

# Shift Length: An Evaluation of Common Shift Schedules

Lisa Barnett

## **Abstract**

*This research was conducted to assist law enforcement agencies in Florida with determining the appropriate shift length to maximize benefit for both officers and the agency. State, county, and city law enforcement officers throughout the state of Florida were surveyed and asked to report their current shifts as well as their preferred shifts. Respondents were also asked to rate their satisfaction with their current shifts. This research analyzed the variety of different shifts utilized throughout the state for patterns by agency size, type, or location. This research found that the 10-hour shift was the most desired shift across most of the categories reviewed, including agency type and size. Additionally, officers reported higher satisfaction on 10-hour shifts. This research also found that officers rate working their desired shift as very important.*

## **Introduction**

The law enforcement community provides services and responds to calls 24 hours a day, seven days a week. The constant need for law enforcement provides challenges to both law enforcement agencies and law enforcement officers. Agencies are challenged with providing appropriate staffing to ensure enough officers are on duty to respond to demands for service, while taking into account their budget and available personnel. Officers are challenged with balancing their personal and work lives and the effects of fatigue due to shiftwork or long work hours.

The eight-hour shift is considered the traditional shift for law enforcement officers. However, during the past half century, law enforcement agencies have been shifting to compressed work weeks. The compressed work week means officers work longer days but less days in the week. The most common examples of the compressed work week are the 10-hour shift, which normally includes four work days, and the 12-hour shift, which is usually limited to no more than three consecutive work days.

Despite the longevity of the use of 8-hour shifts or the increased frequency of compressed work schedules, there is no clear consensus on which shift length is the best for law enforcement officers and agencies. Compressed work weeks offer increased officer satisfaction due to more days off. However, longer work days may lead to increased fatigue and inefficient services. Agencies must provide appropriate staffing for peak service times, which can become costly if ineffectively managed.

This research seeks to determine which shift is the most appropriate for a law enforcement agency in Florida. The research explores the common shift lengths and the advantages and disadvantages of each. These advantages and disadvantages will be examined in respects to both the officers and the agency to determine if a shift schedule exists that can benefit and satisfy both groups.

## Literature Review

Research on shift work focuses on various professions, and researchers debate whether enough of this research has been conducted in the law enforcement community. The research that has been conducted in law enforcement has focused more on the effects of the night-shift than the effects of shift length. Research areas regarding shift work focus on the physical effects of shift work, fatigue, and the length of shifts. (Amedola, 2011b)

### Effects of Shift Work on Health

Police officers in the Buffalo, New York, Police Department participated in a series of studies to measure the effects of shift work on sleep, fatigue, physical activity, incidence of injury, depression, and unplanned absences. Officers across all shifts reported feeling tired upon awakening and snoring. The officers on the night shift were 16 percent more likely to snore and 44 percent more likely to sleep less than seven hours a day than officers on the other shifts. Sleep problems can be demonstrated by snoring, making it a strong indication of other issues with sleep. (Violanti, 2000)

Shift work poorly affected measures for disease, depression, and physical activity. Officers on afternoon shifts with high posttraumatic stress symptoms increased suicide ideation by 13 percent for every 10 percent of hours worked on the afternoon shift. Even though the officers on night shift were younger, they had a higher number of metabolic syndrome components, which are a factor for cardiovascular risk syndrome. Officers on the night shift were also at higher risk for obesity if they had sleep problems, which is compounded by officers with sleep problems reporting lower physical activity levels. Officers who sleep more and obtain six or more hours of sleep were significantly more likely to have a rigorous exercise routine. (Violanti, 2007; Burchfiel, 2011)

In addition to metabolic syndrome, shift work contributed to officers' risk for other cardiovascular diseases. Officers on 12-hour shifts exhibited difficulty maintaining their blood pressure regulation, which increased the risk of hypertension. These officers also reported poor sleep quality and fatigue. (Elliott, 2016)

Both officer injuries and absences affect the efficiency of the organization and can create additional costs for agencies. Officers working night shift were the most likely to experience an injury during their shift, followed by officers working the afternoon shift, then officers working the day shift. Officers on any shift were more likely to suffer an injury on the first day of their work period than a subsequent work day. Increased absenteeism rates may be a result of officers using absenteeism as a coping method for increased sleep loss and fatigue. (Violanti, 2012 and 2020)

The sleep disorders officers developed from shift work can lead to increased health issues and safety concerns. In one group of police officers, 40.4 percent had at least one sleep disorder. These officers were more likely to report having depression, burnout, falling asleep while driving, making more administrative errors, having uncontrolled anger towards a citizen or suspect, or falling asleep during meetings than officers without sleep disorders. These officers also had more citizen complaints and reported absenteeism. (Rajaratnam, 2011)

Long shift hours put police officers at greater risk of burnout than general office workers. Police officers were significantly more likely to burnout if they experienced sleepiness, shorter sleep periods, mandatory overtime, or shifts lasting 11 hours or longer. This tendency to burnout was representative of the 30.4 percent of police officers who experience shorter sleep periods and 25.8 percent who experienced excessive sleepiness. (Peterson, 2019)

## **Effects of Fatigue**

The shift schedule can increase fatigue for police officers. Vila, Morrison, and Kenney defined fatigue as “a mental and/or physical state resulting from insufficient good-quality sleep or from prolonged or intense physical, emotional, or mental effort that tends to decrease alertness, impair performance potential, worsen mood, and interfere with decision making”. These researchers assert that most officers preferred the compressed work week for personal reasons such as more days off or less time commuting. Their research indicated that officers working compressed work schedules were less fatigued than officers working 8-hour shifts; however, they did not accept this association as conclusive due to their study being limited by too few participants. (Vila, 2002)

The Tired Cops study was frequently cited for its examination of the effects of fatigue on police officers. Police officers participating in the study reported regularly working more consecutive hours per day or a period longer than what is legal for certain other professions, such as truck drivers. These officers also reported being fatigued more often than professionals in other occupations. Officers reported an average of 6.6 hours of sleep per day, and less than half of the officers reported averaging seven hours of sleep or more. Officers submitted to pupillometry tests which revealed an impairment equivalent of a 0.10 blood alcohol concentration in at least 6.2 percent of the participating officers. This level of impairment was more than double the highest rate observed in research up to that point. (Vila, 2000)

Additional studies have used levels of alcohol impairment to demonstrate the effects fatigue could have on a police officer’s decision making and job performance. In one group of police officers, officers performed at the level of 0.05 percent blood alcohol content impairment after 16.91 to 18.55 hours of being awake. These officers exhibited reduced reaction time, accuracy, and ability to complete dual tasks. Officers performed at the level of 0.10 percent blood alcohol content impairment after 17.74 to 19.65 hours of being awake. The officers’ sleep impairment performance mirrored impairment performance results for all areas except grammatical reasoning and memory and search tasks. These results indicate that being awake beyond the usual 16 to 17 hours can cause a greater risk of injury or mistakes. (Williamson, 2000)

The general population demonstrated similar results relating fatigue to impairment. Participants’ hand-eye coordination was measured at half-hour intervals. Participants’ performance decreased 1.16 percent for each 0.01 percent blood alcohol content. Starting at 10 hours awake, the participant’s performance decreased equivalent to a 0.004 percent increase in blood alcohol content for every hour they were awake. These participants demonstrated performance equivalent to a 0.05 percent blood alcohol level after 17 hours of being awake. Since blood alcohol levels are generally accepted, these comparisons make it easier to relate the effects of fatigue. (Dawson, 1997)

Fatigue can also significantly affect an officer's ability to drive. Even on day shift, officers who were fatigued were more likely to be involved in a crash than officers who were rested. Officers on night shift were significantly more likely to deviate from their lane. These officers reported significantly less sleep during their work days than their days off. The officers on day shift slept 1.6 hours more per day and officers on night shift slept 2.2 hours more per day on their days off than on the days they worked. (James, 2015)

Both police agencies and officers contribute to circumstances creating fatigue. Agencies require officers to attend court on their days off, taking away from their rest periods, and sometimes need officers to work extra hours to accommodate busy service times or low staffing levels. Officers typically desire the overtime due to low salaries, and even work secondary employment as well. These extra work hours increase officers' fatigue. In a group of officers who worked an average of 75.1 hours per week, with overtime, over half of those officers only slept three to six hours each day. In order to reduce fatigue, 70 percent of officers believed they need seven to nine hours of sleep per day; however, two-thirds of those officers only slept three to six hours per day. (Senjo, 2010)

Some researchers have made recommendations on the actions law enforcement agencies can take to manage shift schedules and reduce fatigue. These recommendations include considering whether the agency can avoid permanent night shifts and keep consecutive night shifts to a minimum. Recommendations for determining the shift schedule include committing to a regular schedule, avoiding frequent shift changes, and dispersing weekends off evenly. Additional recommendations are limiting the length of shifts and the amount of overtime. Officers may also benefit from shift start and end times scheduled around circadian rhythm times and avoiding long stretches of days off between work periods in order to maintain their circadian rhythm. (Scism, 2017)

## **Shift Length**

Law enforcement agencies began adopting alternative shift schedules as early as the 1970s, when compressed work schedules started to gain popularity. Many law enforcement officers prefer condensed work schedules and believe these schedules increase coverage and performance, reduce costs and response times, and limit fatigue. However, the evidence to support one shift schedule over another for policing is limited and unreliable due to small sample sizes, subjective outcome measures, and cross-sectional studies. This limited scientific information leads law enforcement leaders to rely on anecdotal evidence rather than substantiated research evidence. (Amendola, 2012)

The Police Foundation surveyed 300 local police departments in 2005 and 2009 to identify trends in shift schedules. During that four-year period, the amount of police departments using 8-hour shifts reduced from 40.1 percent in 2005 to 29.3 percent in 2009. During the same time period, there were only slight changes in the prevalence of 10- and 12-hour shifts, with 10-hour shifts slightly decreasing and 12-hour shifts slightly increasing. The largest agencies were consistent in their use of 10-hour shifts. More small agencies started 12-hour shifts, but 8-hour shifts remained the most prevalent. (Amendola, 2011a)

