

Evaluating Public Health Workforce Satisfaction in San Bernardino County

by

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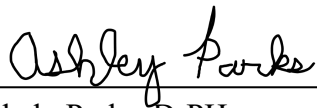
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Abstract

Over the years, public health departments state and local, as well as other public health agencies, have faced challenges with their workforce. Workplace satisfaction is influenced by factors such as supervisor-subordinate relationships, the opportunity for growth and advancement, and skill development, which directly affect attrition rates. The purpose of this study was to examine the difference in job-related satisfaction for employees in a supervisory and non-supervisory position using an independent samples *t*-test. An independent samples *t*-test was also used to evaluate the differences in employees, who do and do not have an intention to leave in the next year, and their average levels of self-reported satisfaction with their job, program, department, supervisor, and job security. A cross-sectional design was utilized to analyze the data gathered in 2021, from a California local jurisdiction public health department. The results demonstrated that there was no significant difference in job satisfaction between individuals working in supervisory and non-supervisory roles. Conversely, a statistically significant difference was found among all five categories of satisfaction, based on the employee's intention to leave or not leave work at the public health department within the next year. As such, further research should aim at developing and improving trainings to support current and future public health professionals.

Keywords: public health, workforce, satisfaction, local health department, supervisory, non-supervisory

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Table of Contents

LIST OF TABLES	II
INTRODUCTION.....	3
OVERVIEW OF THE LITERATURE	3
PUBLIC HEALTH WORKFORCE	4
WORKFORCE PERFORMANCE AND JOB RELATED SATISFACTION	5
SUPERVISORY LEVEL	6
SALARY AND RETENTION RATE	7
PURPOSE OF THE STUDY.....	9
RESEARCH QUESTIONS	9
HYPOTHESES.....	9
METHOD	11
DESIGN	11
PROCEDURES.....	11
PARTICIPANTS.....	11
INDEPENDENT AND DEPENDENT VARIABLES	12
DATA ANALYSIS	13
RESULTS	14
DEMOGRAPHIC CHARACTERISTICS	14
MAJOR FINDINGS	15
DISCUSSION	18
SUMMARY OF MAJOR FINDINGS.....	18
PUBLIC HEALTH IMPLICATIONS	19
STUDY LIMITATIONS.....	21
CONCLUSION	22
REFERENCES.....	23

List of Tables

Table 1.Characteristics of Participants	15
Table 2. Independent Samples T-Test of Job Satisfaction Based on Position.....	16
Table 3. Independent Samples T-Test of Employee’s Intention to Leave the Organization in the Next Year	17

Introduction

Overview of the Literature

Public health organizations such as local health departments (LHDs) provide fundamental pathways to distribute essential public health services to communities (Hyde & Shortell, 2012). The public health system throughout the U.S. includes governmental and non-governmental entities responsible for facilitating resources to promote and improve a healthier lifestyle for residents within their local departments (Hyde & Shortell, 2012). Even though there is a broad range of resources offered by LHDs to their communities, the public health workforce implementing those programs and services may not be as widely available. There are several factors that contribute to the number of employees available to support the programs; these include but are not limited to, emerging health disparity, revisions and development of policies, funding, formal education, and training (Beck et al., 2017). Increasing the size of the public health workforce or increasing salaries might not be feasible in most public health departments, given the complex financial and political considerations under which health agencies operate. (Beck et al., 2017)

Despite the fact that not all employees possess formal training, employees indicate a high level of engagement within their respective workplaces (Public Health Workforce Interests and Needs Survey [PH WINS], 2020). Nonetheless, a disconnect in the workforce among public health departments has been identified, including the limited formal training, skill development, and education provided (Beck et al., 2017). A vast majority of employees working in the public health sector report being satisfied with their current occupation; however, they are less satisfied with the

organization and even less so with their pay (PH WINS, 2020). Furthermore, a significant number of employees are considering leaving their current employer in the next couple of years prompted by the extraordinary conditions weathered in responding to the COVID-19 pandemic the last couple of years (Davis, 2022).

