

## THE KEY FACTORS ASSOCIATED WITH PUBLIC HEALTH WORKERS' INTENTION TO LEAVE A JOB

### KLJUČNI FAKTORI POVEZANI SA NAMEROM JAVNOZDRAVSTVENIH RADNIKA DA PROMENE POSAO

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#### Abstract

A particularly important issue in healthcare settings is public health professionals' intention to leave their job, which may exacerbate both existing and forecasted public health workforce shortages and jeopardize the health system's performance. The rate of intention to leave a job varies across countries and among different profiles of health workers. It is well documented that job dissatisfaction facilitates the intention to leave. Organizational factors (such as job-related stress, interpersonal relationships with colleagues and supervisors, opportunities for professional development, nature of work, and organizational culture) are considered to have the most significant impact on public health workers' intention to leave a job. However, the relevance of individual factors (gender, age, marital status) and other factors (e.g., number of family members, community satisfaction, and family responsibilities) is less clear. It is of great importance that policy-makers and managers in health facilities implement effective retention strategies in order to ensure continued delivery of both health care and public health services, and prepare for response to future crises. Retention strategies should be oriented towards ensuring public health workers' health and safety, increasing job satisfaction, recognizing their value and achievements, and creating supportive work environments.

#### Keywords:

health workers,  
public health,  
intention to leave a job

## Sažetak

Važan i sve veći problem koji može doprineti već postojećem, kao i predviđenom nedostatku radne snage u oblasti javnog zdravlja i ugroziti ukupni učinak zdravstvenog sistema jeste namera javnozdravstvenih radnika da promene posao. Prevalencija namere promene posla među zdravstvenim radnicima se razlikuje među zemljama i profilima. Potvrđena je negativna korelacija između zadovoljstva poslom i namere napuštanja posla. Organizacioni faktori kao što su stres na poslu, međuljudski odnosi sa kolegama i nadređenima, mogućnosti za profesionalni razvoj, priroda posla i organizaciona kultura značajno utiču na planove javnozdravstvenih radnika u vezi sa poslom. S druge strane, uticaj individualnih faktora (na primer, pol, godine, bračni status), kao i drugih faktora (broj članova porodice, zadovoljstvo zajednicom, porodične obaveze) još uvek nije razjašnjen. Da bi se osigurao kontinuitet pružanja kliničkih i javnozdravstvenih usluga, kao i adekvatan odgovor na buduće krize, potrebno je da donosioci odluka i menadžeri u zdravstvenim ustanovama implementiraju efektivne strategije zadržavanja javnozdravstvenih radnika, koje uključuju unapređenje njihovog zdravlja i bezbednosti, zadovoljstva poslom, zatim uvažavanje i vrednovanje njihovog rada, kao i kreiranje podržavajućeg radnog okruženja.

### Ključne reči:

zdravstveni radnici,  
javno zdravlje,  
namera promene posla

## Introduction

Public health workers (PHWs), responsible for delivering the Essential Public Health Services, have made many contributions to the impressive health gains over the last century, including the extension of life expectancy and improved quality of life, reducing infant and child mortality, reducing and eliminating numerous infectious diseases, and control of the burden of non-communicable diseases (1). Despite the PHW's vital role in ensuring the health and safety of the population, health systems face great workforce challenges that threaten public health. They include an aging workforce, skill shortages, issues regarding education and professional development, increasing mobility (i.e. international migration), difficulty recruiting new workers, and their retention within the public health workforce. All these challenges can lead to substantial workforce losses (2-4). According to the estimates of the World Health Organization, by 2030, for the provision of universal health care, there will be a shortage of approximately 18 million health workers (HWs), globally (5). Since the retention of employees within the health workforce represents one of the most important issues that every health system needs to address to overcome the shortage of staff, examination of prevalence and determinants of intentions to leave a job in healthcare settings is of great importance.

Numerous studies have examined the intention to leave a job among doctors and nurses in countries around the world, while in developed countries it is being explored also among other profiles of HWs, including PHWs (6-10).