In Texas, most shift schedules for law enforcement agencies followed the 8-, 10-, or 12-hour schedule. Eleven of 47 agencies used 12-hour shifts. The 12-hour shifts

increased the amount of days off for officers; however, the additional time off led to officers who displayed a lack of familiarity with their area due to their time away from it. Additionally, 64 percent of the agencies using 12-hour shifts reported reduced communication among officers and 55 percent indicated communication between supervisors and officers was reduced. (DiMambro, 2008)

One Iowa agency evaluated its performance on 8-hour shifts compared to 12-hour shifts, while also considering the efficiency of a 10-hour shift. There was no significant difference in the amount of time it took officers to complete calls between the 8- and 12-hour shifts. While the patterns of call volume stayed the same, the officers on 12-hour shifts were not as efficient at responding to the increases and decreases in call patterns as the officers on the 8- or 10-hour shifts. The researchers concluded that 8-hour shifts were the most efficient, followed by the 10-hour shift, with the 12-hour shift being the least efficient. The inefficiency of the 12-hour shift was exhibited by tired officers, increased costs for the agency, and reduced relations between officers and citizens. However, from an officer satisfaction perspective, over 80 percent of officers were in favor of the 12-hour shift. (Bamum, 2011)

The Police Foundation conducted the shift length experiment in two police departments in Detroit, Michigan, and Arlington, Texas. Officers were randomly assigned to 8-, 10-, or 12-hour shifts for the six-month observation period. The researchers established various subjective and objective methods for measuring the effects of the shift lengths on work performance, safety, health, quality of life, sleep, fatigue, off-duty employment, and overtime. The researchers concluded there were no significant differences on work performance, safety, health, quality of sleep, or work-family conflict. (Amendola, 2012)

The shift length experiment concluded that 10-hour shifts performed better than the 8- and 12-hour shifts. The quality of work life for officers on the 10-hour shift was higher than those on the 12-hour shift and significantly higher than those on the 8-hour shift. Officers on the 10-hour shift averaged more hours of sleep than officers on the 12-hour shift and significantly more hours than officers on the 8-hour shift. Officers on 10-hour shifts worked significantly less overtime than officers on 12- or 8-hour shifts, with 8-hour shifts costing the most in overtime. The researchers warned policy makers to be cautious when considering 12-hour shifts because those officers reported significantly higher levels of sleepiness and significantly lower levels of alertness. One limitation to this study is that the researchers did not examine the costs associated with implementing the condensed work schedule. (Amendola, 2011b and 2012)

The 10-hour shift is often associated with the Ottawa schedule. The Ottawa schedule consists of two overlapping 10-hour shifts during the day and afternoon and an 8-hour overnight shift. This schedule is attributed with providing more opportunities for training, briefings, and continued presence due to the overlapping shifts. Additionally, the overlapping shifts provided additional resources for peak call times, flexible operations, and more time for thorough investigations. Officers benefited from improved morale and personal lives due to more days off as well as reduced fatigue. Agencies observed less absenteeism. One drawback to the 10-hour shifts is they required more duty groups for shift rotations, which caused issues with maintaining minimum staffing levels. They also led to extended days off when rotating shifts, which raised concerns for continuing investigations. (Simpson, 2000)

The 8- and 12-hour shifts are often praised for their easy division into the 24-hour cycle, while the 10-hour shift is labeled as more complicated for not dividing easily into 24. However, since the 10-hour shift does not divide easily into the 24-hour day, this schedule provided the opportunity for shift overlap which allowed for additional staffing during busy times of the day. Shifts that do not overlap had to plan staffing for peak hours but then had lull periods where there is not a need for the same number of officers, which is a waste of resources. Additionally, overlapping shifts reduced the likelihood of an officer incurring overtime from receiving a late call. (Oliver, 2005)

Conversely, some researchers believed that 12-hour shifts were better than 8-hour shifts. They acknowledged that 8-hour shifts were better for officers due to physical health variables, such as cardiovascular problems or musculoskeletal pain. Otherwise, officers on 12-hour shifts reported longer sleep periods, lower levels of fatigue, and less interference with leisure time. (Tucker, 1998)

Some agencies have adopted schedules that extended past 12-hour shifts. Officers who worked a 13-hour 20-minute shift demonstrated significant deficiencies in comparison to officers who worked 10-hour shifts. For instance, officers on the extended shift had reduced reaction times and double the number of lapses in concentration. Officers on the extended shift experienced a significant decrease in the quality of life measures, as well as sleep, quality of sleep, and cognitive processing. These officers also experienced increases in fatigue, sleepiness, and complaints. After six months on the extended shifts, only 17 percent of officers preferred the extended shift to the 10-hour shift. (Bell, 2015)

## **Methods**

The purpose of this research is to identify the most appropriate shift length for Florida law enforcement agencies by exploring the most common shift lengths and identifying the advantages and disadvantages for both the officers and the agency. To achieve this purpose, this research included a survey of law enforcement officers with statements and questions designed to gather information on the shift lengths currently in place, the officers' satisfaction with their current shift length, as well as the officers' input on which shift length they prefer and their reasoning.

This research targeted officers in state, county, and city agencies in Florida. The primary state agency used for the survey was the Florida Highway Patrol (FHP). County and city agencies throughout the state were asked to participate and were identified based on the troop boundaries for FHP to facilitate identifying correlations based on geographical location. Except for one troop area, five sheriffs' offices and five police departments were contacted in each troop area, with no police departments contacted from the same county. The one troop exception only contained two counties, so both sheriffs' offices and one police department from each county were asked to participate. A total of two state agencies, 42 sheriffs' offices, and 42 police departments were asked to distribute the survey. Of these agencies, one state agency, 18 sheriffs' offices, and 11 police departments agreed to distribute the surveys to their officers for an agency response rate of 35.29 percent.

Two different versions of the survey were used, one for FHP and one for all other agencies. These surveys were titled Florida Highway Patrol Shift Length Survey (FHP

Survey) and Law Enforcement Shift Length Survey (LE Survey). Each survey included a statement to determine the participant's geographic area or troop. The surveys were produced in Survey Monkey and delivered via email by a contact within the officer's agency. The survey was anonymous and collected demographic data limited to the type of agency the officer worked for and their years of service. Another demographic question asked whether the participants live with anyone to determine any correlations to their responses related to how they view their shifts. Demographic data also included their assignment, whether a supervisor or specialty position, to provide further information as some specialty units may be limited to working specific shifts. The survey was distributed to officers and first line supervisors because they are more likely to work shifts than supervisors of a higher rank.

One weakness in the data collected and the research was the difficulty in comparing a state agency with local agencies, which have different primary functions and organization structures. Despite identifying agencies to distribute the survey to equally across all geographic areas, the agencies who agreed to participate were not evenly distributed across the state, producing more reliable results for some geographic areas than others. In addition, there was a low response rate from officers in police departments, causing them to be underrepresented in the results. The survey was anonymous to encourage participation in the survey and honest responses; however, officers may still have been reluctant to respond candidly or may have been biased in their responses.

## **Results**

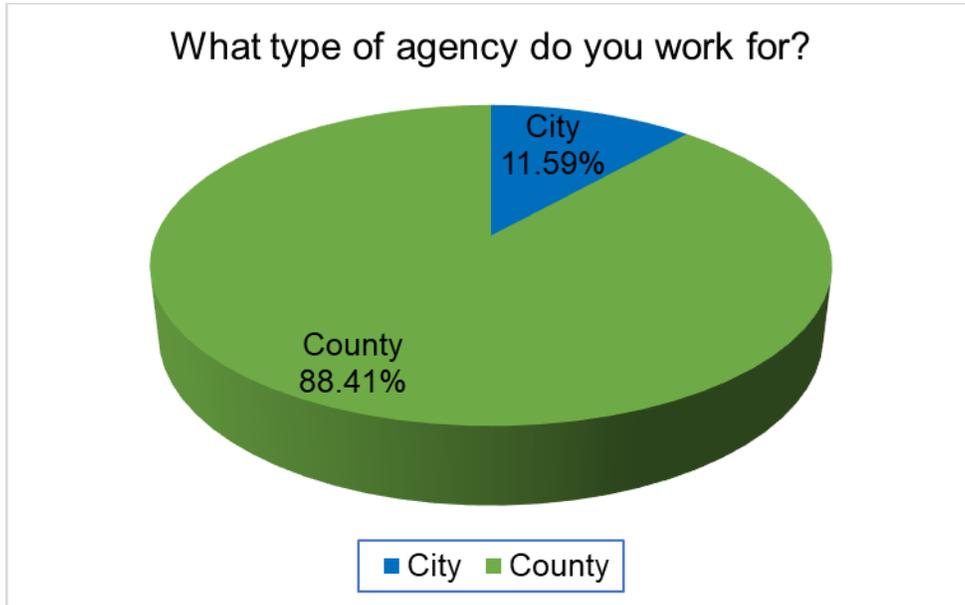
The surveys were distributed to 7,408 potential participants and received 2,083 responses, for a response rate of 28.11 percent. After reviewing the responses, it was noted that many did not include information past the initial demographic information. The responses that were completed in entirety totaled 1,885, which is a response rate of 25.45 percent. Specifically, the FHP Survey was sent to approximately 1,586 law enforcement officers in the Florida Highway Patrol of which 507 officers responded to the survey for a response rate of 31.97 percent. Of the 507 responses, 54 officers did not complete the survey past the first demographic question, which left 453 completed surveys for analysis, or a completed response rate of 28.56 percent. The LE Survey was sent to approximately 5,822 law enforcement officers in 11 police departments and 18 sheriffs' offices. Of those, 1,576 officers responded to the survey for a response rate of 27.06 percent. However, 144 of the respondents did not complete the survey beyond the first six questions which collected demographic information, reducing the number of responses to 1,432, for a completed response rate of 24.60 percent. Only the fully completed survey responses were used for this analysis; those responses which did not continue past the demographic section were removed for analysis.

### **Type of Agency**

The first question on the LE Survey asked what type of agency the respondent worked for, with the options of city, county, or state. This question was not included on the FHP Survey which was only sent to state law enforcement officers in the Florida Highway Patrol. On the LE Survey, there were no respondents who worked for the state.