By assessing the needs of the public health workforce and developing strategies to identify best practices, public health departments and other public health agencies can improve their retention rates (Leider et al., 2021). The Association of State and Territorial Health Officials (ASTHO) recognizes the stress and workforce burnout public health employees have faced in the recent years. To address these issues, ASTHO launched a new public health workforce development program aimed to manage workforce burnout, resiliency, and morale (ASTHO, 2022). The Public Health, Equity, Resilience, and Opportunity Program (PH-HERO) will create and support a culture of well-being and resilience within local, state, and territorial public health agencies (ASTHO, 2022). Employee participation in this program will help increase overall job satisfaction with their job and organization; in addition, local communities will benefit from the improvements of a satisfied public health workforce (Harper et al., 2015).

Public Health Workforce

The public health workforce is a diverse group of individuals with different backgrounds, education, and skill sets. Although a portion of the public health workforce does not possess a health-related degree or formal training, these individuals provide vital services and work to reinforce the importance of protecting and promoting the health of their communities (Beaglehole & Dal Poz, 2003). A 2017

survey conducted by PH WINS included responses from over ten thousand public health employees across the United States. Results from the survey identified an under-representation of the Hispanic/Latinx, younger adults, and men working in public health agencies. Women in government public health agencies represented over 70 percent of the state-level workforce (Bogaert et al., 2019).

A decrease in health agency funding has caused expenditures by state public health agencies to fall from 2010 to 2018 because of limited budgets from federal and state sources (Carlin et al., 2021). From 2012 to 2019, the state health workforce decreased by roughly 10 percent, from 101,000 full-time equivalents (FTEs) to 91,000 FTEs (Carlin et al., 2021). As the COVID-19 pandemic emerged, gaps across all local and state health departments were exposed, including staffing shortages (PH WINS, 2020). The public health workforce was spotlighted as many people worldwide sought guidance and reliable information throughout the last couple of years. As a result of the pandemic, the public health workforce faced additional challenges resulting in high-stress levels, burnout, and rapid turnover rates (PH WINS, 2020).

Workforce Performance and Job Related Satisfaction

According to the survey conducted by the Public Health Workforce Interests and Needs Survey (PH WINS) in 2017, public health employees often seek job opportunities that offer better pay, career advancement, and a better work environment (PH WINS, 2020). As seen in many state and local agencies, funding is a barrier that affects resources available for the local population, employees, and organizations (Harper et al., 2015). Turnover is a costly alternative to retaining good

employees. It is estimated that replacing an employee costs approximately 150 percent of the individual's annual salary and benefits package (Harper et al., 2015). Examining the factors associated with turnover rates is critical to maximizing the employee retention rate to retain highly-skilled employees (Harper et al., 2015). Past studies have demonstrated that employees with high levels of job satisfaction stay at their organizations longer, are more productive and motivated, have significantly less absenteeism, report more significant organizational commitment, and showcase higher levels of engagement (Harper et al., 2015).

Many employees currently entering the public health workforce have reported the importance of values in the workplace environment, including flexibility, creativity, diversity, equity, and inclusion across the organization (Leider et al., 2021; Locke et al., 2019). Based on the 2017 PH WINS survey, only 44 percent of the respondents felt that creativity and innovation are rewarded and they felt that communication between senior leadership and staff was poor (PH WINS, 2020). Leaders, managers, supervisors, and executives must adapt to the changing work environment that aids in empowering their employees to allow opportunities to express creativity and share innovative ideas in order to retain good talent.

Supervisory Level

Fostering a positive and enriching environment in the workplace produces higher satisfaction with the organization among many employees. When comparing employee satisfaction in the organization between supervisory and non-supervisory positions, those who hold supervisory positions have higher satisfaction rates than those who are not supervisors (Harper et al., 2015). The 2017 PH WINS survey

revealed that 77 percent of nonsupervisory employees reported being somewhat/very satisfied with their jobs. On the other hand, 81 percent of supervisors, 85 percent of managers, and 91 percent of executives reported being satisfied with their jobs (Bogaert et al., 2019). Supervisors, managers, and executives tend to have much higher wages, resulting in higher satisfaction with their job and the organization. In the same survey, respondents reported less satisfaction with their organizations than with their jobs (Bogaert et al., 2019). Supervisors and leaders are responsible for implementing the organization's mission; however, supervisors develop and model behaviors that shape the culture within their programs, ultimately influencing the employees' satisfaction in the organization (Bogaert et al., 2019).