In-depth research on HWs' turnover intention is of clear importance to explore the processes and factors on which such an intention is based (11). Understanding the intention to leave the job as well as identifying its associated factors, allows organizations to implement the retention measures timely and prevent the actual turnover and its serious negative implications for the continuity, quality of services, and overall performance of the organization (12).

## Intention to leave a job (definitions, models, and determinants)

The concept of the intention to leave a job, its causes and consequences, have been intensively studied since the 1970s. Although the intention to leave a job does not always have to result in actual employee turnover, it has been considered its strongest predictor. This is based on Ajzens' theory of planned behavior and substantiated by numerous studies which have effectively provided evidence of a significant correlation between turnover intentions and real turnover (13).

There are several definitions of the intention to leave the job, and all basically have a conscious desire of employees to leave their job. In 1981, Price and Mueller defined the intention to leave the job as "an expressed intention of employees leaving their current job in the near future" (14). According to Mobley, it is "an employee's voluntary plan to leave the organization, which can be harmful to the organization" (15). Tett and Meyer in their definition focused on job alternatives, and it reads: "conscious willfulness to seek other alternative job opportunities in other organizations" (16). Scholars often cite Vanderberg's and Nelson's definition: "intention to leave is an individual's own estimated probability (subjective) that they are permanently leaving the organization at some point in the near future" (17). According to Regts and Molleman, the intention to leave is "the intention that employees have to leave the organization to which they belong, despite having the opportunity to remain in it" (18).

Numerous models have been proposed to explain the phenomenon of intention to leave a job, but none has been generally acknowledged so far (19). The earliest model, named Decision to participate Model, was proposed in 1958 by March and Simon (20). This model, alongside Mobley's Turnover Decision Process (21) model and Jackofsky's Integrated Process model (22), has mainly directed the path of turnover research. Their common feature is that they use the job satisfaction approach to illuminate the phenomenon of turnover intention.

March and Simons' Decision to participate Model, highlighted the importance of equilibrium between employees' participation in the organization and incentives offered by the organization. According to this model, the two independent factors that affect the intention to leave a job are as follows: perceived desirability to leave (controlled by organizational size and job satisfaction) and perceived ease of movement (determined by individual differences in gender, age, tenure, and ability) (20). According to Mobley's Model of the Turnover Decision Process, one's plan to leave a job comprises a series of cognitive phases, which begins with an assessment of the satisfaction with the current job. This is followed by an evaluation of the advantages and disadvantages of leaving the job and deliberation of other job opportunities, which eventually can result in leaving or staying. Mobley's Turnover Decision Process model suggested that there are determinants other than the satisfaction that can explain turnover intention (i.e. antecedents), including various personal, organizational, market, and other factors (21). In the Integrated Process model Jackofsky underscored the importance of the direct inverse relationship between an employee's job performance and turnover (22).

As opposed to a job satisfaction approach, which suggests that job-related factors determine the intention to leave a job, is an embeddedness approach that emphasizes all of the factors that keep an employee on the job. The Job Embeddedness Model, created by Mitchell and al., suggests three main groups of decision factors that can affect the retention of staff: i) links- connections between an employee and his/her colleagues, friends, and the community which bound him/her to a job; ii) fit- an individual's anticipated compatibility with a current workplace and with the community; and iii) sacrifices- an employee's perceived convenience that may be lost by changing a job (23). Studies have already examined how job embeddedness affects the intention to leave a job in a health care setting (24).

Existing literature suggests that the intention to leave a job can be influenced by multiple factors, commonly classified into three broad categories, i.e. individual, organizational and external factors. Additionally, so-called mediating factors, such as job satisfaction, are often studied as a separate category (25).

As the impact on the employees' intention to leave a job is concerned, both cognitive and non-cognitive individual factors are examined. Studies suggested that personality affects the perception of both organizational support and organizational justice. A lower degree of intention to leave the job among employees who have a positive perception of organizational support and organizational justice is observed (25, 26). Despite the scholars' efforts, the consistent connection between socio-demographic characteristics (i.e. non-cognitive individual factors such as gender, ethnicity, tenure, educational level, managerial position) and turnover intention has not been found (25).

