). Therefore, OCB is one way that an organization can respond to such challenges, as it encourages employees to go beyond formally determined role requirements (de Geus et al., 2020).

It should also be noted that, while conducting research among employees of public institutions, we paid special attention to their age. This was because, already in the last century, Carstensen et al. (1999) proved that the relationship between POS and its results can be moderated by the demographic variable of age. Later also, Kurtessis et al. (2015) focused on age as a moderator of the relationship between POS and job satisfaction and organizational commitment. In our research, we considered age as a moderating variable in the relationship between POS and OCB, which has not yet been studied. We believe that it is age that may disturb this relationship in public institutions. As Torsello (2019) stated, young workers have different demands on the organization than do older people. They want to quickly acquire new skills, they expect a participatory style of management, and they treat hierarchies very negatively and want to avoid them, which, unfortunately, is often not possible in public organizations. Moreover, according to the analysis of resource conservation theory, when the physical strength of employees begins to decline with age, they begin to appreciate and optimize other resources that provide them with peace of mind and rationality (Charoensukmongkol, Puyod, 2022). In addition, as Bal et al. (2010) claimed, older workers have a more objective view of what support they expect from their organization and have learned to better cope with negative experiences. Therefore, it can be assumed that employees will perceive the support of the organization differently depending on their age. There is evidence that older workers tend to have a more positive perception of their employer (Carstensen et al., 1999). On the other hand, research indicates that age-related differences in motivation and goals may also have an impact on employees' attitudes and behavior (Cavanagh et al., 2020), including citizenship behavior (Ajlouni et al., 2021). Singh and Singh (2010) argue that older people will show more civic behavior towards their co-workers compared to younger workers, who are focused on their own development. It is therefore worth taking a closer look at these relations and checking whether age can play a regulating role in them.

Our research thus aims to answer the following questions:

1. What is the impact of perceived organizational support on the organizational citizenship behavior of public organization employees?
2. Does employee age influence this relationship and, if so, how?
3. To what extent does job satisfaction mediate the impact of perceived organizational support on organizational citizenship behavior in public organizations?

The purpose of this study was to obtain empirical evidence to explain the relationship between perceived organizational support and organizational citizenship behavior through the creation of job satisfaction. Our objective is also to extend current knowledge by exploring the extent to which the POS–OCB relationship varies across employee ages.

Through this article, we provide additional empirical evidence regarding the direct effects of POS on OCB, but also its indirect effects through job satisfaction. In addition, no similar research has been conducted in public institutions on this relationship. Moreover, this is the first study to take into account the possibility of employee age moderating the relationship between POS and OCB. The work is a response to the researchers' call to include the age of employees as a moderator in the relationship between POS and OCB. The work is therefore a response to the call of researchers to take into account the age of employees as a moderator in this relationship.

2. Theoretical Framework and Hypothesis Development

2.1. Organizational Citizenship Behavior

Organ (1988, p. 4) defines OCB as “an individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization”. In the 1980s, Organ and his colleagues were the first to adopt the term “OCB”. As Firmansyah et al. (2022, p. 2) write, Organization Citizenship Behavior “is a voluntary behavior to help others exceed the demands of the role in the workplace or being organized and is not rewarded by the achievement of task performance”.

According to Podsakoff et al. (2000), OCB is a profound individual contribution that exceeds the demands of the person’s role in the workplace, and has an impact on performance assessment. Appelbaum et al. (2004) add that the OCB concept relates to employee behavior that is not part of an individual job description, is not included in the employment contract and is beneficial to the organization’s performance. Organizational Citizenship Behavior is similarly defined by Purwanto (2022), who writes that OCB is a desired behavior that contributes to the organization’s efficient operation but is not required of employees as a part of their regular work duties. Organizational Citizenship Behavior (OCB), according to Desky

et al. (2020), is individual behavior that is not explicitly acknowledged by the formal reward system and will have an effect on more successful organizational activities.

OCB is any positive activity that employees voluntarily engage in that benefits the organization and has a positive influence on coworkers. Therefore, citizenship behavior is a voluntary and altruistic activity by members of the organization (Shanker, 2018). As Adil et al. (2021) claim, OCB refers to anything that employees opt to undertake spontaneously and willingly that is outside of the confines of their specified, legally binding obligations.

Despite the definition of OCB having been revised multiple times, the constructions have kept their core (Hoffman et al., 2007). All OCB definitions emphasize that they are behaviors that go beyond the scope of standard contractual obligations and for which the employee neither expects nor receives remuneration. Furthermore, they increase the performance of the organization.

Organizational citizenship behavior is a multidimensional concept and has a variety of constructs (Sadiq and Ahmad, 2020). Podsakoff et al. (2000) listed seven dimensions of these behaviors: helping behavior, sportsmanship, organizational loyalty, organizational compliance, individual initiative, citizenship virtue, and self-development. Thus, OCBs include, for example, helping others, helping a new employee to catch up, being punctual, staying at work after hours, taking on additional responsibilities, making creative suggestions, tolerating temporary impositions without complaint, defending an organization, encouraging teamwork, volunteering, accommodating colleagues' work schedules, etc. (Choong, Ng, 2022; Kark, Waismel-Manor, 2005; Organ et al., 2006; Podsakoff et al., 2000).