Salary and Retention Rate

Turnover rates in local health departments appear significantly lower than those in state health agencies; however state and local public health systems face similar turnover rates in their workforce (Sellers et al., 2020). When comparing the government workforce to that of the private sector, employees are about six years older in the government sector, with a median age range of 39 to 45 years of age (Sellers et al., 2020). Typically, the private sector offers higher wages and more competitive benefits than government agencies. Although government employees may have a higher level of education, such as a bachelor's or master's degree, they may earn significantly less than they would in a private organization (Newman et al., 2014). With competitive salaries offered, younger employees are more likely to leave a government health agency to pursue better opportunities with higher wages (Newman et al., 2014). Salary is often one of the top reasons employees intend to

leave their current employer. Of those employees surveyed, (49%) indicated pay as the top factor when considering leaving their current organization, followed by work overload/burnout (41%), lack of opportunities for advancement (40%), stress (37%), and organizational climate/culture (37%) (PH WINS, 2022).

Considering the various factors that impacted employees during the COVID-19 pandemic, many employees have decided to retire earlier than anticipated or leave the public health field altogether (PH WINS, 2022). The 2021 PH WINS survey revealed that 32 percent of state and local employees said they are considering leaving their organization in the next year, five percent of which were planning to retire and the remaining 27 percent were leaving for other reasons (PH WINS, 2022). As more employees continue to retire over the years, it will create an opportunity for a younger population to seek employment in the field of public health (PH WINS, 2022). Continuously assessing the current workforce, succession planning, and developing systems can result in higher retention rates. While it is impossible to ensure a 100 percent retention rate, understanding the reasons for turnover can assist public health leaders in improving their retention rates in their public health workforce.

The public health field is a growing organization that depends on many professionals with diverse backgrounds to prevent diseases, promote health, and prolong life for the community (Leider et al., 2016). The quality of services public health organizations provide is based on the behavior and effort of their workforce (Kitsios & Kamariotou, 2021). Studies show that various factors contribute to employees' satisfaction and performance, such as quality of supervision, the

supervisor-subordinate relationship, leadership practices, workplace training, organization size, and salary (Harper et al., 2015).

Purpose of the Study

The purpose of this study is to determine if there is a statistically significant difference between the level of an employee's role, as measured by supervisory and non-supervisory levels, and employee retention and job satisfaction. The aim is to determine if employees are satisfied with their job based on the level of the supervisory role compared to employee retention based on their satisfaction with the organization. The results from this study will be used to make recommendations to public health decisions makers toward developing strategies to increase retention rates across all supervisory and non-supervisory tiers. Questions this study will answer are:

Research Questions

1. Is there a statistically significant difference in job satisfaction between individuals working in supervisory and non-supervisory roles?
2. Is there a statistically significant difference in satisfaction, across multiple categories, between employees intending to leave the organization in the next year?

Hypotheses

1. H₀: There is no statistically significant difference in job satisfaction between individuals working in supervisory and non-supervisory roles.

2. H₀: There is no statistically significant difference in satisfaction, across multiple categories, between employees intending to leave the organization in the next year.

The first research question hypothesizes that there is a statistically significant difference between supervisory and non-supervisory roles and the employee's job satisfaction. The second research question hypothesizes that there is a statistically significant difference between the employee's satisfaction across multiple categories (job, program, department, supervisor, job security) and intention to leave the organization within the next year.

Method

Design

This study used a cross-sectional design to analyze data from the San Bernardino County – Department of Public Health Workforce Development Assessment. Data for the year 2021 was analyzed for this study. Similar to the Public Health Workforce Interest and Needs Survey (PH WINS), the Public Health Workforce Development Assessment Survey collected information pertaining to engagement, satisfaction, intent to leave, education level, and demographics (PH WINS, 2022). The study examined the relationship between workplace satisfaction and intention to leave among the public health workforce in San Bernardino County.

Procedures

Data used for this study was collected utilizing the Qualtrics application, an online survey tool. The survey was sent to all public health employees through their public health department email. Data was collected between July 2021 and August 2021. The survey was designed to assess the training, development needs, and determine employee satisfaction of the current public health workforce.