In terms of influencing the intention to leave a job, the most important are organizational factors. The job stressors (i.e. increased workload, extreme fatigue, role

ambiguity, the conflict between work and family responsibilities, lack of support from colleagues and supervisors, etc.) create the feeling of stress among employees that may lead to intentions of leaving a job and eventually the actual leaving (25, 26). Job stress in health systems has been a long-standing concern and affects all profiles of HWs, although work-related stressors differ among health professions (27). Therefore, the relationship between work-related stress and the intention to leave a job should not be overlooked. To retain skilled and motivated staff, managers need to create working conditions in which sources of job-related stress are minimized. The other organizational factors which highly influence an employee's intention to leave a job are interpersonal relationships with colleagues and supervisors, opportunities for professional development, nature of work, and organizational culture.

Various external factors may also underlie the intention to leave the job. However, they are beyond the organizations' control. According to Mobley et al., the external factors related to employees' intention to leave a current job are the level of household income, family commitments, and employment opportunities (28). Recent studies suggested also other factors associated with an employee's personal life (e.g. family structure), as well as social life (e.g. perceived community support) that can influence one's decision to leave (26).

A moderate to a strong relationship between job dissatisfaction and the intention to leave is consistently confirmed in the native literature and in numerous studies as well. Since individual and organizational factors usually are reasons behind job dissatisfaction, it is considered mediating factor (25, 29).

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## Prevalence of intention to leave a job among public health workers

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A particularly important issue in healthcare settings is public health workers' intention to leave their job, which can exacerbate both existing and forecasted public health workforce shortage and jeopardize the health system's performance (30). Numerous studies previously reported different rates of HWs' intention to leave a job. However, when interpreting those findings, it should be borne in mind that the variation among different profiles of HWs as well as among countries might be due to the differences in the socio-economic development, workload, infrastructure in the health institutions, work experience, environment, and due to variations in the study instruments and methodology.

Shen and collaborators, in a recent meta-analysis, revealed that about 47% of general practitioners (GPs) worldwide reported the intention to leave a job. Although no significant differences in turnover intention rates among study sites were found, the prevalence rate of 51% among European GPs was higher than in Asia and Australia/ New Zealand where it was 46% and 43%, respectively (6). Almost two-thirds of nurses in Ethiopia,

Iran, and Lebanon had the intention to leave a job (31-33). However, the prevalence rates were lower in high-income countries. The study conducted in ten European countries has demonstrated that every third nurse intended to leave their current job (7), while in the Canadian study the estimated prevalence was 17% (34). Of particular importance in the light of investment in training and staff shortages is leaving a profession. According to a Swiss study, over 40% of medical-technical workers of various profiles have the intention to leave their profession (35), as well as 9% of European nurses (7). Approximately 30% of Chinese primary HWs have the intention to leave a job, with the highest prevalence of 41% among those working in the community (8). A high turnover intention rate of 61% was also observed among pharmacists in Saudi Arabia (9). According to Serbian studies, 14.3% of workers in the public health sector had an intention to work abroad (36), as well as 80% of medical students (37) and 70% of nursing graduates (38).

The intention to leave a job among PHWs has been researched most intensely in the the USA (10, 39-44). According to the national survey among permanently employed PHWs in the USA, the prevalence of intention to leave a current job for reasons other than retirement in 2014 and 2017 was 21% and 29%, respectively (39, 43). Among CDC employees, over a quarter planned to leave a current job (40). Approximately 28% of PHWs employed in local and regional health departments were considering leaving their job which was higher compared to federal and state levels (41). The fact that 33% of PHWs younger than 33 years (compared to 22% of older ones) plan to leave their jobs deserves particular attention in terms of creating tailored retention strategies (44).