Despite OCBs being by definition voluntary and uncontrolled behavior, their consequences are visible in the results of the organization's operation. They can influence the effectiveness of an organization by: reducing disparities in the level of tasks performed and results achieved (Podsakoff, MacKenzie, 1997); increasing the productivity of colleagues and superiors (MacKenzie et al., 1993); freeing up resources for more productive purposes (Smith et al., 1983); and enhancing the organization's ability to attract and retain the best employees (Organ, 1988). As Meiske (2018, p. 27) states, "From an organizational point of view, OCB is necessary because the type of behavior included in OCB improves the resources' utilization and reduces the need for more formal control mechanisms, and does not require a lot of expense".

Organizational citizenship behaviors generate many benefits for the company. Their impact on the performance of individuals, teams and entire organizations has been confirmed by many researchers. This voluntary citizenship of members of an organization is focused on, among other things, helping others, loyalty, accepting principles and rules, willingness to cooperate, and creative self-development, and is therefore oriented towards the good of the organization.

Citizenship behavior increases the loyalty and commitment of members of an organization (Tepper et al., 2004). Bateman and Organ (1983) found, in their project, that job satisfaction is not only a predictor of OCB, but also a consequence of it. OCB is positively correlated with employee well-being and positive mood (Glomb et al., 2011), personal development (Hansen et al., 2003), and physical and mental health (Brown et al., 2003). It is negatively correlated with the intention to change employer (Barzoki, Rezaei, 2017; Ladebo, 2005) and actual staff turnover and absenteeism among members of the organization (Podsakoff et al., 2009). In public organizations, too, OCBs can influence lower turnover rates, lower absenteeism rates and greater trust in the workplace (de Geus et al., 2020). OCBs are related to productivity, efficiency and cost reduction (Podsakoff et al., 2000), higher job satisfaction (Chin, 2015), higher client satisfaction (Felfe, Heinitz, 2010), and low levels of counterproductive behaviors (Reynolds et al., 2015). OCB results in firm survival (Ojebola et al., 2020) and quality performance (Wickramasinghe, Perera, 2014). Koys (2001) further argued that citizenship behavior influences the effectiveness of an organization by increasing financial indices as well as the quantity and quality of work performed. OCB improves the performance and competitiveness of organizations (Smith et al., 1983).

As mentioned above, citizenship behavior brings many benefits not only to employees, but also to the entire organization. Because these behaviors are discretionary and not rewarded, it is very important to identify the precursors that motivate employees to take these actions. According to Organ (Organ, 2018), organizations must encourage and retain those employees who perform tasks that go beyond formally defined roles.

Four mechanisms lie at the basis of the manifestation of organizational citizenship behaviors: *reciprocity and exchange processes* described within the social exchange theory, *identification mechanism*, *impression management*, and thus activities related to image management and *positive relationships* (Blatt, 2008).

Meanwhile, the antecedents of OCB fall into four main categories, namely: individual characteristics, task characteristics, organizational characteristics, and leadership behaviors (Podsakoff et al., 2000).

Individual characteristics include job attitudes (e.g. job satisfaction, perceived fairness, and organizational commitment), worker role perception, demographic variables, employee abilities and individual differences (Ojebola et al., 2020). Task characteristics entail task feedback and inherent task satisfaction. Organizational characteristics include organizational level of flexibility, advisory and coworker staff support, and perceived organizational support. The predictors of OCB among leadership characteristics include contingent reward behavior and supportive leader behaviors (Kasa and Hassan, 2016). Due to the subject of the article, POS will be described later as one of the predictors of OCB.

2.2. Perceived Organizational Support and Organizational Citizenship Behavior

Perceived organizational support (POS) is defined as the belief among employees that their employer is concerned for their well-being and also provides resources to assist them in coping with the demands of their job (Eisenberger et al., 1986). So, more generally, POS can be defined as how much an organization values its employees (Allen, 2003).

As Osman et al. (2015) write, what matters to employees today is not merely remuneration. Rather, they prefer to work in organizations that appreciate their employees and their contribution. Organizational support both attracts employees and reduces turnover, creating an ideal workplace.

Perceived Organizational Support includes fair treatment, supervisory support, rewards and favorable job conditions (Osman et al., 2015). POS also includes support for those employees who need to find a balance between work and family life. Therefore, organizational support also manifests as flexibility in how work is organized to reduce the strains related to work-to-family conflicts (Andrade, Neves, 2022). Perceived organizational support is “also valued as assurance that aid will be available from the organization when it is needed to carry out one’s job effectively and to deal with stressful situations” (Shanock, Eisenberger, 2002, p. 698).

According to Meiske (2018), when workers feel a high level of organizational support, they are likely to absorb their membership of the organization into their identities. This leads to the employee identifying with the organization and, consequently, personally contributing to the development and results of the organization. POS is founded on the social exchange principle, which states that each side must contribute something of value to the other side and that the exchange must be fair to both sides (Wang, Cheng, 2010).

Therefore, organizational support should provide employees with what they need in order to identify with the organization and should promote their perceived obligation to care for the welfare of the organization. This allows a relationship to emerge between POS and OCB.

Over the years, many researchers have indicated a positive relationship between POS and employee OCBs (Eisenberger et al., 1986; Kapela, Pohl, 2020; Kurtessis et al., 2015; Miao, Kim, 2010). POS is a predictor of OCB because, when employees perceive their organization as being supportive and caring for their welfare and needs, they want to reciprocate this feeling by engaging in citizenship behaviors. According to social psychology, employees act as citizens in reciprocity to the perception that organizations support their individual interests (Homans, 1958). This “self-interests” viewpoint is founded on the assumption that meeting individuals’ psychological needs promotes positive social behavior (Chiaburu et al., 2015).