Participants

The San Bernardino County – Department of Public Health Workforce Development Assessment dataset includes 26 programs within the public health department. For this study, every employee in the department had the opportunity to participate in the assessment. A total of 679 responses were collected. The study participants consisted of both male and female adults. Using G*Power Software, Version 3.1.9.2, a medium effect size of .30, an alpha level of .05, and a power of

80% were selected to estimate the minimum required sample size of 176 for the independent samples *t*-test utilized (Faul et al., 2007). The selected sample used exceeds the minimum required sample size.

Independent and Dependent Variables

The independent variable for the first research question was measured by the question, “*Which best describes your position at San Bernardino County Department of Public Health?*” The five categories among the different levels included: 1 = Non-supervisory administrative/clerical employee with non-community contact, 2 = Non-supervisory employee working directly with the community, 3 = Program Coordinator, Project Coordinator, Direct Supervisor, 4 = Executive Leadership or Program Management, 5 = Non-supervisory ACC or EHS employee working directly with the community, for questions Q2.7. A new variable (Q2.7_REC0DE) was created and recoded to combine all non-supervisory (1,2,5) and supervisory (3,4) roles into two new categories: 1 = non-supervisory and 2 = supervisory.

The independent variable for the second research question was measured by the question, “*Are you considering leaving DPH in the next year?*” The response options were Yes and No and were coded as 4 = Yes and 5 = No.

The dependent variable for the first and second research questions was the employee’s self-reported satisfaction level among five variables. The variables were measured by the question, “*Considering everything, how satisfied are you with your – Job, Program, Department, Supervisor, Job security?*” The response options were coded numerically on a scale from 1 to 5 as follows: 1 = Very dissatisfied, 2 =

Somewhat dissatisfied, 3 = Neither satisfied nor dissatisfied, 4 = Somewhat satisfied, 5 = Very satisfied.

Data Analysis

In order to answer research questions 1 and 2, the IBM Statistical Package for Social Sciences (SPSS) software, version 27, was utilized. For the first research question, *“Is there a statistically significant difference in job satisfaction between individuals working in supervisory and non-supervisory roles?”* an independent samples *t*-test was conducted. For the second research question, *“Is there a statistically significant difference in satisfaction, across multiple categories, between employees intending to leave the organization in the next year and those intending to stay?”* independent samples *t*-tests were also used to compare self-reported satisfaction across multiple satisfaction types, including satisfaction with their Job, Program, Department, Supervisor, and Job security among public health employees in San Bernardino County Department of Public Health.

Results

Demographic Characteristics

This study was comprised of 679 participants who completed the assessment. The data demonstrated that the highest level of education for the sample is as follows; 28.6% of them have a High School degree or equivalent, 14.9% have an Associate's degree, 35.2% have a Bachelor's degree (BS, BA, BSN, other Bachelor's degree), 17.7% have a Master's degree (MS, MA, MBA, MHSA, MPA, MPH, MSN, MSW, other Master's degree), and 3.7% have a Doctoral degree (DDS, DMD, DrPH, Ph.D., ScD, DNP, DVM, VMD, JD, MD, DO, PharmD, other Public Health Doctorate, other non-Public Health Doctorate). From the entire sample, only 6.9% of participants had a public health degree, 5.1% had a Master's degree (MPH), and 1.8% had a Doctoral degree (DrPH/Ph.D.), as shown below in Table 1.

Table 1*Characteristics of Participants*

Category	n	%
Highest Level of Education Completed		
High School or equivalent	194	28.6
Associates	101	14.9
Bachelor's	239	35.2
Master's	120	17.7
Doctorate	25	3.7
Public Health Degree		
Master's	35	5.1
Doctorate	12	1.8
Years in Public Health Field		
Less than 1 year	59	8.7
1 to 5 years	270	39.8
6 to 10 years	102	15.0
11-20 years	133	19.6
More than 20 years	115	16.9
Supervisory Level		
Non-supervisor	554	81.6
Supervisor	125	18.4

Note. n = sample size (679), % = percentage.

Major Findings

In the first research question, "Is there a statistically significant difference in job satisfaction between individuals working in supervisory and non-supervisory roles?" an independent samples t -test was calculated comparing average levels of self-reported job satisfaction across supervisor and non-supervisor categories. No significant difference was found ($t(677) = 0.581, p = 0.678$). The mean of non-supervisory employees ($M = 4.00, SD = 1.10$) was not significantly different from the mean of the supervisory employees ($M = 3.94, SD = 1.17$). Supervisory and non-supervisory employees demonstrated about the same job satisfaction in the organization, as displayed in Table 2 below.