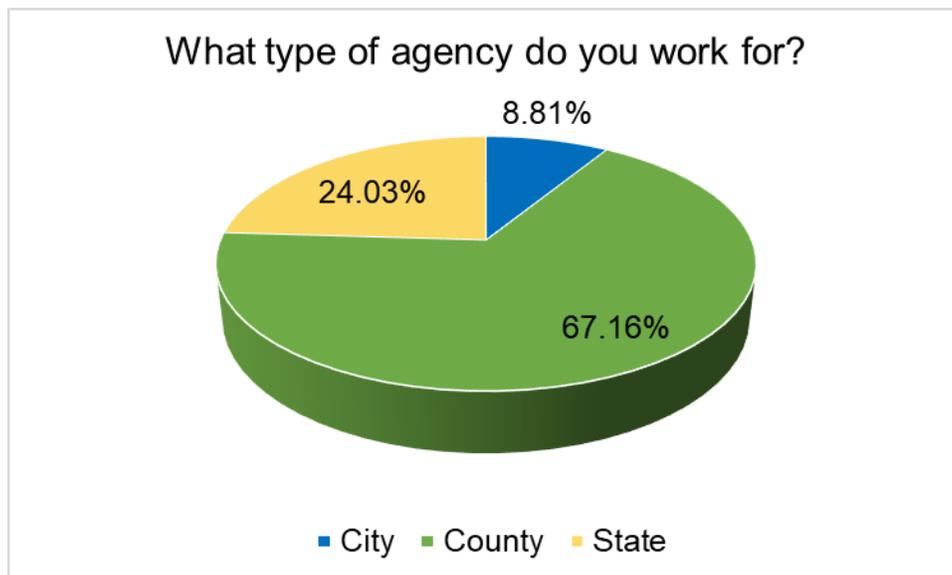
One hundred sixty-six respondents (11.59%) reported working for the city. One thousand, two hundred sixty-six respondents (88.41%) reported working for the county.

Table 1. LE Survey Type of Agency



Although the results were generally reviewed by which survey was taken, Table 2 depicts the agency type of both surveys combined. Out of the 1,885 completed responses for both surveys, the representations of each agency type are 453 (24.03%) state, 1,266 (67.16%) county, and 166 (8.81%) city.

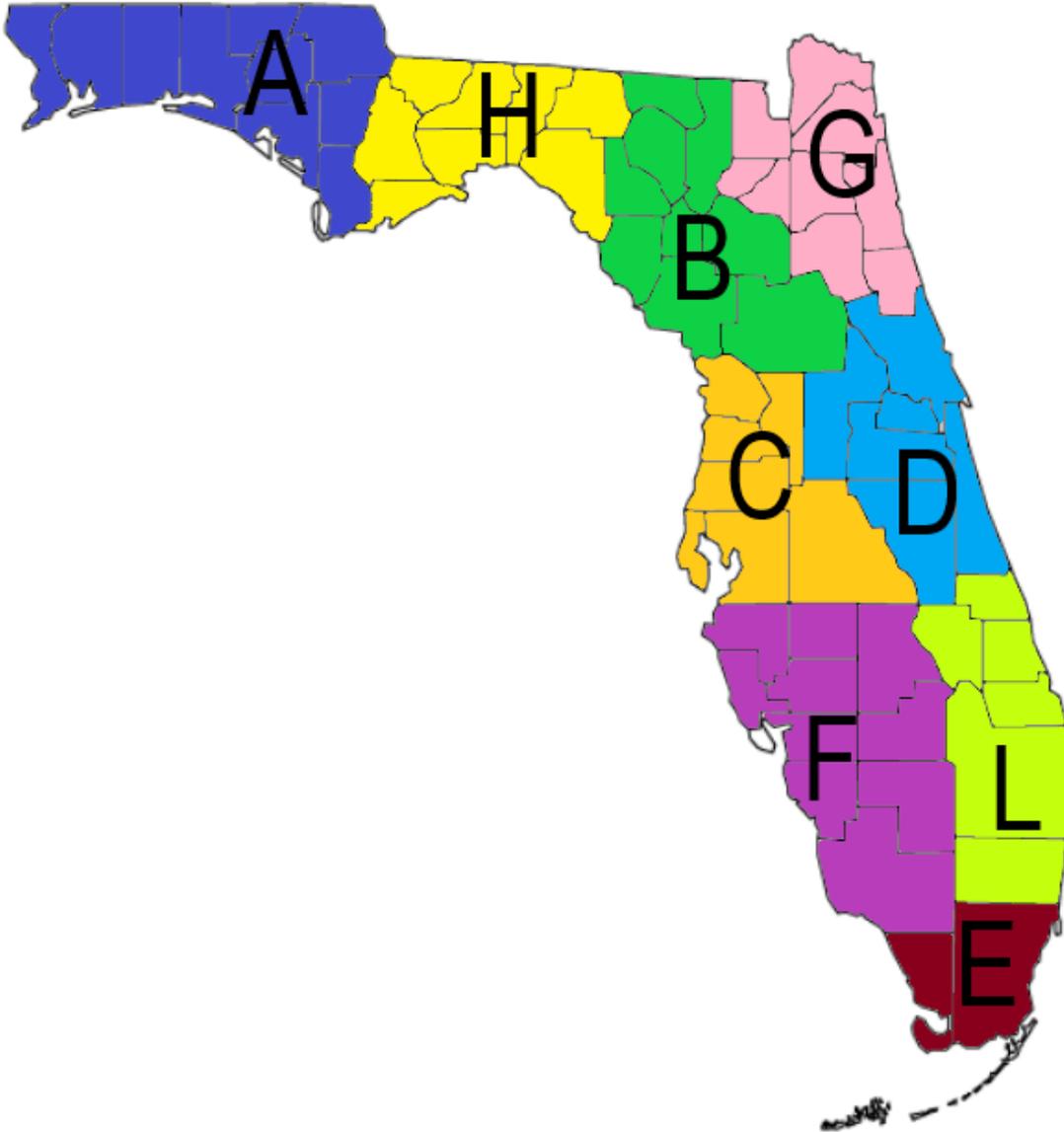
Table 2. Combined Surveys Agency Type



## Work Location

The FHP troop organization was used to determine geographic regions for this research. Nine out of the 13 FHP troops organize the state geographically for patrol operations as noted on Table 3.

Table 3. Florida Geographic Troops

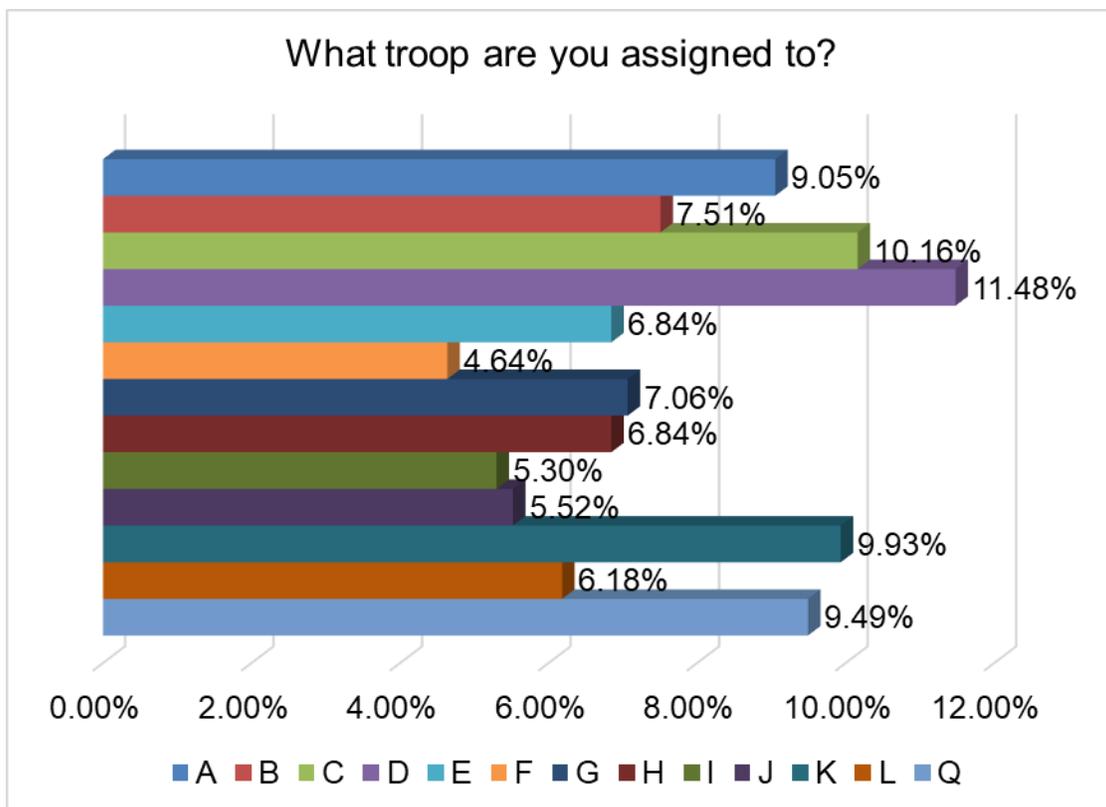


In addition to the nine troops listed above, there are four troops that are not organized by geography. Troops I and J represent the Commercial Vehicle Enforcement (CVE) assignments, with Troop I servicing the northern region and Troop J servicing the

southern region of the state. Troop K covers the Florida Turnpike system and is spread throughout the geographical regions of several troops. Troop Q includes members assigned to specialty units, such as investigations, training, or unmanned aerial aircraft pilots, which are dispersed throughout the state.

On the FHP Survey, Question 1 asked respondents to identify what troop they were assigned to. Forty-one respondents (9.05%) responded they are assigned to Troop A. Thirty-four respondents (7.51%) responded they are assigned to Troop B. Forty-six respondents (10.16%) reported they are assigned to Troop C. Fifty-two respondents (11.48%) reported they are assigned to Troop D. Thirty-one respondents (6.84%) reported they are assigned to Troop E. Twenty-one respondents (4.64%) reported they were assigned to Troop F. Thirty-two respondents (7.06%) reported they were assigned to Troop G. Thirty-one respondents (6.84%) reported they were assigned to Troop H. Twenty-four respondents (5.30%) were assigned to Troop I. Twenty-five respondents (5.52%) were assigned to Troop J. Forty-five respondents (9.93%) were assigned to Troop K. Twenty-eight respondents (6.18%) were assigned to Troop L. Forty-three respondents (9.49%) were assigned to Troop Q.