However, empirical analyses of the relationship between POS and OCB have not produced consistent results. For example, Chiaburu, Chakrabarty, Wang, and Li (2015) found a significant positive relationship between POS and OCB, but that the level of relationship between these two variables depends on the specific cultural environment. In addition, some studies have shown the relationship between POS and OCB to be stronger at the organizational

than individual level (Eisenberger et al., 1986; Wayne et al., 2002). Kapela and Pohl (2020), meanwhile, conducted research on social sector employees. Their results indicated that POS is related to OCB in this sector, but more strongly at the personal level. Research conducted by Meiske (2018) among lecturers at University of Lambung Mangkurat, meanwhile, indicated that the lecturers' perceived organizational support did not positively affect their organizational citizenship behavior. The results of her study explain that the relationship between POS and OCB must be formed through the creation mechanism of job satisfaction and organizational commitment. It is therefore worth pursuing this subject further to better understand the possible relationship between POS and OCB, especially in the less-studied public sector. Given the above, we hypothesize that:

H1: POS is positively related to employees' OCB in the public sector

Additionally, our research focuses on age as a moderator in the relationship between POS and OCB. First, we base our assumptions on the theory of person–organization fit, especially supplementary fit (Muchinsky and Monahan, 1987). On the employee side, it is demographic characteristics (such as age) that constitute the general characteristics taken into account when assessing fit (Riordan, Wayne, 2008). We can therefore expect that a differentiating individual characteristic, namely age, may influence the individual's perception of organizational support, which may increase or decrease the frequency of citizenship behaviors.

Furthermore, as mentioned in the introduction, according to the analysis of resource conservation theory, the decreasing physical strength of employees with age means that, over time, they more appreciate other resources provided by the organization. Mental comfort and rationality are important to them (Charoensukmongkol, Puyod, 2022). Therefore, older workers will perceive organizational support differently than younger workers.

In addition, numerous studies have shown a significant relationship between demographic data and citizenship behaviors. Significant links between age and OCB have been noted by, *inter alia*, (Altuntas, Baykal, 2014; Chattopadhyay, 1999; Wanxian, Weiwu, 2007). Saleem (2017) showed in their research at universities that dependencies were greatest in workers of over 40 years of age. Moreover, Rhoades and Eisenberger (2002) indicated that demographic characteristics, including age, are also related to POS. Research by Cobanoglu and Derinbay (2016) on a sample of 494 primary school teachers showed that perceived organizational support among teachers is not differentiated by gender, branch, educational status or formal recognition of professional achievements. The POS of teachers is differentiated only by age.

Age as a control variable is close to both OCB and POS. Therefore, it is important to clarify the precise effects of age on the relationship between POS and OCB. Hence, we propose the following hypothesis:

H2: The positive relationship between POS and OCB is moderated by age. In particular, the positive effect of POS on OCB will be stronger among older employees.

2.3. The Mediating Role of Job Satisfaction

Job satisfaction is a key employee attitude. It denotes the employee's primary affective reactions to various aspects of work and professional experience (Igbaria, Guimaraes, 1992; Pitaloka, Sofia, 2014). It defines how an employee feels in their work and what they think about it (Colquitt et al., 2019). Most researchers agree that it is a positive emotional response to work (Oshagbemi, 2003; Scarpello, Vandenberg, 1992). Already Locke (1976) emphasized in his definition that satisfaction means a pleasant or positive emotional state resulting from an evaluation of work and professional experiences. It is the complex of feelings and beliefs that people have about their work (Jones, George, 2015). It is associated with employee satisfaction not only with the job itself, but also with the broader organizational context of the job (Jernigan et al., 2002; de Juana-Espinosa, Rakowska, 2018; Pluta, 2015)

Various aspects of job satisfaction can be considered (Indarti et al., 2017). Already, Herzberg, Mausner and Snyderman (1959) defined and measured job satisfaction as a global concept and as a concept with two separate aspects – internal satisfaction (related to the work itself) and external satisfaction (related to the environment in which the work is done). A similar classification was made by Schnake and Dumler (2003), who indicated internal job satisfaction to be employee satisfaction with the nature of work, achievements, recognition, or development, and external job satisfaction as being related to the employee's feelings about external aspects of work (such as remuneration, leadership style, workplace atmosphere, or relationships with colleagues), while distinguishing social satisfaction as satisfaction with aspects of relationships with people in the work environment, such as friendship or respect. This confirms that job satisfaction is a complex and relatively difficult-to-measure category, especially as it is influenced by many variables related to both individual and social, cultural, organizational, and environmental factors. On the other hand, it is closely connected to the organization's results, such as high performance level or high organizational commitment (Indarti et al., 2017). It directly affects employees' organization-related physical and mental well-being, and thus productivity, absenteeism, turnover rate, and employee relations (Meyer et al., 2004). According to Organ et al. (2006), job satisfaction most strongly influences citizenship behavior, organizational commitment and employee engagement. Employees who are happy with their job make additional efforts and are more likely to demonstrate OCB and contribute positively to the organization's activities (Sawalha et al., 2019). Employees who are satisfied with their job are more likely to speak positively about the organization and help colleagues, and are more compliant in carrying out their duties (Robbins, Judge, 2013), as well as being more loyal to the organization and co-workers (Lewicka et al., 2018). In turn, a lack of job satisfaction leads to employees tending to behave sub-optimally, to not try their best, and to rarely make sacrifices of time or extra effort in their job (Indarti et al., 2017).