Table 2*Independent Samples T-Test of Job Satisfaction Based on Supervisory Position*

	<i>n</i>	Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Supervisory Position				0.581	0.678
Non-supervisory	554	4.00	1.10		
Supervisory	125	3.94	1.17		

**p* < .05

Note. *n* = sample size; *SD* = standard deviation.

For the second research question, "Is there a statistically significant difference in satisfaction, across multiple categories, between employees intending to leave the organization in the next year?" an independent samples *t*-test was calculated comparing intention to leave in the next year based on the average levels of self-reported satisfaction with their Job, Program, Department, Supervisor, and Job Security. A significant difference was found among all groups with respect to their level of satisfaction across multiple categories. Job ($t(677) = 8.80, p < 0.001$), Program ($t(677) = 7.93, p < 0.001$), Department ($t(677) = 10.6, p = 0.002$), Supervisor ($t(677) = 6.67, p < 0.001$), and Job Security ($t(677) = 3.45, p = 0.025$). The mean of the employees intending to leave within the next year, based on their satisfaction across the various categories, was significantly lower than those not intending to leave, as shown in Table 3. Job: "Yes" intending to leave ($M = 3.41, SD = 1.22$) "No" intending to leave ($M = 4.21, SD = 0.98$). Program: "Yes" intending to leave ($M = 3.33, SD = 1.24$) "No" intending to leave ($M = 4.09, SD = 1.04$). Department: "Yes" intending to leave ($M = 2.92, SD = 1.20$) "No" intending to leave ($M = 3.95, SD = 1.09$). Supervisor: "Yes" intending to leave ($M = 3.52, SD = 1.31$) "No" intending to leave ($M = 4.21, SD = 1.15$). Job Security: "Yes" intending to leave ($M = 4.08, SD = 1.09$) "No" intending to leave ($M = 4.37, SD = 0.93$). There is

a difference in whether an employee intends to leave the organization within the next year based on their satisfaction with all five categories.

Table 3

Independent Samples T-Test of Employee's Intention to Leave the Organization in the Next Year

		<i>n</i>	Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Category	Intention to leave in the next year					
	Job				8.80	<.001
	Yes	186	3.41	1.22		
	No	493	4.21	0.98		
Program					7.93	<.001
	Yes	186	3.33	1.24		
	No	493	4.09	1.04		
Department					10.6	0.002
	Yes	186	2.92	1.20		
	No	493	3.95	1.09		
Supervisor					6.67	<.001
	Yes	186	3.52	1.31		
	No	493	4.21	1.15		
Job Security					3.45	0.025
	Yes	186	4.08	1.09		
	No	493	4.37	0.93		

**p* < .05

Note. *n* = sample size; *SD* = standard deviation.

Discussion

Summary of Major Findings

This study examined differences in professional and job-related satisfaction and intention to leave among employees in San Bernardino County – Department of Public Health. The results are consistent with previous literature, highlighting pay satisfaction and other factors related to employee engagement as clear indicators for employees considering leaving (Bogaert et al., 2019).

The results of the first research question demonstrated no significant difference in job satisfaction between individuals working in supervisory and non-supervisory roles, utilizing an independent samples *t*-test ($p = 0.678$). These findings were incongruent with previous literature showing that individuals in supervisory positions have significantly higher job satisfaction levels than those in non-supervisory roles (Harper et al., 2015). The incongruency with previous studies may be due to the fact that this study analyzed data from July to August 2020, during the COVID-19 pandemic timeframe. The stress, burnout rates, and post-traumatic symptoms may have challenged the public health workforce and may have caused a shift in satisfaction with their jobs. Supervisors, such as executives, reported experiencing bullying, threats, and harassment during the pandemic that can cause detrimental effects on any employee (PH WINS, 2022). Furthermore, it was found that worker empowerment is a critical component of job satisfaction. Employees who feel empowered to make decisions and contributions are more likely to have higher job satisfaction (Harper et al., 2015). Although the results did not align with previous

literature, improving job satisfaction among all employees is a critical component of advancing and achieving the organization's goals.