Table 4. FHP Survey Respondent Troop Assignments

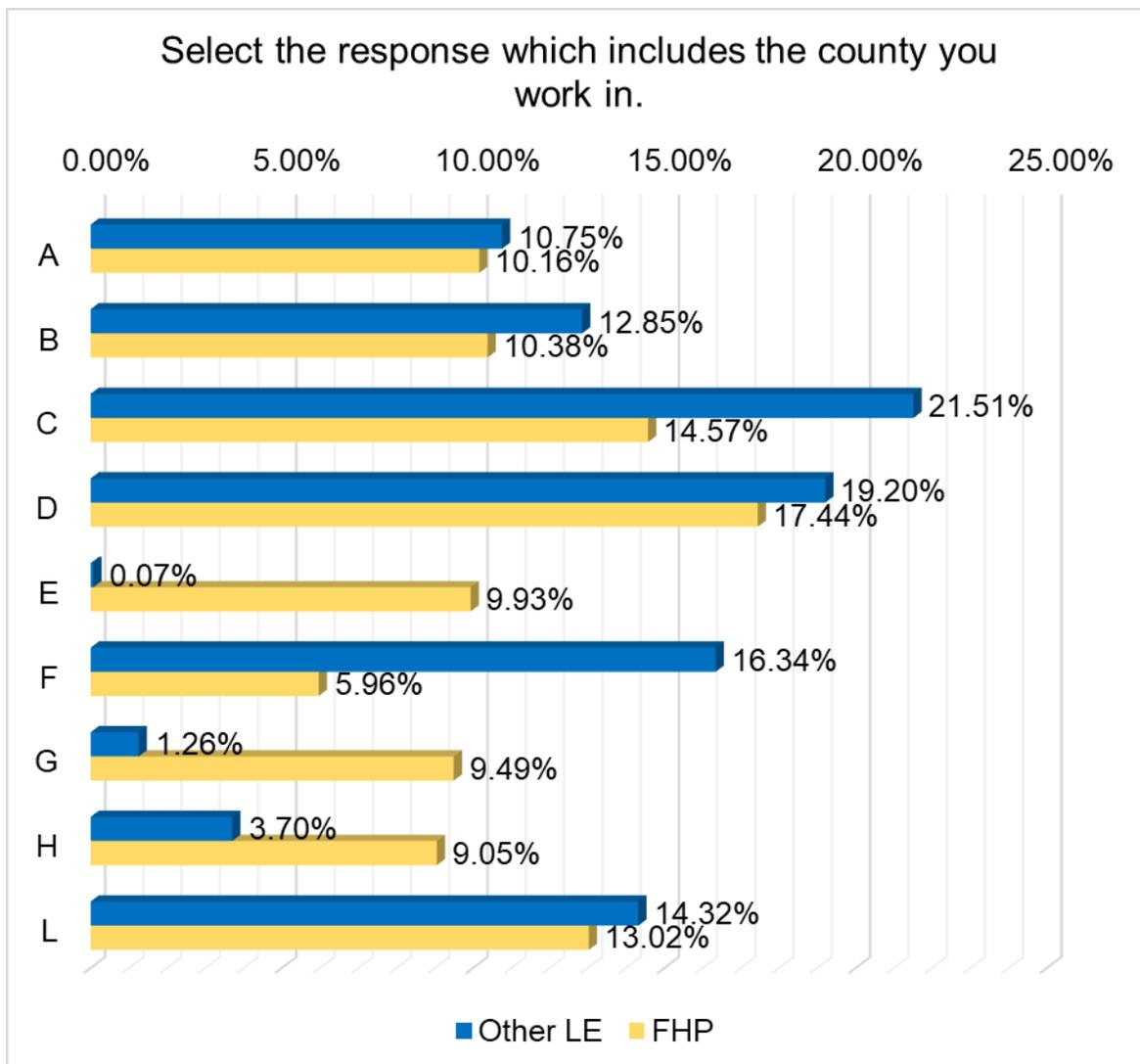


On the FHP Survey, Question 2 was a conditional question that was only asked if respondents reported in Question 1 that they were assigned to Troops I, J, K, or Q. From Question 1, there were 137 respondents that were assigned to these four troops and required to answer Question 2. The geographical regions for these respondents were 5

(3.65%) in Troop A, 13(9.49%) in Troop B, 20 (14.60%) in Troop C, 27 (19.71%) in Troop D, 14 (10.22%) in Troop E, 6 (4.38%) in Troop F, 11 (8.03%) in Troop G, 10 (7.30%) in Troop H, and 31 (22.62%) in Troop L.

LE Survey Question 2 asked the respondents to select the geographic area that includes the county they work in. The response choices were divided into the counties that align with the FHP regional troop organization. One hundred fifty-four (10.75%) of the respondents reported working in a county in the Troop A area, 184 (12.85%) in a county in the Troop B area, 308 (21.51%) in a county in the Troop C area, 275 (19.20%) in the Troop D area, 1 (0.07%) in the Troop E area, 234 (16.34%) in the Troop F area, 18 (1.26%) in the Troop G area, 53 (3.70%) in the Troop H area, and 205 (14.32%) in the Troop L area.

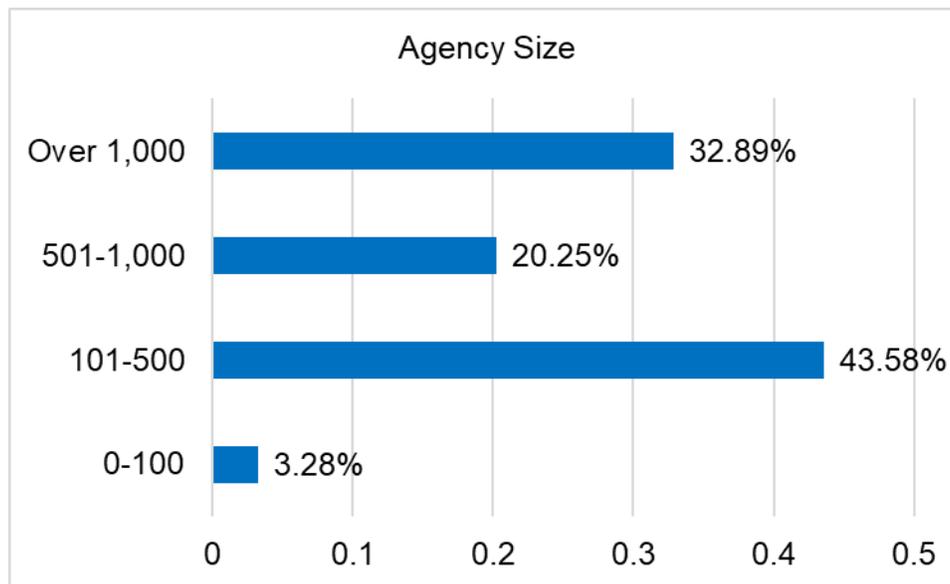
Table 5. Combined Surveys Geographical Areas



## Agency Size

On the LE Survey, Question 3 asked how many full-time law enforcement officers work for the respondent's agency. Forty-seven (3.28%) work for agencies with 100 or less officers, 624 (43.58%) work for agencies with 101 to 500 officers, 290 (20.25%) work for agencies with 501 to 1,000 officers, and 471 (32.89%) work for agencies with over 1,000 officers. The FHP Survey did not ask for agency size since it was only sent to one agency; however, the appropriate response for agency size for FHP is over 1,000 officers.