Due to the scope of its impact, job satisfaction is one of the most frequently studied of employee attitudes (Judge, Kammeyer-Mueller, 2012) and appears to be a key determinant of citizenship behavior in an organization (Heriyadi et al., 2020; Nurjanah et al., 2020). Such positive relationships were confirmed in the research of Organ and Konovsky (1989), Williams and Anderson (1991), Pitaloka and Sofia (Pitaloka, Sofia, 2014), and Ramadhan and Saudi (2018).

The relationship between job satisfaction and organizational citizenship behavior may derive from the principle of reciprocity or the postulates of social exchange theory, which show that employees with high job satisfaction will try to reciprocate with the organization by exhibiting citizenship behaviors (Organ, 1977). The self-determination theory (SDT) of Deci and Ryan (2008), which explains the formation of a person's internal motives in response to external factors such as satisfaction, can also explain these behaviors (Fachrudin, Sholihin, 2021).

The literature indicates that job satisfaction also acts as a mediator between various organizational behavior variables (Crede et al., 2007). Among others, research by Bayarçelik and Findikli (2016) confirms that satisfaction mediates the perception of organizational justice and desire to leave a job; meanwhile, research by Güteryüz, Güney, Aydın and Aşan (2008) indicates that it mediates the relationship between emotional intelligence and organizational commitment; and research by Khalaf et al. (2019) indicates that it mediates employee engagement and organizational performance. Therefore, the question arises as to whether it also mediates the relationship between employees' perceived organizational support and their citizenship behavior. The extent to which employees perceive that the organization provides them with support and is ready to provide assistance when they need it may affect their sense of responsibility for contributing to the organization by displaying attitudes and behaviors conducive to the achievement of the organization's goals. Considering job satisfaction as a form of emotional response to a situation that reflects work, performance assessment or professional experiences, Locke (1976) indicates that the employees' perception of the organizational support they receive influences their job satisfaction. Therefore, in light of the claim by Biswas and Mazumder (2017) that job satisfaction is a direct consequence of employees' perception of work and the work environment, and employees with high job satisfaction display citizenship behaviors, we hypothesize that:

H3: Job satisfaction mediates the relationship between perceived organizational support and citizenship behavior in public organizations.

To summarize, the purpose of this study is to explain the relationship between perceived organizational support and organizational citizenship behavior. We test to see if there is a mediating effect of job satisfaction on the relationship, and a moderating influence of employees' age on the relationship. The research model is shown in Fig. 1.

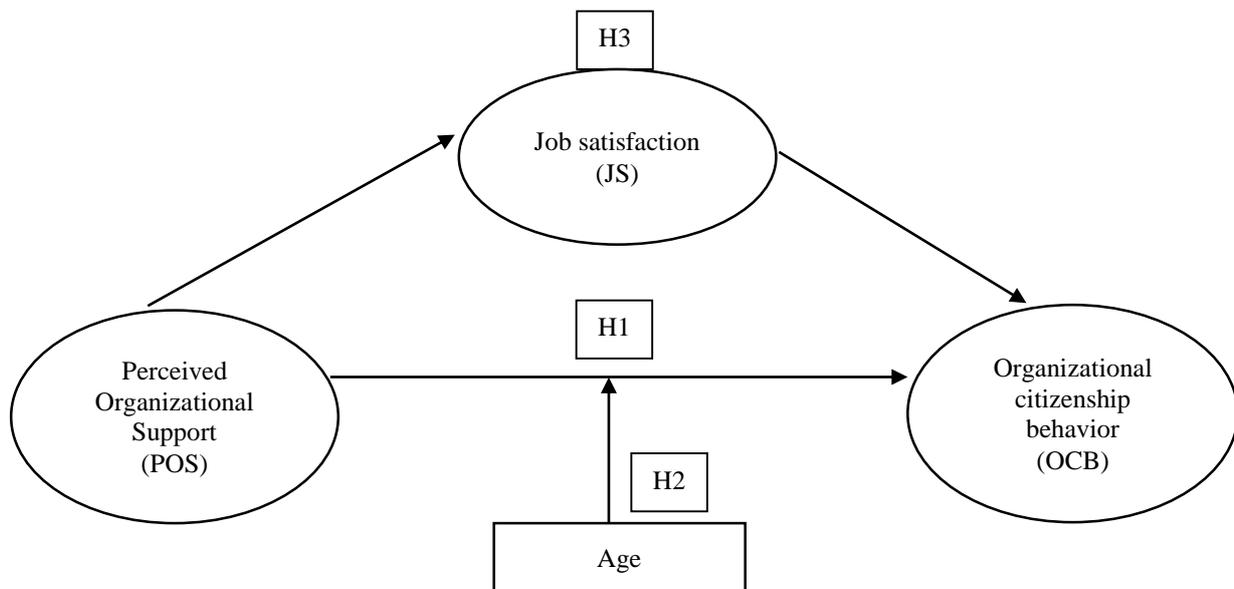


Figure 1. Hypothesized model of relationships.