Issues of the HWs' commitment to work are becoming even more important during a crisis, such as the COVID-19 pandemic. Outbreaks of infectious diseases shape HWs' perspectives toward the job and may increase turnover intention, as was demonstrated in studies conducted in Peru and Qatar (45, 46). According to a recent Saudi Arabian study the reported rates of intention to leave a job among medical doctors, nurses, and paramedical staff in primary healthcare centers were 34.7%, 39.4%, and 27.1%, respectively (47). The average turnover intention among Iranian nurses was 41.7 (on a scale of 15 to 75) (48), while in the UK 57% of the nurses considered leaving in 2021 (49). Some scholars, however, argue that considering the job as a moral imperative during pandemics may decrease the turnover intentions among front-line staff (50).

The unprecedented pressure exerted by the pandemic has presented challenges, also, to public health professionals who make up an invisible army in the battle against COVID-19 and manage tasks such as epidemiological investigation and contact tracing, health promotion, organizing quarantine measures, conducting vaccination campaigns, etc. Previous studies revealed low willingness to work among PHWs during outbreaks (51). An American study highlighted the impact of engagement in the fight against COVID-19 on the future career plans of PHWs

since almost 24% more of them intended to leave a job in public health within the next three years in September (38.4%) compared to their plans reported in early 2020 (14.8%) (52). According to a recent study conducted during the COVID-19 pandemic, every fifth PHW in Serbia planned to leave a job (53). Before the pandemic, in 2019, the share of PHWs who planned to change jobs in Serbia was around 26% (54).

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## Factors associated with public health workers' intention to leave a job

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According to a recent Serbian study, 20.3% of the PHWs were considering leaving their current job within the next five years; 9.8% to work abroad, 8.2% to work in a sector other than healthcare, and 2.3% to work in the private health sector (53). In other words, half of the total number of PHWs, who reported intention to leave their current job within the next five years, wanted to go abroad. Increasing migration flows of European health professionals in the last years from low to high-income countries can create additional problems of shortage of skilled workforce (55). Gačević et al. in a study conducted among all workers in the Serbian public health sector demonstrated that 14.3% of participants had an intention to work abroad, especially those who are dissatisfied with the job, males, those younger than 55 years, nurses, staff from institutions at the secondary and tertiary level, those without managerial position and personnel having dual practice (36).

Most literature and research have consistently confirmed that job satisfaction heavily affects employees' decisions regarding leaving a job. Job satisfaction directly affects the employees' decision to leave a job, presenting a key mediating variable between job-related factors and turnover intention (25,29). Numerous studies among health professionals (including PHWs) support these allegations (6, 8, 9, 33, 35, 39, 42).

In contrast, there is an inconsistency of research evidence regarding the association of demographic characteristics of HWs with their intention to leave the job. Some studies have identified the male sex as a predictor of intention to leave, indicating that men are more likely to be dissatisfied with their jobs and have higher job expectations than women (7, 8, 36, 56). Such is the study among the US governmental public health workforce (40), as well as a recent Serbian study (53), indicating that female PHWs, are probably aware of the comfort of working in public health, such as the absence of overtime and on-call duty, caring for seriously sick patients and dealing with their dissatisfied relatives, facing suffering and fatalities, etc (57). However, there are numerous studies in which gender influence on intention to leave a job has not been shown (6, 9, 10, 43, 45). Many researchers found an inverse relationship between age and intentions to leave a job (8, 36, 39, 43, 56). Mobility is often more pronounced among young health workers than among older ones. Young health workers are willing to advance their education and careers, which may lead to greater mobility. In public health, the issue of the



attractiveness of jobs to new generations also emerges (57). Contrary to this, Al-Muallem and Surimi revealed that older pharmacists were more likely to leave the job than the younger ones (9). In the ten European countries analysis, older nurses were more likely to consider leaving their profession (7), while age has not determined turnover intention in the meta-analysis among GPs by Shen et al. (6). Other individual characteristics that potentially predict the HWs' intention to leave a job might be as follows: non-white race, being single, working in a remote region, working part-time, having additional practice, etc (7, 8, 36, 39, 53, 56).