Utilizing an independent samples *t*-test, the second research question examined the difference between employees' intention to leave in the next year and their average levels of self-reported satisfaction with their Job, Program, Department, Supervisor, and Job Security. The results concluded that there was a statistically significant difference among all five satisfaction categories and the employee's intention to leave within the next year experiencing reduced satisfaction levels. These results are congruent with previous literature that revealed that organizational satisfaction and other factors related to employee engagement contribute to the employee's consideration to leave the organization (Bogaert et al., 2019).

Additionally, considerations that could impact retention may include assessing and satisfying training needs, improving communication between supervisors, leaders, and employees, rewarding creativity and innovation, and opportunities for advancement in the organization (Bogaert et al., 2019).

Public Health Implications

Training needs for public health employees differ based on their level of education and experience (Leider et al., 2015). Employees with public health education identify different training needs, compared to employees who do not have a public health degree background, ultimately leading to gaps in the organization (Leider et al., 2020). Identifying and assessing the existing gaps within the public health workforce can assist health departments in determining how to invest their resources to offer high-quality training opportunities to their employees (Grimm et

al., 2019). A model developed by the Council of Linkage's Core Competencies demonstrates the competencies across position type and supervisory status to identify potential needs and opportunities (Leider et al., 2015). Within the last decade, competency definition and competency-based training have been used to address cross-cutting training in public health; however, system-wide assessment of the public health workforce remains significantly outdated (Kaufman et al., 2014).

Promoting diversity and inclusion management while identifying factors associated with job satisfaction and positive workplace perceptions can establish strategies conducive to the retention and recruitment of public health employees (Leider et al., 2021). As the workforce continues to age and ultimately retire, succession planning and retention efforts are necessary to promote and implement solutions that seek to retain the younger workforce (Sellers et al., 2020). Applying an organization-wide strategic direction for workforce development is inevitable to provoke change in any public health organization (Bryant & Ward, 2017). Public health workers must be skilled in cultural competency and understand how to address social determinants of health to reduce health disparities and meet the needs of the underserved population (Leider et al., 2019).

The Association of State and Territorial Health Officials (ASTHO) has recognized the need to address the impact of the pandemic amongst the public health workforces (ASTHO, 2022). The Public Health, Equity, Resilience, and Opportunity Program (PH-HERO) addresses workforce burnout, resiliency, and morale. With the turnover and mental health concerns rising, the PH-HERO will create and support a culture of well-being and resilience within local, state, and public health agencies.

(ASTHO, 2022). Components of the PH-HERO program include developing a comprehensive package of resources public health leaders can use to address worksite well-being, including implementation guides, assessment tools, trainings, and resource guides for individual workers, supervisors, and agency leaders (ASTHO, 2022). The public health workforce has faced many challenges in the last couple of years, and programs like PH-HERO would provide additional support to public health agencies (ASTHO, 2022).

Study Limitations

This study contained some limitations. Since the data was retrieved from San Bernardino County – Department of Public Health, the data shared was deidentified with variables such as gender, age, race, and ethnicity made unavailable. Due to the absence of this information, it is unknown if the sample size included a representative and generalizable sample of gender and race and ethnicity. Additionally, satisfaction in the workplace can be impacted by various factors. A limited number of variables were measured when asking about satisfaction in the workplace, such as Job, Program, Department, Supervisor, and Job Security. Highly personal information such as marital status, health status, and personality characteristics were not measured; however, these factors have been shown to impact individual job satisfaction (Harper et al., 2015). Lastly, the method by which education level was sorted to identify employees who have public health education was not specific to bachelor's degree. It was likely that some employees who responded as having a BS/BA had obtained their degree in public health. For the purpose of this study, only those who responded as having a Master of Public Health (MPH), Doctorate of Public

Health (DrPH), or other public health doctorate were considered to have public health degrees in the department.

Conclusion

This study aimed to examine the level of satisfaction among the public health workforce in San Bernardino County – Department of Public Health based on two categories, non-supervisory and supervisory levels. Additionally, this study compared the intention of the employees to leave the organization within the next year based on five categories: job, program, department, supervisor, and job security. While many public health employees are satisfied with their job, opportunities for improvement in areas such as mentorship programs, supervisory support, as well as skill and leadership development, can improve the sense of value for employees producing higher retention rates (Bogaert et al., 2019). Further research is needed to explore methods of developing and improving succession planning to increase performance, satisfaction, and retention rates in local health departments (Bogaert et al., 2019).

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