3. Methods

3.1. Research procedure

The main objective of the quantitative research was to identify the relationship between perceived organizational support and citizenship behaviors, in which job satisfaction is considered to be an important mediator of the process. The analyses of these relationships also took into account employee age.

The research was implemented in the following stages:

First was an analysis of the domestic and foreign literature on citizenship behaviors in organizations and their antecedents, perceived organizational support, and the mediating role of job satisfaction. The literature analysis (desk research, web research) constituted the substantive foundation for the primary research and enabled the key research questions to be formulated.

The second stage involved deriving the research hypotheses from the literature analysis and constructing a hypothetical research model. This stage allowed the variables of importance to the analyzed process to be identified, the understanding of these variables to be expanded and the postulated relations between them to be determined.

The third stage was to design a measurement tool to collect data on the main constructs as part of the proposed hypotheses.

In the next stage, potential respondents were identified, and data collection methods were selected. The research was realized from July to October 2021. It employed an online survey covering employees of public organizations in Poland. We focused on local government units

located all over Poland. We used the public Polish database at <https://www.gov.pl/web/mswia/baza-jst>.

The research was approved by the Scientific Research Ethics Committee of the Nicolaus Copernicus University (Permit No. 19/2021/FT). It should be noted that the study does not fall within the field of clinical psychology.

The study was carried out with the collaboration of the local government units' HR departments.

Before the research, we obtained written consent from the management of each public unit. Finally, the questionnaire was sent by email to 2 101 public offices. The HR department invited potential participants and provided them with the link to the survey. Participants were informed that their participation in the study was entirely voluntary. An invitation appeared over the study in which participants were informed about the purpose of the study. Respondents were previously informed that the survey was only about their beliefs about themselves. Before starting the study, each respondent consciously verbally consented to participate. There was no remuneration for participating in this study. The responses of the respondents were anonymous. They could withdraw at any time. Respondents entered their answers directly online.

In total, the authors received 1 130 correctly completed questionnaires (the data were found to have no missing values). Missing values, outliers, and multicollinearity were examined since they might have an impact on the validity of the findings.

In the fifth stage, the data collected during the research were subjected to statistical analyses using structural equation modeling (SEM).

In the final stage, the research hypotheses were verified, the research results were discussed, the contribution of the conducted research to management theory and practice was indicated, and the research limitations were specified.

3.2. Measures

The research process was based on designing measuring instruments to collect data on the main constructs under the proposed hypotheses. The studied variables were measured using a set of items derived by adapting existing research tools that were selected based on the literature review.

The questionnaire consisted of 19 items from the literature that measure basic constructs such as perceived organizational support, organizational citizenship behavior, job satisfaction and the demographic characteristics of respondents (indicated in Table 1), which acted as control variables.

To measure job satisfaction, following Judge, Bono and Locke (2000), a shortened five-item version of the Brayfield and Rothe (1951) scale was used. An example item is "I find real enjoyment at work". The six-item scale from Shanock and Eisenberger (2006) (the short scale version developed by Eisenberger et al. (1986)) was used to measure POS. An example item is

“My organization strongly considers my goals and values”. The eight-item scale by Lee and Allen (2002) was used to measure OCB. A sample item from the scale is “Attend functions that are not required but that help the organizational image”.

All items were rated using a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The survey was translated from English into Polish by two independent experts. The agreed Polish version was back-translated into English by another expert with a satisfactory degree of convergence with the original.

3.3. Description of the research sample

The quantitative study was the main stage of the procedure carried out in order to empirically verify the hypothetical model. The survey covered 1310 respondents. Table 1 shows the demographics of the study participants. Overall, 79.1% of the participants were female and only 20.9% were male. Half of the total group of respondents were over 40 years old (62.2%) and over 66.2% had organizational tenure of more than 15 years. In addition, only 65 (4,9%) of the participants had secondary education, 105 (8%) held bachelor’s degree, 1140 (87%) held a master’s degree level of education or above. The majority of respondents (60%) worked in local government units located in cities with up to 50,000 inhabitants.

Table 1.
Respondent profiles

Characteristics		Full Sample (n = 1310)	
		Frequency	Percentage
Gender	Female	1 036	79.1
	Male	274	20.9
Age	under 30	104	7.9
	31–40	391	29.8
	41–50	489	37.3
	51–60	253	19.3
	over 60	73	5.6
Organizational Tenure	Less than 5 years	92	7.0
	5–15	351	26.8
	15–25	461	35.2
	25–35	256	19.5
	Over 35	150	11.5

Source: Own research.

3.4. Data analysis methods

The current study used SPSS Amos for data analysis purposes. The correlations and reliability were tested using SPSS, whereas confirmatory factor analysis and hypothesis testing were conducted with AMOS. To test for homogeneity and internal consistency, Cronbach’s alpha statistic and convergent validity were calculated. Discriminant validity was checked by confirmatory factor analysis. The hypotheses were tested by structural equation modelling (SEM), which allows the researcher to describe unobservable latent variables. The model was

estimated in the SPSS Amos 16 package using the maximum likelihood method. The adopted level of significance was 0.05. Additionally, results were confirmed by bootstrap analysis with 5000 samples.

3.5. Measurement model

The reliability and validity of the scales were tested by Cronbach's alpha statistic, composite reliability (CR) and average variance extracted (AVE). Table 2 contains values of the statistics.