While findings on socio-demographic variables have varied across studies, the evidence on the association of mental health problems, work-related stress, and burnout with HWs' intentions to leave have been consistent (58). According to the meta-analysis of He et al., HWs with higher work stress had three times higher risk of turnover intention (8). Burnout was cited as the main reason for turnover intention for both European and US nurses (7, 59). In the last two years, while fighting against the pandemic, HWs have been exposed to additional sources of work-related stress which undoubtedly negatively impacted their mental health and, consequently, commitment to work (6, 45, 46). During the pandemic, self-perceived low efficacy, extreme fatigue, and stress have been recognized to be contributors to burnout and eventually turnover among health professionals, including PHWs (52). Serbian study among PHWs showed that every one-unit increase in the self-perceived job-related stress during the COVID-19 pandemic resulted in an increase in the odds of considering leaving a current job by 30% (53). Several studies have highlighted the salary as one of the main predictors of the intention to leave the job among HWs, regardless of the profile (6, 9). However, the pay did not seem the most significant factor for leaving the job among both the US government (60) and Serbian PHWs (53). Studies have revealed a significant association between HWs' turnover intention and other job-related factors, such as opportunities for learning and professional development, promotion prospects, leadership style, interpersonal relationship, satisfaction with respect, valuation of one's work, job autonomy, etc (6-9, 31, 49, 53, 56).

The study of He et al. did not find a significant relationship between external factors (i.e. number of family members, community satisfaction, family responsibilities) and turnover intention in the meta-analysis among primary HWs in China (8). However, decreasing social support, as well as work-family conflict, may intensify HWs' turnover intention, especially during crises (46, 48).

## Conclusion

The availability and adequate distribution of skilled, motivated, and capable PHWs are crucial for the effective delivery of the Essential Public Health Services and for improving the health of the population. It is expected that public health workforce challenges and the adverse physical and mental health outcomes associated with prolonged

response to the crisis will negatively impact public health practice in the long run. Therefore, it is essential that policymakers and healthcare managers implement effective retention strategies in order to reduce PHWs' turnover and ensure continued delivery of public health services, and preparedness for future crises.

Research demonstrates a consistent association between job-related (i.e. organizational) factors and PHWs' intention to leave their job, while the relevance of demographic (i.e. individual) and external factors are less clear and vary across the studies. Since no factor influences employees' intention to leave work in isolation, it is of great importance that public health facilities use a holistic approach when creating retention strategies (11). Alongside ensuring PHWs' health and safety, strategies should be oriented towards increasing job satisfaction, recognizing their value and achievements, and creating supportive and productive work environments. Additionally, the management interventions should be oriented towards strategies that are supportive of innovation and creativity to attract and retain the new generation of PHWs.

## Literature

1. Foldspang A. From potential to action. Public health core competencies for essential public health operations. A manual. Brussels: Association of Schools of Public Health in the European Region; 2016.
2. Yeager VA, Wisniewski JW, Amos K, Bialek R. Why Do People Work in Public Health? Exploring Recruitment and Retention Among Public Health Workers. *J. Public Health Manag. Pract.* 2016; 00(00):1-8.
3. Santric- Milicevic M, Vasic M, Edwards M, Sanchez C, Fellows J. Strengthening the public health workforce: An estimation of the long-term requirements for public health specialists in Serbia. *Health Policy.* 2018; 122:674-80.
4. Tripković K, Šantrić- Miličević M, Miladinović Mandić M, Kovačević L, Bjegović- Mikanović V, et al. Implementation of the Workload Indicators of Staffing Need (WISN) method in determining staff requirements in public health laboratories in Serbia. *Disaster Med. Public Health Prep.* 2020; 1-9.
5. World Health Organization. Global strategy on human resources for health workforce 2030. [Internet]. 69th World Health Assembly. 2016 May 20-28; Geneva, Switzerland. Geneva: WHO; 2016.
6. Shen X, Jiang H, Xu H, Ye J, Lv C, Lu Z, Gan Y. The global prevalence of turnover intention among general practitioners: a systematic review and meta-analysis. *BMC Fam. Pract.* 2020;21:246.
7. Heinen MM, van Achterberg T, Schwendimann R, Zander B, Matthews A, Kozka M et al. Nurses' intention to leave their profession: A cross sectional observational study in 10 European countries. *Int. J. Nurs. Stud.* 2013; 50:174-84.
8. He R, Liu J, Zhang W-H, Zhu B, Zhang N, Mao Y. Turnover intention among primary health workers in China: a systematic review and meta-analysis. *BMJ Open.* 2020; 10:e037117.
9. Al-Muallem N, Al- Surimi KM. Job satisfaction, work commitment and intention to leave among pharmacists: a cross-sectional study. *BMJ Open.* 2019; 9:e024448.
10. Sellers K, Leider JP, Harper E, Castrucci BC, Bharthapudi K, Liss-Levinson R, et al. The Public Health Workforce Interests and Needs Survey: The First National Survey of State Health Agency Employees. *J Public Health Manag Pract.* 2015; 21(Suppl 6):S13-27.
11. Chen G, Tang Y, Su Y. The Effect of Perceived Over-Qualification on Turnover Intention From a Cognition Perspective. *Front. Psychol.* 2021; 12:699715.