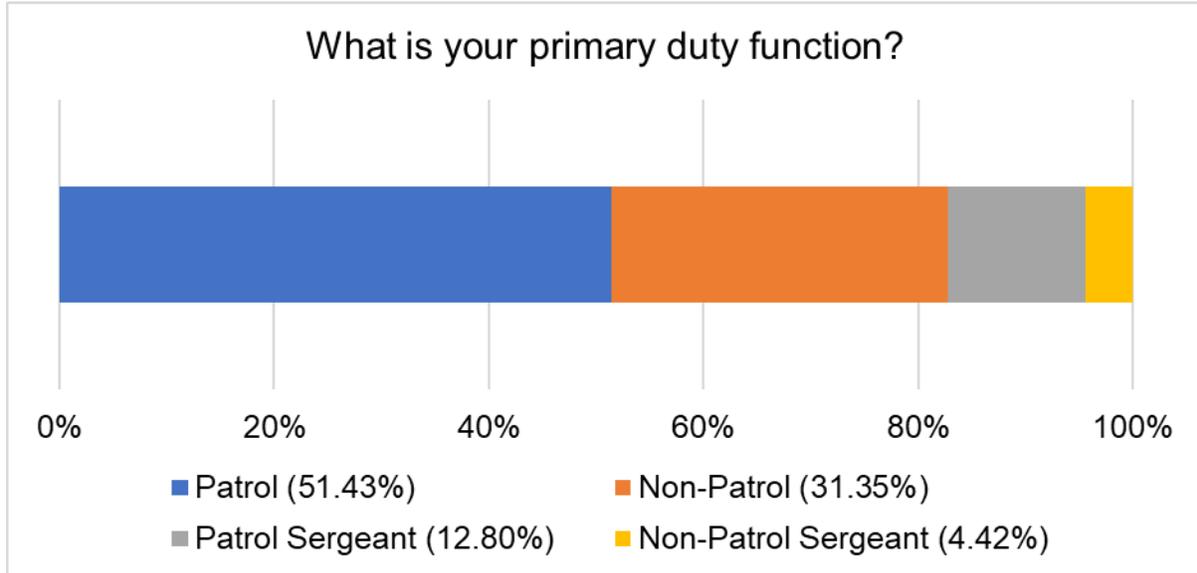
Table 6. LE Survey Agency Size



## Primary Duty Assignment

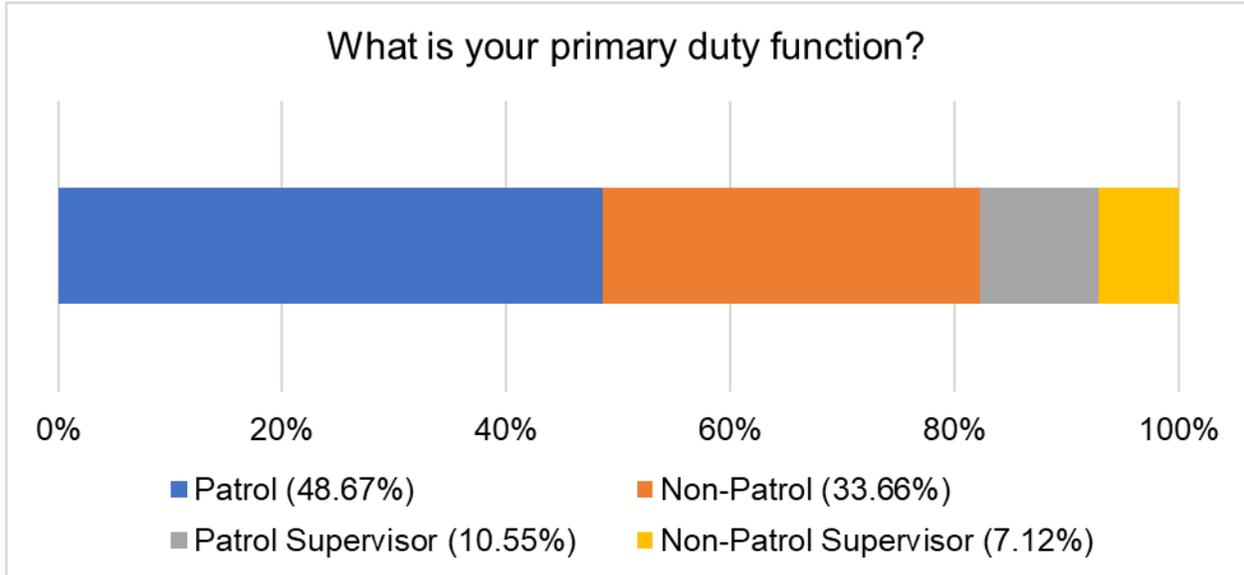
Each respondent was asked what their primary duty assignment was to determine if they worked patrol or a specialty assignment, or if they were a supervisor. FHP Survey Question 3 asked respondents for their primary assignment. All responses were completed. Only five respondents reported other non-patrol functions and provided explanations; however, one of these respondents explained that they were CVE, which was a response option and their response was added to the CVE responses, resulting in only 4 (0.88%) responses for other non-patrol functions. The remaining officers were 233 (51.43%) patrol, 6 (1.33%) motors, 50 (11.04%) CVE, 10 (2.21%) criminal interdiction or K-9 handlers, 5 (1.10%) driving under the influence (DUI) squad, 17 (3.75%) Bureau of Criminal Investigations and Intelligence, and 50 (11.04%) traffic homicide investigators (THI). Additionally, 58 (12.80%) road sergeants and 20 (4.42%) specialty unit supervisors responded.

Table 7. FHP Survey Duty Assignments



On the LE Survey, Question 4 asked respondents what their primary duty function was. Six hundred ninety-seven (48.67%) responded that they were assigned to patrol. One hundred sixty-nine (11.80%) were assigned to investigations, 20 (1.40%) were assigned to motors, 18 (1.26%) were assigned to DUI, 29 (2.03%) were assigned to drug enforcement, and 22 (1.54%) were assigned to K-9. One hundred fifty-one (10.54%) were patrol supervisors and 102 (7.12%) were specialty unit supervisors. Two hundred twenty-four (15.64%) responded other and provided their own assignment description. The other response descriptions were organized as 16 (1.11%) administrative, 7 (0.49%) aviation, 16 (1.11%) civil processing, 10 (0.70%) community relations related, 7 (0.49%) corrections/jail, 38 (2.65%) court related, 5 (0.35%) internal affairs and/or professional standards, 4 (0.28%) marine units, 71 (4.96%) school and/or youth services, 13 (0.91%) traffic and/or crash investigations unit, 10 (0.70%) training, and 27 (1.89%) other. These percentages for the other response descriptions were calculated out of the 1,432 total responses.

Table 8. LE Survey Duty Assignments

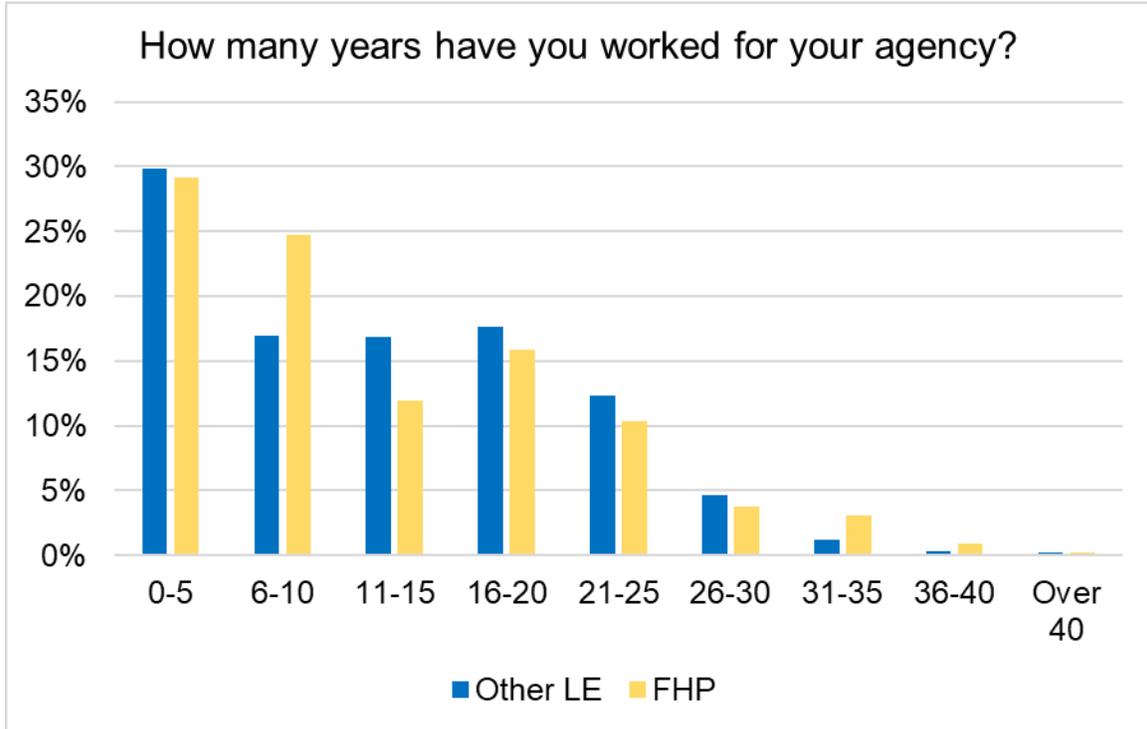


### Years of Service

FHP Survey Question 4 asked how many years the respondent worked for FHP. There were 132 (29.14%) respondents with 0 to 5 years of service, 112 (24.72%) respondents with 6 to 10 years of service, 54 respondents (11.92%) with 11 to 15 years of service, 72 (15.90%) respondents with 16 to 20 years of service, and 47 (10.38%) respondents with 21 to 25 years of service. Seventeen (3.75%) respondents had 26 to 30 years of service, 14 (3.09%) had 31 to 35 years of service, 4 (0.88%) had 36 to 40 years of service, and 1 (0.22%) reported over 40 years of service.

LE Survey Question 5 asked respondents how many years they have worked for their agency. Four hundred twenty-seven (29.82%) of respondents reported working for their agency for 0 to 5 years, 243 (16.97%) for 6 to 10 years, 241 (16.83%) for 11 to 15 years, 253 (17.67%) for 16 to 20 years, and 176 (12.29%) for 21 to 25 years. Sixty-seven (4.68%) reported working for their agency 26 to 30 years, 17 (1.18%) for 31 to 35 years, 5 (0.35%) for 36 to 40 years, and 3 (0.21%) for over 40 years.

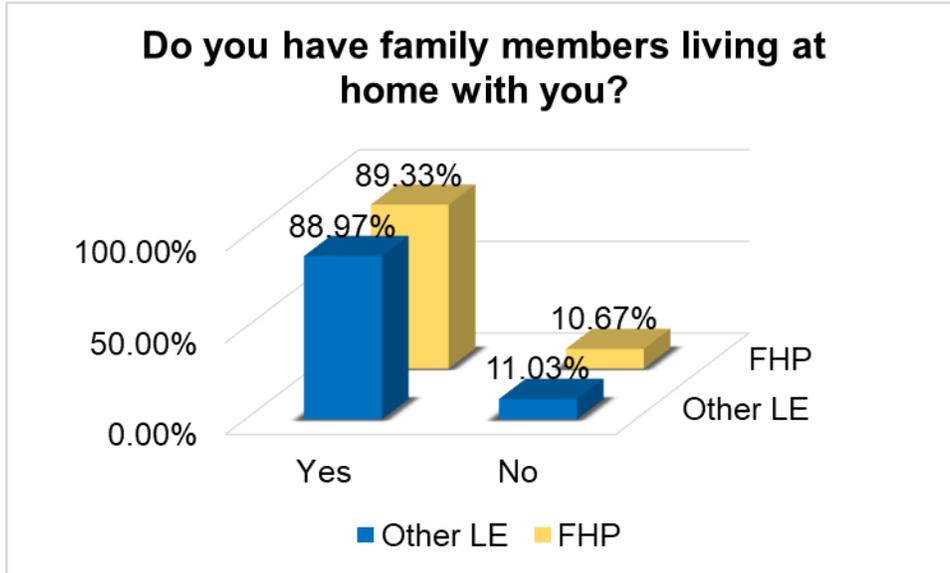
Table 9. Combined Surveys Length of Service



### Family Members Living at Home

FHP Survey Question 5 and LE Survey Question 6 asked whether the respondent had family members living at home with them. For the FHP Survey, three respondents elected to skip this question. Four hundred two (89.33%) replied yes and 48 (10.67%) replied no. For the LE Survey, six of the respondents who completed the survey did not provide a response. One thousand, two hundred seventy-five (88.97%) reported they had someone who lives with them and 151 (11.03%) reported they did not.