All values of Cronbach's alpha statistics were above 0.7, which means the results are reliable (Nunnally, 1978). Furthermore, the composite reliability (CR) was between 0.83 and 0.92 for all factors, which exceeded the recommended value: 0.7. Every construct also has an average variance extracted (AVE) higher than 0.5 and fulfills the Fornell-Lacker criterion. All measures confirm good reliability, and composite and convergent validity of the scales used (Fornell, Larcker, 1981; Tavakol, Dennick, 2011). Factor loadings were higher than 0.5 and statistically significant for all analyzed variables (Hair et al., 2006).

Table 2.

Assessment of the measurement model (construct reliability and validity)

Factor	Cronbach's alpha	CR	AVE
Perceived Organizational support	0.917	0.919	0.695
Job satisfaction	0.892	0.897	0.687
Organizational citizenship behavior	0.786	0.829	0.501

Source: Own research.

This article used AMOS 16. (Chicago: IBM SPSS) to carry out the CFA, comparing the benchmark model (four-factor model) with the competition models (one-, two-, and three-factor model). The degree of each model's index superiority and inferiority is listed in Table 3.

Table 3.

Confirmatory factor analysis

Factor	Question	Loadings	P value
Perceived Organizational Support	My organization values my contribution to its well-being.	0.818	
	My organization really cares about my well-being.	0.871	0.000
	My organization strongly considers my goals and values.	0.914	0.000
	My organization shows very little concern for me. (R)	0.792	0.000
	My organization takes pride in my accomplishments at work.	0.765	0.000
Job satisfaction	I find real enjoyment at work.	0.882	
	I feel fairly satisfied with my present job.	0.878	0.000
	Most days I am enthusiastic about my work.	0.860	0.000
	I consider my job to be rather unpleasant. (R)	0.679	0.000
Organizational citizenship behavior	Willingly give my time to help others who have work-related problems.	0.508	
	Assist others with their duties.	0.563	0.000
	Attend functions that are not required but that help the organizational image.	0.801	0.000
	Offer ideas to improve the functioning of the organization.	0.806	0.000
	Take action to protect the organization from potential problems.	0.797	0.000

Source: Own research.

We can see that the fit indices for the benchmark model are obviously superior to those of the other three models, indicating that the three variables used in this article (Perceived Organizational Support, Job Satisfaction, Organizational Citizenship Behavior) are independent of each other and have high discriminative validity. Model D has the best model fit indicators.

4. Results

4.1. Descriptive statistics and correlations

Table 4 summarizes the means, standard deviation and correlations for all variables. Correlations between all analyzed variables are statistically significant. Organizational citizenship behavior in particular is positively related to organizational support (0.388), job satisfaction (0.454) and age (0.211). Furthermore, between job satisfaction and organizational support, a positive correlation also exists (0.670). In table 4, the HTMT ratio was also calculated to check discriminant validity. The Heterotrait–Monotrait Ratios (HTMT) between all three constructs were below 0.9, which means that the discriminant validity was ensured (Henseler et al., 2015).

Table 4.

Means, standard deviation, and correlations

Variables	Mean	s.d.	1	2	3
1. Organizational support	4.410	1.292	(0.834)		
2. Job satisfaction	5.141	1.179	0.670**	(0.829)	
3. Organizational citizenship behavior	5.235	0.867	0.388**	0.454**	(0.707)
4. Age	41–50 years ⁽¹⁾	-	0.128**	0.140**	0.211**

Notes: (1) – Median, *p < 0.05, ** p < 0.01, Values in parentheses are square roots of AVE.

Source: Own research.

4.2. Hypothesis testing

To test the hypothesis that job satisfaction is a mediator between organizational support and organizational citizenship behavior, three structural equation models were estimated. First, the relations between organizational support and job satisfaction (model 1) or organizational citizenship behavior (model 2) were checked. In the last model, job satisfaction was incorporated into the regression equation as a mediator between organizational support and organizational citizenship behavior. To our approach we adopted the procedure described in Song et al. (2020). The results obtained in all three models are presented in Table 5.

Table 5.*Results of estimated models (basic and with the mediating effects of job satisfaction)*

Variable	Job satisfaction	Organizational citizenship behavior (OCB)	
	Model 1	Model 2	Model 3
Perceived Organizational support	0.670***	0.387***	0.151***
Job satisfaction			0.355***
RMSEA	0.069	0.081	0.073
IFI	0.989	0.961	0.955

Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Source: Own research.

Organizational support was significantly related to both: job satisfaction (Model 1, $\beta = 0.670$, $p < 0.001$) and organizational citizenship behavior (Model 2, $\beta = 0.387$, $p < 0.001$). After including job satisfaction in the main model, the organizational support still has a statistically significant (though smaller) effect on organizational citizenship behavior (Model 3, $\beta = 0.151$, $p < 0.001$). Furthermore, job satisfaction influences OCB (Model 3, $\beta = 0.355$, $p < 0.001$). This means that job satisfaction partly mediates relationships between these two variables (organizational support and organizational citizenship behavior).

Although goodness-of-fit indicators for Model 3 are satisfied ($RMSEA < 0.08$, $IFI > 0.95$), the indirect effect of organizational support on OCB via job satisfaction was additionally checked using a bias-corrected bootstrapping procedure. Based on 5000 samples, the low and high limit of bias-corrected 95% confidence intervals were estimated for indirect effect (Byrne, 2010). As shown in Table 6, the indirect effect of organizational support on organizational citizenship behavior via job satisfaction is 0.237 and is statistically significant (the confidence interval does not contain 0 (Byrne, 2010)).