12. González R, Cockburn W, Irastorza X, Houtman I, Bakhuis Roozeboom M. European Survey of Enterprises on New and Emerging Risks Managing Safety and Health at Work; European Agency for Safety and Health at Work, Esener, European Union: Brussels, Belgium, 2010.
13. Ajzen I. The theory of planned behaviour. *Organ. Behav. Hum. Decis. Process.* 1991; 50(2):179-211.
14. Price JL, Mueller CW. A causal model of turnover for nurses. *Acad Manag J.* 1981; 24:543-65.
15. Mobley WH. Employee turnover: causes, consequences, and control. New York, New York: Addison- Wesley Publishing Company Inc, 1982.
16. Tett RP, Meyer JP. Job satisfaction, organizational commitment, turnover intention and turnover: path analysis based on analytic findings. *Pers. Psychol.* 1993; (46):259-93.
17. Vandenberg RJ, Nelson JB . Disaggregating the motives underlying turnover intentions: When do intentions predict turnover behaviour? *Hum Relat.* 1999; (52):1313-36.
18. Regts G, Molleman E. To leave or not to leave: When receiving interpersonal citizenship behavior influences an employee's turnover intention. *Hum Relat.* 2012; 66(193): 192-218.
19. Singh N, Sharma LS. Process Models of Employee Turnover during 1975-1995: A Review, *European academic research.* 2015; III(2).
20. March JG, Simon HA. *Organizations.* New York: John Wiley, 1958.
21. Mobley WH. Intermediate linkages in the relationship between job satisfaction and employee turnover. *J. Appl. Psychol.* 1977; 62:237-40.
22. Jackofsky EF. Turnover and job performance: An integrated process model. *Acad Manage Rev.* 1984; 9:74-83.
23. Mitchell TR, Holtom BC, Lee TW, Sablinski C, Erez M. Why people stay: Using job embeddedness to predict voluntary turnover. *Acad Manage J.* 2001; 44:1102-21.
24. Sun T, Zhao XW, Yang LB, Fan LH. The impact of psychological capital on job embeddedness and job performance among nurses: a structural equation approach. *J. Adv. Nurs.* 2011; 68(1):69-79.
25. Shweta J. Determinants of employee turnover intentions: A review. *Management Today.* 2009; 9(2):26-33.
26. Halawi AH. Stimuli and Effect of the Intention to Leave the Organization. *Eur. Sci. J.* 2014; e - ISSN 1857- 7431.
27. Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Department of health and human services. Exposure to stress. *Occupational Hazards in Hospitals.* DHHS (NIOSH) Publication No. 2008-136, July 2008.
28. Mobley WH, Griffeth RW, Hand HH, Meglino BM. Review and conceptual analysis of the employee turnover process. *Psychol. Bull.* 1979; 86:493-522.
29. Bayarçelik EB, Findikli MA. The Mediating Effect of Job Satisfaction On The Relation Between Organizational Justice Perception And Intention To Leave. *Procedia Soc Behav Sci* 235. 2016; 403-11.
30. Zaheer S , Ginsburg L, Wong HJ, Thomson K, Bain L, Wulffhart Z. Turnover intention of hospital staff in Ontario, Canada: exploring the role of frontline supervisors, teamwork, and mindful organizing. *Hum. Resour. Health.* 2019; 17:66.
31. Gebregziabher D, Berhanie E, Berihu H, Belstie A, Teklay G. The relationship between job satisfaction and turnover intention among nurses in Axum comprehensive and specialized hospital Tigray, Ethiopia. *BMC Nurs.* 2020; 19:79.
32. Chegini Z, AsghariJafarabadi M, Kakemam E. Occupational stress, quality of working life and turnover intention amongst nurses. *Nurs. Crit. Care.* 2019; 24(5):283-89 .
33. El-Jardali F, Dimassi H, Dumit N, Jamal D, Mouro G. A national cross sectional study on nurses' intent to leave and job satisfaction in Lebanon: implications for policy and practice. *BMC Nurs.* 2009; 8(3):1-13.
34. Stewart NJ, D'Arcy C, Kosteniuk J, Andrews ME, Morgan D, Forbes D, et al. Moving on? Predictors of intent to leave among rural and remote RNs in Canada. *J Rural Health.* 2011; 27(1):103-13.