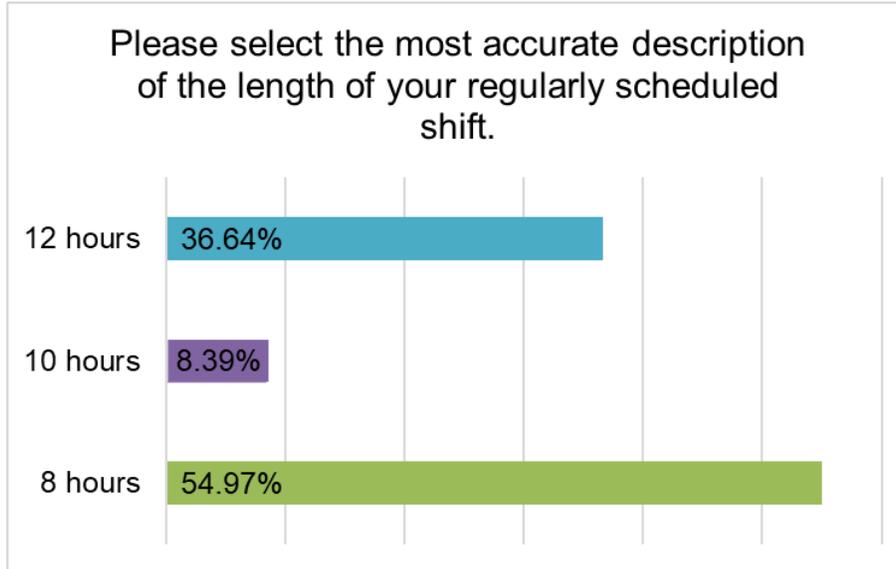
Table 10. Combined Surveys Family at Home



### Current Shift

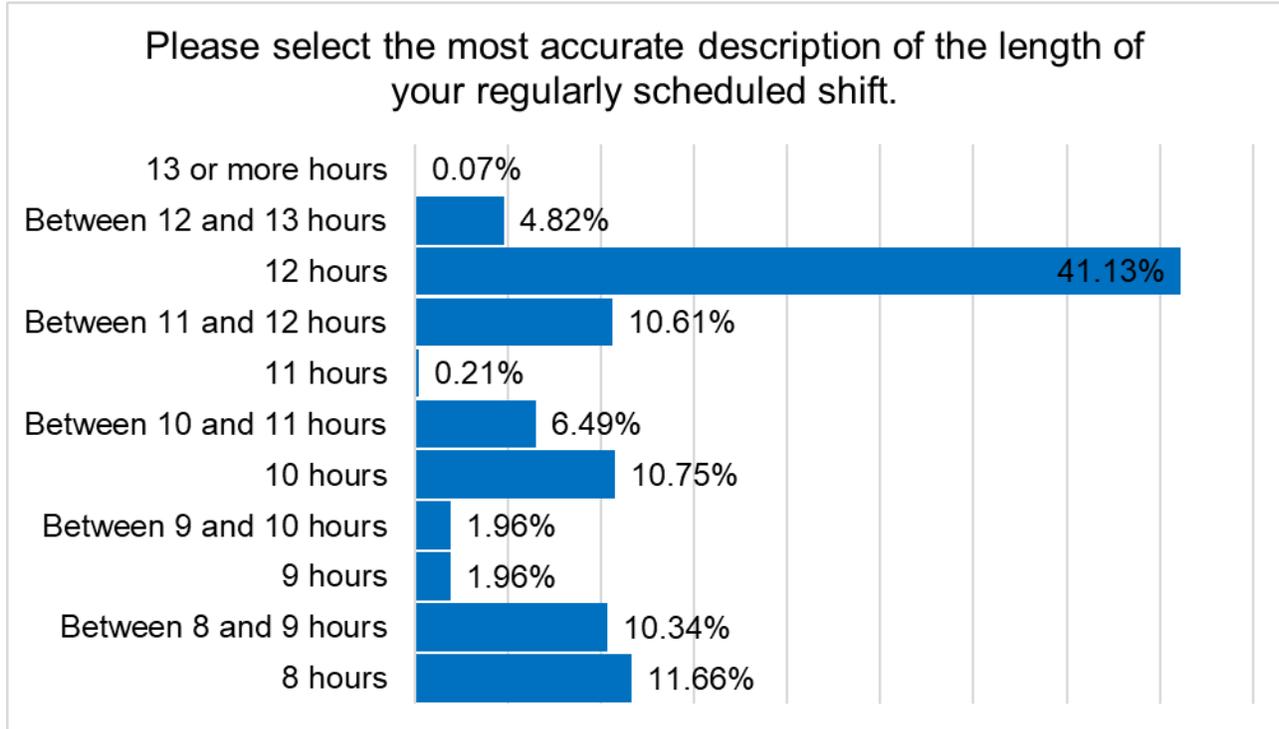
FHP Survey Question 6 asked the respondent what shift they are currently working and provided the options of 8, 10, or 12 hours. These response options were limited because the shift options for FHP were known. All respondents who completed the survey provided a response. Two hundred forty-nine (54.97%) reported working 8-hour shifts, 38 (8.39%) reported working 10-hour shifts, and 166 (36.64%) reported working 12-hour shifts.

Table 11. FHP Survey Current Shift Length



LE Survey Question 7 asked respondents to select the most accurate description of the length of their current scheduled shift. This survey included more response options to account for unknown shift options. One hundred sixty-seven (11.66%) reported working 8-hour shifts, 148 (10.34%) reported working between 8 and 9 hours, 28 (1.96%) reported working 9 hours, and 28 (1.96%) reported working between 9 and 10 hours. One hundred fifty-four (10.75%) reported working 10-hour shifts, 93 (6.49%) worked between 10 and 11 hours, 3 (0.21%) worked 11 hours, and 152 (10.61%) worked between 11 and 12 hours. Five hundred eighty-nine (41.13%) reported working 12 hours, 69 (4.82%) worked between 12 and 13 hours, and 1 (0.07%) worked shifts of 13 hours or more.

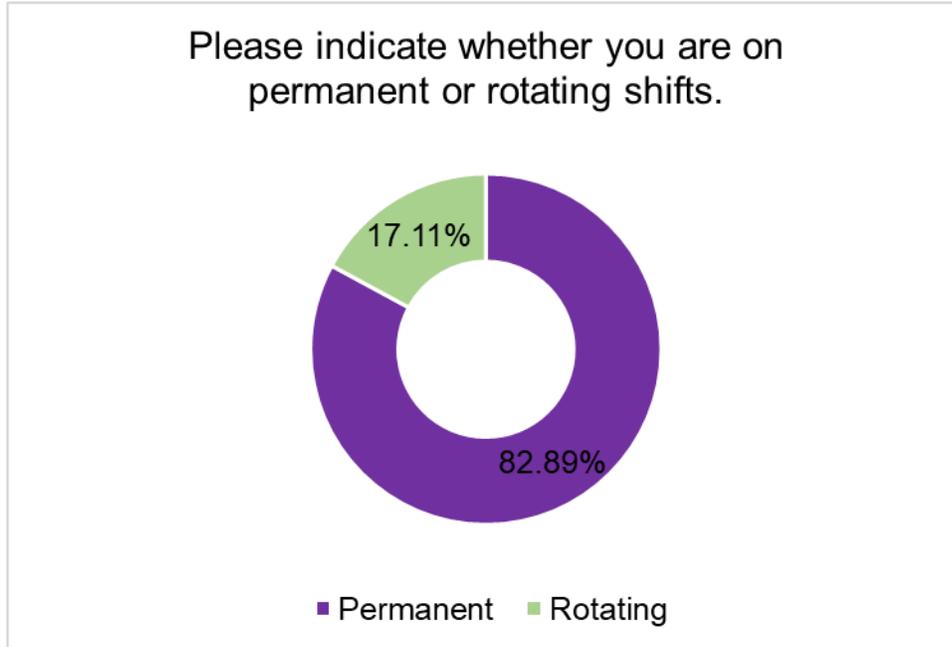
Table 12. LE Survey: Current Shift Length



### Permanent Shifts

LE Survey Question 8 asked whether the respondent is on permanent or rotating shifts. One thousand, one hundred eighty-seven (82.89%) said they were on permanent shifts. Two hundred forty-five (17.11%) said they were on rotating shifts.

Table 13. LE Survey Permanent Shifts



### Satisfaction with Current Shift

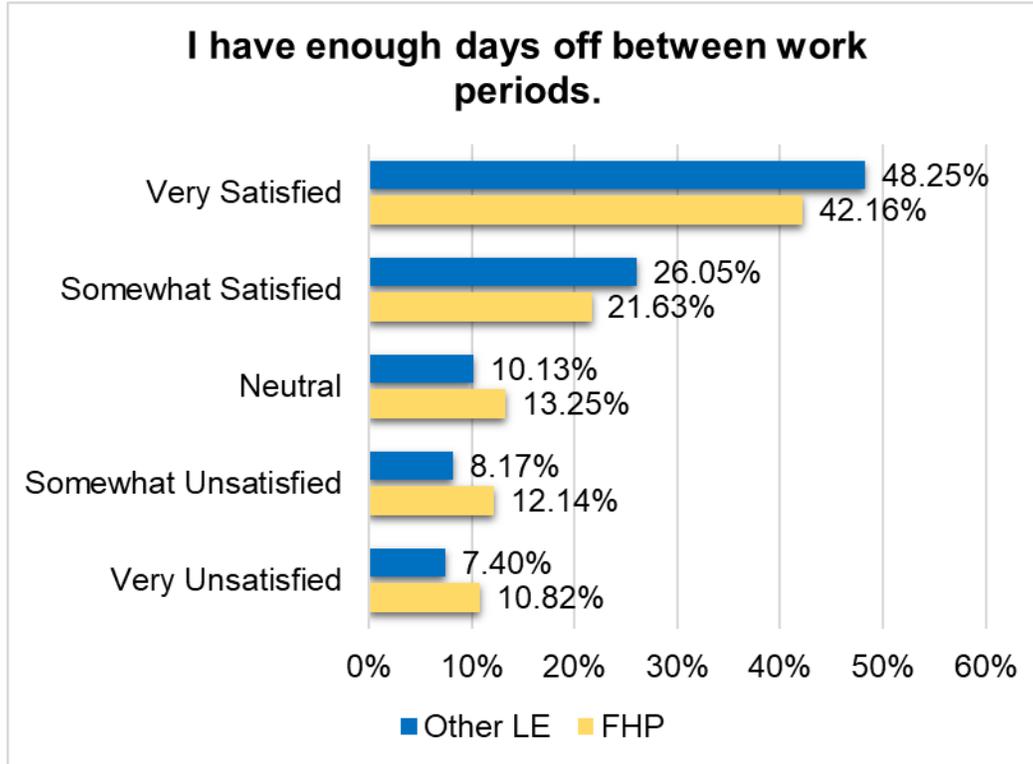
FHP Survey Question 7 and LE Survey Question 9 asked respondents to consider how their current shift affects their satisfaction in relation to 11 statements. Respondents were provided with a 5-point Likert scale to rate their satisfaction for each area. The options for rating each area were very unsatisfied, somewhat unsatisfied, neutral, somewhat satisfied, or very satisfied. The results for both surveys are presented by statement.