Table 6.*Indirect effects of organizational support (via job satisfaction) on OCB*

Path	Indirect Effect	Standard error	Low limit	High limit
Perceived Organizational support→Job satisfaction→OCB	0.237	0.032	0.175	0.302

Source: Own research.

The hypothesis that age is a moderator of relationships between organizational support and organizational citizenship behavior was tested by the four calculated models. The first model contains no predictive variables. In the second model, organizational support was added, while age was added in the third, and cross-level interactions between age and organizational support in the last. This is in line with the approach proposed by, *inter alia*, Kanwal et al. (2019). The results for all calculated models are presented in Table 7.

Table 7.*Results for cross-level analysis*

Variable	Coefficient	s.e.	P value	X ²	RMSEA	IFI
1. Null model				32.902	0.156	0.932
2. Organizational support	0.387	0.016	0.000	9.660	0.081	0.960
3. Age	0.165	0.015	0.000	8.274	0.075	0.958
4. Organizational support x Age	0.596	0.027	0.000	7.193	0.069	0.970

Abbreviations: χ^2 , Chi square; IFI, Incremental Fit Measures; RMSEA, Root Mean Square Error of Approximation.

Source: Own research.

The results for the last model show that age significantly and positively moderated the relationship between organizational support and organizational citizenship behavior ($\beta = 0.596$, $p < 0.05$). Model four also has the best value of goodness-of-fit measures, which confirms that age should be included in the model as a moderator.

Furthermore, Table 5 shows that age on its own has an impact on organizational citizenship behavior (Model 3). Greater age was associated with greater intensity of this type of behavior. But to analyze age as a moderator of the relation between organizational support and organizational citizenship behavior, additional models were calculated. First, all respondents were split into three groups according to age. Then the impact of organizational support on OCB was tested in each group separately. The results are presented in Table 8.

Table 8.*Impact of organizational support on OCB in respondents grouped by age*

Variable	Coefficient	s.e.	P value	X ²	RMSEA	IFI
1. All respondents	0.387	0.016	0.000	9.660	0.081	0.960
2. AGE: up to 40	0.255	0.022	0.000	5.590	0.096	0.942
3. AGE: 41 to 50	0.392	0.028	0.000	4.124	0.080	0.959
4. Age: over 50	0.560	0.032	0.000	3.199	0.082	0.963

Abbreviations: χ^2 , Chi square; IFI, Incremental Fit Measures; RMSEA, Root Mean Square Error of Approximation.

Source: Own research.

It is shown that the impact of organizational support on OCB was weakest in the youngest group of respondents ($\beta = 0.255$, $p < 0.05$). Model 2 also has the worst goodness-of-fit measure values. In the last group (Model 4), the influence of organizational support on OCB was the strongest.

5. Discussion and implications

The aim of this study was to obtain empirical evidence to explain the relationship between perceived organizational support and organizational citizenship behavior in public sector organizations through the creation of job satisfaction. Our objective was also to extend the

current knowledge by exploring the extent to which the POS–OCB relationship varies by employee age. The structural equation modeling results allowed interesting conclusions to be drawn. The results confirm the first hypothesis – that POS positively influences the OCB of employees of public institutions. Employees who feel supported by their organization want to reciprocate that support by engaging in citizenship behavior. The higher the level of POS, the greater the level of OCB manifested. This confirms that POS is an important activating factor for OCB in public organizations – unlike in private organizations, where Podsakoff et al. (2000) found that it is individual factors, such as employee characteristics, that are more important than organizational factors such as organizational support. It is in public institutions that high power distance dominates, and formal structures are more important than informal arrangements (Jehanzeb, 2020). Therefore, employee support needs to be more visible and tangible so that this power distance does not lead to experience disconnect. Then employees will not engage in OCB (Danish et al., 2015).

Our results are consistent with empirical evidence from public organizations, including by Singh and Gupta (2015), who conducted research on a group of 200 public sector employees. De Geus et al. (2020) pointed out in their meta-analysis that, in the public sector, POS is recognized as one of the reasons for the higher level of OCB, as our research also confirmed. Jehanzeb (2020) writes that employees' trust in organizational policies and decision-makers is strengthened by organizational support systems and employee development programs, which, in turn, improves OCB. Also, the results of Sumarsi (2019) or Sumarsi and Rizal (2021) indicate that, if employees feel supported by the organization and this support is in line with their norms and expectations, then they feel a stronger commitment to stay in the organization, to voluntarily make additional efforts for the organization and to engage in other organizational citizenship behaviors. We also found a significant relationship between POS and OCB. Organ noted that employees' positive attitudes towards the organization (such as perceived organizational support) may be even more closely related to their extra-role behaviors than to their in-role behaviors (Organ, 1988). Wayne et al. (1997) argue that employees strive for a balance in the exchange relationship with the organization by displaying behavior appropriate to the level of commitment and support they receive from the organization.