35. Peter KA, Meier-Kaeppeli B, Pehlke-Milde J, Grylka-Baeschlin S. Work-related stress and intention to leave among midwives working in Swiss maternity hospitals – a cross-sectional study. *BMC Health Serv. Res.* 2021; 21:671.
36. Gacevic M, Santric- Milicevic M, Vasic M, Horozovic V, Milicevic M, Milic N. The relationship between dual practice, intention to work abroad and job satisfaction: A population-based study in the Serbian public healthcare sector. *Health Policy.* 2018; 122:1132-9.
37. Santric-Milicevic M, Terzic-Supic Z, Matejic B, Vasic V, Ricketts TC. First- and fifth-year medical students' intention for emigration and practice abroad: A case study of Serbia. *Health Policy.* 2014; 118:173-83.
38. Santric-Milicevic M, Matejic B, Terzic-Supic Z, Vasic V, Babic U, Vukovic V. Determinants of intention to work abroad of college and specialist nursing graduates in Serbia. *Nurse Educ. Today.* 2015; 35:590-6.
39. Liss-Levinson R, Bharthapudi K, Leider JP, Sellers K. Loving and Leaving Public Health: Predictors of Intentions to Quit Among State Health Agency Workers. *J Public Health Manag Pract.* 2015; 21(6 Supp), S91-S101
40. Leider JP, Harper E, Shon JW, Sellers K, Castrucci BC. Job Satisfaction and Expected Turnover Among Federal, State, and Local Public Health Practitioners. *Am J Public Health.* 2016; 106:1782-8.
41. Juliano C, Castrucci BC, Leider JP, McGinty MD, Bogaert K. The Governmental Public HealthWorkforce in 26 Cities: PH WINS Results From Big Cities Health Coalition Members. *J Public Health Manag Pract.* 2019; 25(Suppl 2):S38-S48.
42. Sellers K, Leider JP, Gould E, Castrucci BC, Beck A, Bogaert K, et al. The State of the US Governmental Public Health Workforce, 2014-2017. *Am J Public Health.* 2019; 109:674-80.
43. Bogaert K, Castrucci BC, Gould E, Sellers K, Leider JP, Whang C, et al. The Public Health Workforce Interests and Needs Survey (PH WINS 2017): An Expanded Perspective on the State Health Agency Workforce. *J Public Health Manag Pract.* 2019; 25:S16-S25.
44. Sellers K, Leider JP, Lamprecht L, Liss-Levinson R, Castrucci BC. Using Public Health Workforce Surveillance Data to Prioritize Retention Efforts for Younger Staff. *Am J Prev Med.* 2020; 59(4):562-9.
45. Peru Yanez JA, Jahanshahi AA, Alvarez-Risco A, Li J, Zhang SX. Anxiety, Distress, and Turnover Intention of Healthcare Workers in Peru by Their Distance to the Epicenter during the COVID-19 Crisis. *Am. J. Trop. Med. Hyg.* 2020; 103(4):1614-1620.
46. Nashwan AJ, Abujaber AA, Villar RC, Nazarene A, Al-Jabry MM, Fradelos EC. Comparing the Impact of COVID-19 on Nurses' Turnover Intentions before and during the Pandemic in Qatar. *J. Pers. Med.* 2021; 11(6):456.
47. Al-Mansour K. Stress and turnover intention among healthcare workers in Saudi Arabia during the time of COVID-19: Can social support play a role? *PLoS ONE.* 2021;16(10): e0258101.
48. Mirzaei A, Rezakhani Moghaddam H, Habibi Soola A. Identifying the predictors of turnover intention based on psychosocial factors of nurses during the COVID-19 outbreak. *Nurs Open.* 2021; 00:1-8.
49. Royal College of Nursing. Employment Survey 2021.RCN, London. <https://www.rcn.org.uk/professional-development/publications/employment-survey-2021-uk-pub-010-075>
50. Astin C, Haneen A, Abdulaziz A, Hamasha M, Soren J. Identifying Patterns of Turnover Intention Among Alabama Frontline Nurses in Hospital Settings During the COVID-19 Pandemic. *J. Multidiscip. Healthc.* 2021; 14: 1783-94.
51. Balicer RD, Omer SB, Barnett DJ, Everly Jr GS. Local public health workers' perceptions toward responding to an influenza pandemic. *BMC Public Health.* 2006; 6:99.
52. Stone KW, Kintziger KW, Jagger MA, Horney JA. Public Health Workforce Burnout in the COVID-19 Response in the U.S. *Int. J. Environ. Res. Public Health.* 2021; 18:4369.