#### *Days Off Between Work Periods*

The first statement asked respondents to rate whether they had enough days off between work periods. For the FHP Survey, 49 (10.82%) respondents reported being very unsatisfied, 55 (12.14%) somewhat unsatisfied, 60 (13.25%) neutral, 98 (21.63%) somewhat satisfied, and 191 (42.16%) very satisfied with the amount of days off they have between work periods. The average satisfaction rating was 3.72.

For the LE Survey, 106 (7.40%) respondents reported being very unsatisfied, 117 (8.17%) somewhat unsatisfied, 145 (10.13%) neutral, 373 (26.05%) somewhat satisfied, and 691 (48.25%) very satisfied with the amount of days off they have between work periods. The average of the responses was 4.00.

Table 14. Combined Surveys Current Days Off

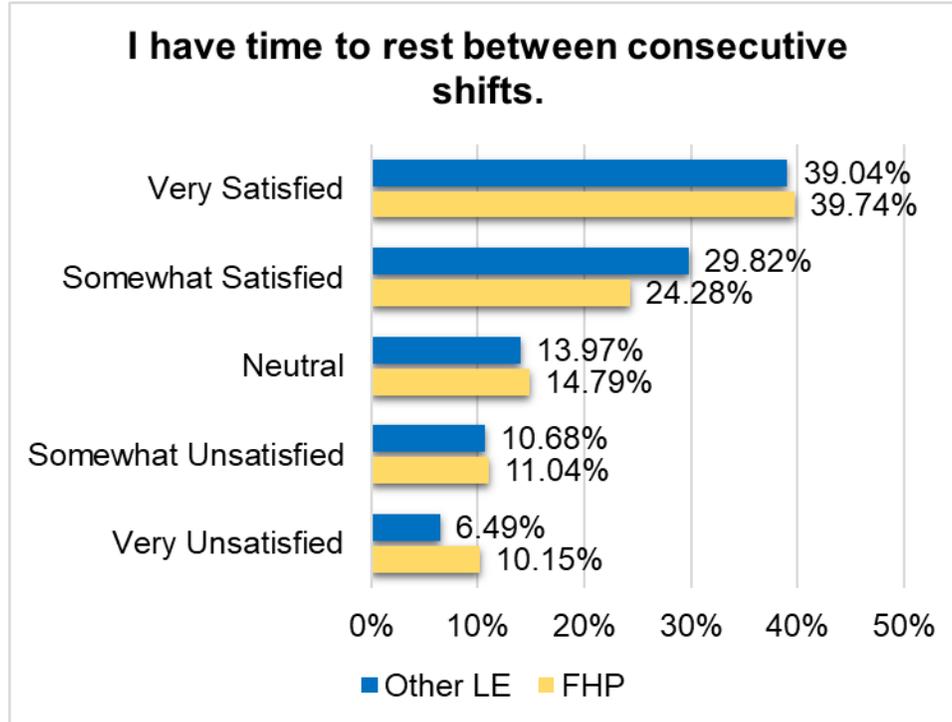


***Rest Between Consecutive Shifts***

The second statement asked respondents to rate whether they had enough time to rest between consecutive shifts. For the FHP Survey, 46 (10.15%) were very unsatisfied, 50 (11.04%) were somewhat unsatisfied, 67 (14.79%) were neutral, 110 (24.28%) were somewhat satisfied, and 180 (39.74%) were very satisfied with the time to rest between consecutive shifts. The average for statement 2 was 3.72.

For the LE Survey, 93 (6.49%) were very unsatisfied, 153 (10.68%) were somewhat unsatisfied, 200 (13.97%) were neutral, 427 (29.82%) were somewhat satisfied, and 559 (39.04%) were very satisfied with the time to rest between consecutive shifts. The average for statement 2 was 3.84.

Table 15. Combined Surveys Current Time to Rest Between Shifts

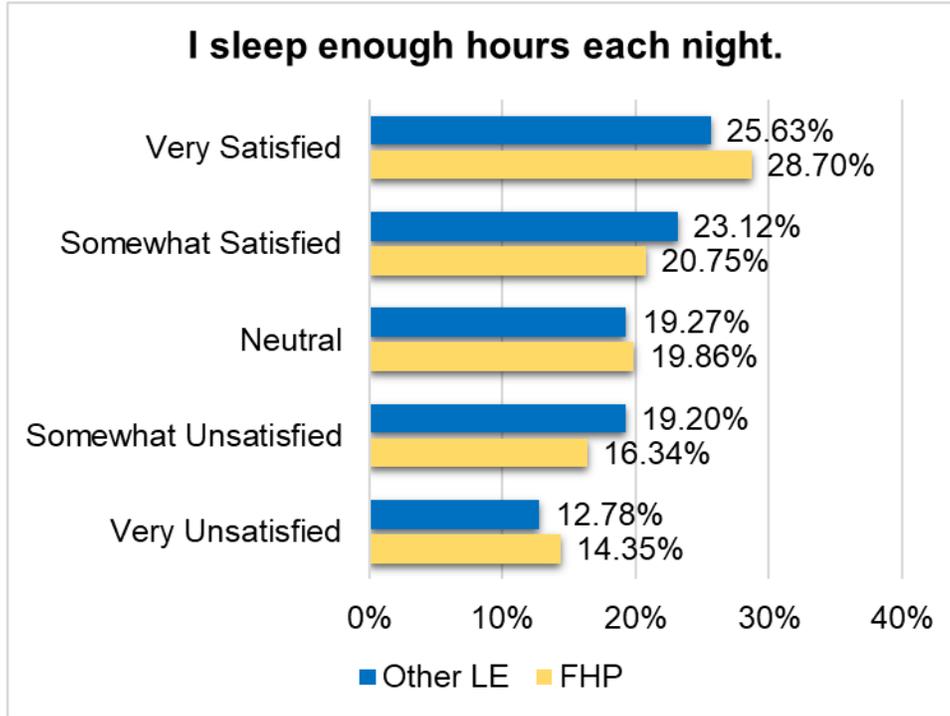


### ***Sleep Each Night***

The third statement asked respondents to rate if they had enough sleep each night. For the FHP Survey, 65 (14.35%) reported they were very unsatisfied, 74 (16.34%) somewhat unsatisfied, 90 (19.86%) neutral, 94 (20.75%) somewhat satisfied, and 130 (28.70%) very satisfied with sleeping enough each night. The average for statement 3 was 3.33.

For the LE Survey, 183 (12.78%) reported they were very unsatisfied, 275 (19.20%) somewhat unsatisfied, 276 (19.27%) neutral, 331 (23.12%) somewhat satisfied, and 367 (25.63%) very satisfied with sleeping enough each night. The average for statement 3 was 3.30.

Table 16. Combined Surveys Current Sleep

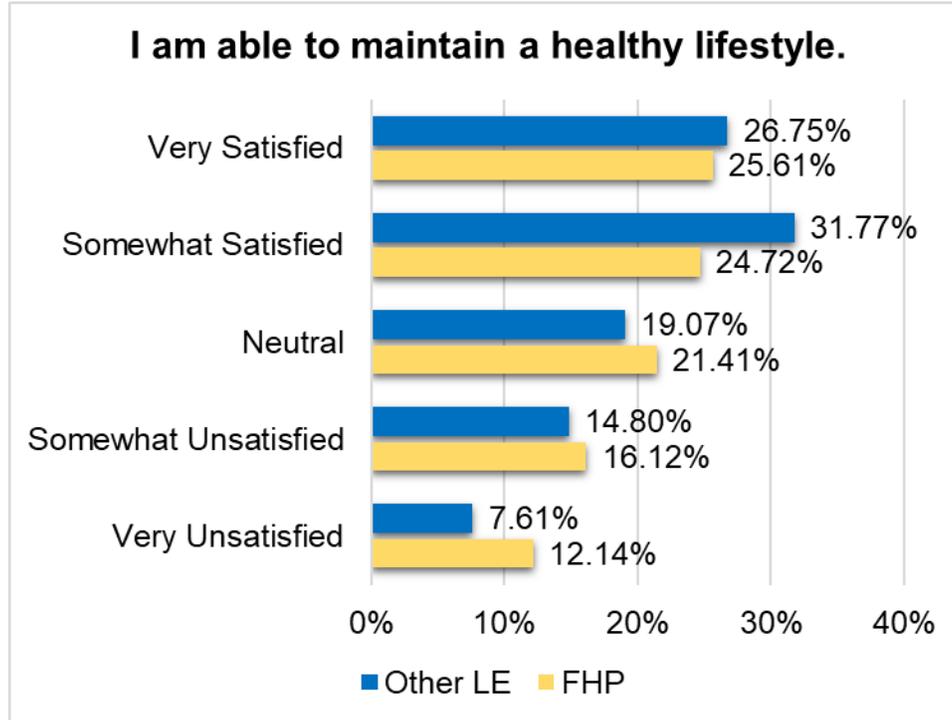


***Maintaining a Healthy Lifestyle***

For the fourth statement, respondents rated how well they were able to maintain a healthy lifestyle on their current shift. For the FHP Survey, 55 (12.14%) reported being very unsatisfied, 73 (16.12%) somewhat unsatisfied, 97 (21.41%) neutral, 112 (24.72%) somewhat satisfied, and 116 (25.61%) very satisfied with their ability to maintain a healthy lifestyle. The average response for the fourth statement was 3.36.