Additionally, our research confirmed the second hypothesis – that the positive relationship between POS and OCB is moderated by age. The positive effect of POS on OCB is stronger among older employees. This relationship became stronger as the age of the respondents increased. This is the first such discovery in the public sector. This is in line with Sing and Singh's (2010) findings that older employees are more likely to exhibit citizenship behaviors than younger employees, while requiring more organizational support (Rakowska et al., 2020), with Bal et al. (2010) arguing that they are more aware of what this support should constitute.

Furthermore, the results provide empirical evidence to support the third hypothesis – that job satisfaction mediates the relationship between perceived organizational support and organizational citizenship behavior in such a way that the relationship is strengthened if we add

job satisfaction to it. This means that employees with higher job satisfaction are likely to display more citizenship behavior. This is in line with the findings of van Dick et al. (2008) and Zenker and Rütter (2014) confirming that job satisfaction positively influences organizational citizenship behavior. De Geus' (2020) analyses of public organizations also confirmed that job satisfaction is an important factor in OCB growth. The results of Yeo et al. (2013) clearly indicate that job satisfaction led to higher levels of OCB in the public organizations studied. Previous studies have also indicated the relationship between perceived organizational support and OCB, but there was a research gap on the relationship between these variables, including on job satisfaction as a mediator. Although OCB is behavior that is not expected to be rewarded, our research shows that POS improves employee satisfaction and encourages engagement in citizenship behavior. Therefore, the high awareness of the organization's support, which the employee really feels, builds job satisfaction, which in turn will encourage the employee to display extra-role behaviors. This, therefore, indicates the indirect existence of a social exchange mechanism between the leader of a public organization and his subordinates. Our results also indicated the use of reciprocal norms in organizational support theory, which explains how employees who feel cared for, supported, and enabled by the organization would return the good by displaying positive behavior in the form of OCB.

The results of our research confirm results obtained in contexts other than that of public organizations, as well as in other configurations of dependencies, e.g. the role of job satisfaction in mediating organizational justice and organizational citizenship behavior (Fachrudin and Sholihin, 2021). Relevant studies on these issues from the perspective of public organizations are still few. Therefore, our research enriches the literature on public organizations with an analysis of the relationships between perceived organizational support and organizational citizenship behavior taking into account job satisfaction as a mediator of this relationship. In addition, our results are a response to the calls of other authors regarding the need to include moderators in the POS-OCB relationship in the form of, for example, the age of the respondents (Meiske, 2018).

5.1. Practical implications

The research results also have some practical implications. They can contribute to a better understanding by managers and HR professionals of the importance of organizational support for the development of employees' citizenship behavior and encourage them to use activities and HR practices that would bring about such support. As Hammer et al. (2011) suggest, it is worthwhile for organizations to adopt policies and actions that will positively influence employees' perceptions of organizational support, because, if they feel supported by their organization, they are more likely to engage in citizenship behavior (Lambert, Lambert, 2000). In order to improve POS, we propose that public organizations take care of a fair system of reward and equal treatment of employees, especially in terms of supporting them in the performance of their duties. The research results proved that the positive relationship between

POS and OCB is moderated by age. This relationship is stronger for older workers. Our discovery is disturbing. Therefore, our recommendation is that public organizations in which key positions have been occupied by the same elderly people for many years should open up to young people. These organizations should be focused on positive relations with these employees as well. For people under 40, personal career and development are very important (Ok, Vandenberghe, 2016). The organization should therefore invest in these employees and offer them career advancement. If career-minded employees receive support to develop themselves, they are likely to be more likely to engage in OCB.

As job satisfaction has been proven to mediate the relationship between perceived organizational support and citizenship behavior, organizations should focus on how to increase job satisfaction. This applies especially to identifying factors that might support employees, because the perception of this support influences citizenship behaviors that bring multiple benefits to the organization. It is worth paying attention to the employment policy, development opportunities or communication in the organization. It is also important to take into account the age structure of employees and to identify the needs of different generations so that solutions intended to increase job satisfaction can be adapted to the expectations of different generations.

Managers should pay attention to the extent to which employees feel supported by the organization and take steps to ensure that employees perceive the organization as supportive. An important role may be played by shaping the right organizational culture, positive working environment, and leadership style, as research suggests that attributes such as job satisfaction are important factors influencing OCB in the public sector (de Geus et al., 2020). Consequently, the sense of support from the organization may, according to the rule of reciprocity, improve commitment to achieving the organization's goals (this is indicated, for example, by the findings of Sumarsi (2019) or Firmansyah et al. (2022), who confirm that organizational commitment mediates the relationship between perceptions of organizational support and citizenship behavior) but may also engender other positive employee attitudes and behaviors, including citizenship ones. The research results may therefore be useful for both practitioners and other researchers engaged in this issue.

5.2. Conclusions

The issues raised, both in the literature analyses and in the empirical research, have captured how perceived organizational support is related to organizational citizenship behavior and job satisfaction of employees in public institutions. This helped to build a picture of these relationships and their strength. The research confirmed that perceived organizational support influences employees' citizenship behavior, and job satisfaction was found to be an important mediator of these relationships. Furthermore, the age of the employee was found to be relevant to these relationships. It follows that the study of individual relationships is useful for the development of organizational behavior theory and management practice in shaping desirable employee attitudes and behaviors. In addition, conducting research in public organizations has

helped to extend the findings on the attitudes and behaviors of employees in this sector. It indicated that, in such organizations, although it appears that the sense of service and commitment to a mission is a sufficient premise for OCB, job satisfaction is important for the development of organizational citizenship behavior.

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