53. Tripković K, Šantrić-Milićević M, Vasić M, Šulović MZ, Odalović M, Jovanović VM, et al. Factors Associated with Intention of Serbian Public Health Workers to Leave their Job: A Cross-Sectional, Population-Based Study. *Int. J. Environ. Res. Public Health*. 2021; 18:10652.
54. Institut za javno zdravlje Srbije "Dr Milan Jovanović- Batut". Analiza ispitivanja zadovoljstva zaposlenih u državnim ustanovama Republike Srbije 2019. godine. <https://www.batut.org.rs/index.php?content=2143>
55. Open Society Foundations. Working Together to Address Health Workforce Mobility in Europe. Recommendations for Action. <https://osf.to/HealthWorkforceMobility>
56. Jadoo SAA, Aljunid SM, Dastan I, Tawfeeq RS, Mustafa MA, Ganasegeran K, et al. Job satisfaction and turnover intention among Iraqi doctors - a descriptive cross-sectional multicentre study. *Hum. Resour. Health*. 2015; 13:21.
57. The European Observatory on Health Systems and Policies. Observatory Studies Series No. 24. Public Health in Austria. An analysis of the status of public health. The European Observatory on Health Systems and Policies, 2011. ISBN 978 92 890 0249 3.
58. Søvold LE, Naslund JA, Kousoulis AA, Saxena S, Qoronfleh MW, Grobler C, et al. Prioritizing the Mental Health and Well-Being of Healthcare Workers: An Urgent Global Public Health Priority. *Front. Public Health*. 2021; 9:679397.
59. Warden DH, Hughes RG, Probst JC, Warden DN, Adams SA. Current turnover intention among nurse managers, directors, and executives. *Nurs Outlook*. 2021; 69(5):875-85.
60. Council on Linkages Between Academia and Public Health Practice. Recruitment and Retention: What's Influencing the Decisions of Public Health Workers? Public Health Foundation: Washington, DC, USA, 2016.