For the LE Survey, 109 (7.61%) reported being very unsatisfied, 212 (14.80%) somewhat unsatisfied, 273 (19.07%) neutral, 445 (31.77%) somewhat satisfied, and 383 (26.75%) very satisfied with their ability to maintain a healthy lifestyle. The average response for the fourth statement was 3.55.

Table 17. Combined Surveys Current Healthy Lifestyle

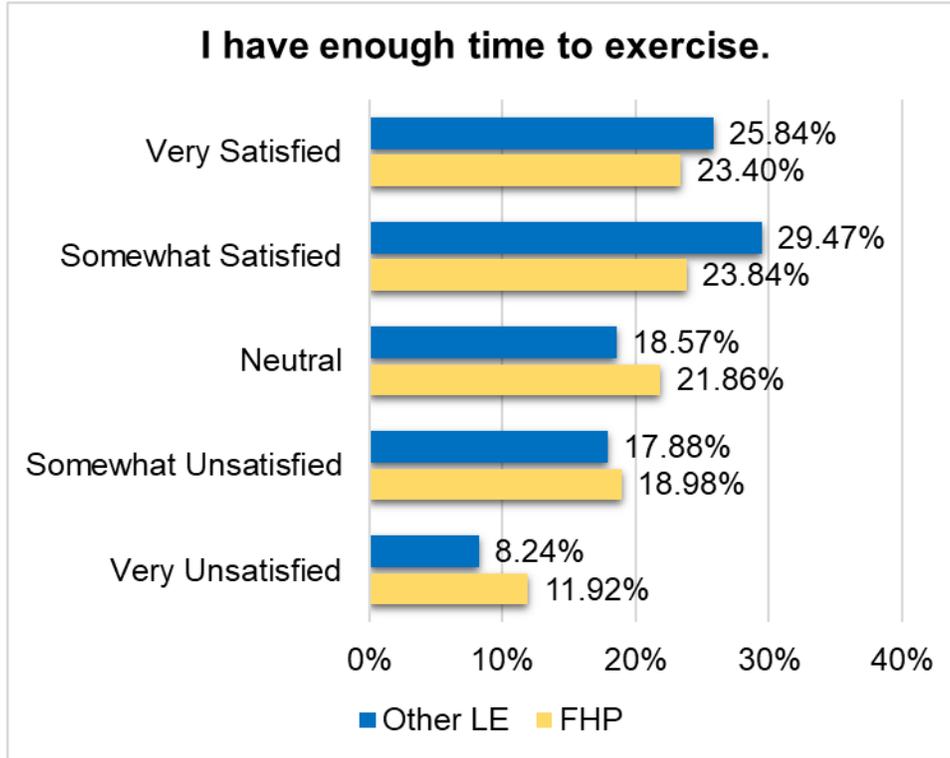


**Exercise**

For the fifth statement, respondents were asked to rate how they felt about the time they have to exercise on their current shift. For the FHP Survey, 54 (11.92%) respondents were very unsatisfied, 86 (18.98%) were somewhat unsatisfied, 99 (21.86%) were neutral, 108 (23.84%) were somewhat satisfied, and 106 (23.40%) were very satisfied with having enough time to exercise. The average response for the fifth statement was 3.28.

For the LE Survey, 118 (8.24%) respondents were very unsatisfied, 256 (17.88%) were somewhat unsatisfied, 266 (18.57%) were neutral, 422 (29.47%) were somewhat satisfied, and 370 (25.84%) were very satisfied with having enough time to exercise. The average response for the fifth statement was 3.47.

Table 18. Combined Surveys Current Exercise Time

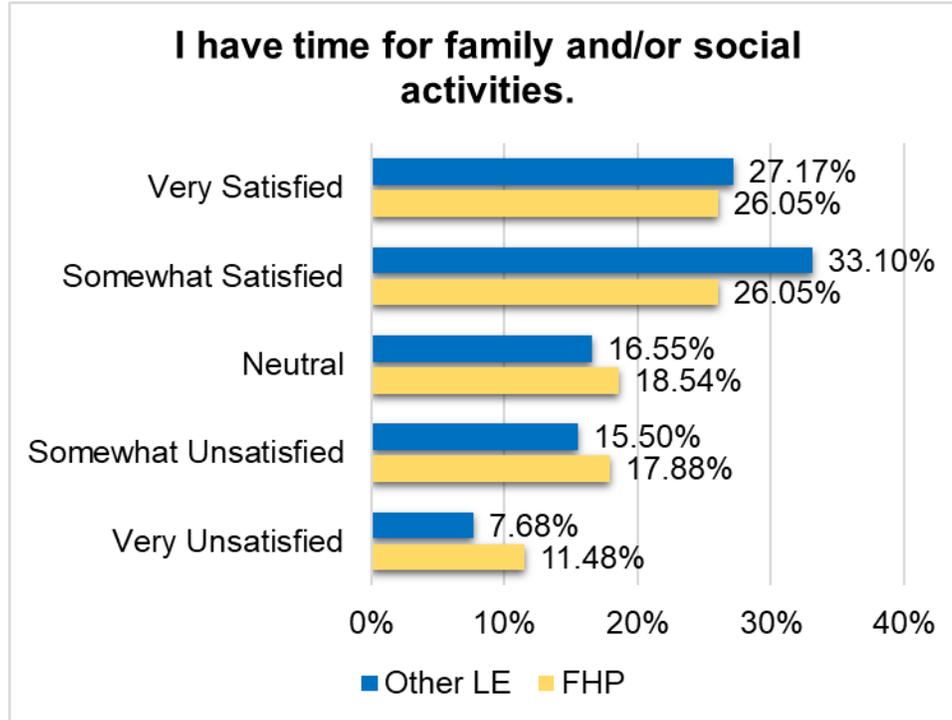


***Family and/or Social Activities***

For the sixth statement, respondents rated whether they have time for family and/or social activities on their current shifts. For the FHP Survey, 52 (11.48%) respondents were very unsatisfied, 81 (17.88%) were somewhat unsatisfied, 84 (18.54%) were neutral, 118 (26.05%) were somewhat satisfied, and 118 (26.05%) were very satisfied with having time for family and/or social activities. The average response for the sixth statement was 3.37.

For the LE Survey, 110 (7.68%) of respondents were very unsatisfied, 222 (15.50%) were somewhat unsatisfied, 237 (16.55%) were neutral, 474 (33.10%) were somewhat satisfied, and 389 (27.17%) were very satisfied with having time for family and/or social activities. The average response for the sixth statement was 3.56.

Table 19. Combined Surveys Current Social/Family Time

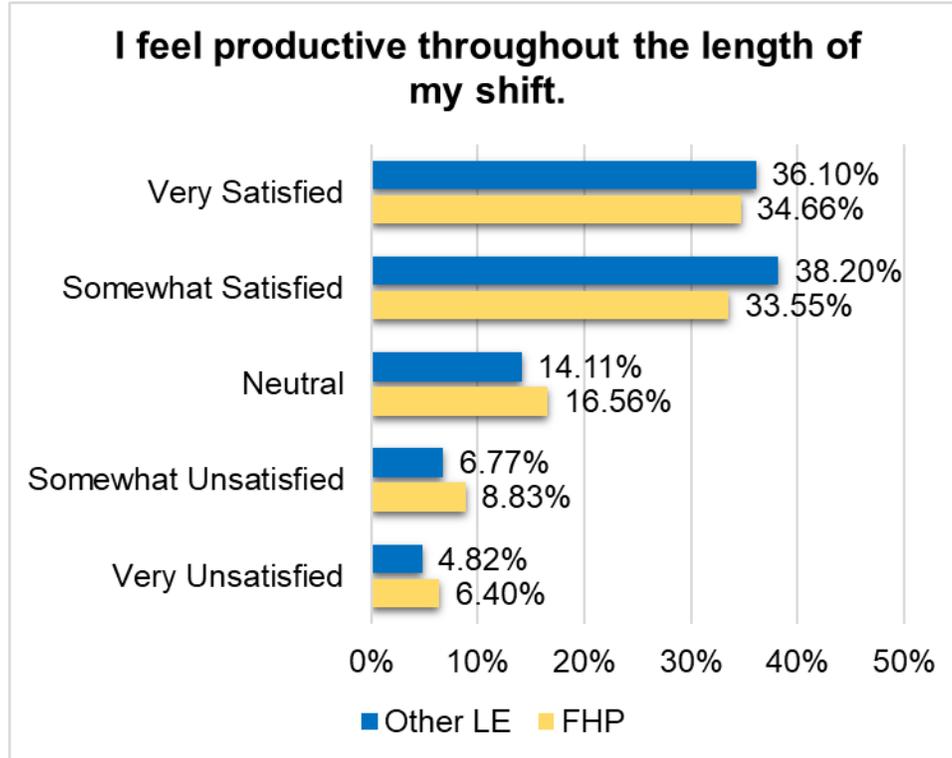


### ***Shift Productivity***

For the seventh statement, respondents rated their own satisfaction with how productive they feel throughout the length of their current shift. For the FHP Survey, 29 (6.40%) respondents were very unsatisfied, 40 (8.83%) were somewhat unsatisfied, 75 (16.56%) were neutral, 152 (33.55%) were somewhat satisfied, and 157 (34.66%) were very satisfied with feeling productive throughout the length of their shift. The average of the responses for the seventh statement was 3.81.

For the LE Survey, 69 (4.82%) respondents were very unsatisfied, 97 (6.77%) were somewhat unsatisfied, 202 (14.11%) were neutral, 547 (38.20%) were somewhat satisfied, and 517 (36.10%) were very satisfied with feeling productive throughout the length of their shift. The average of the responses for the seventh statement was 3.94.

Table 20. Combined Surveys Current Productivity

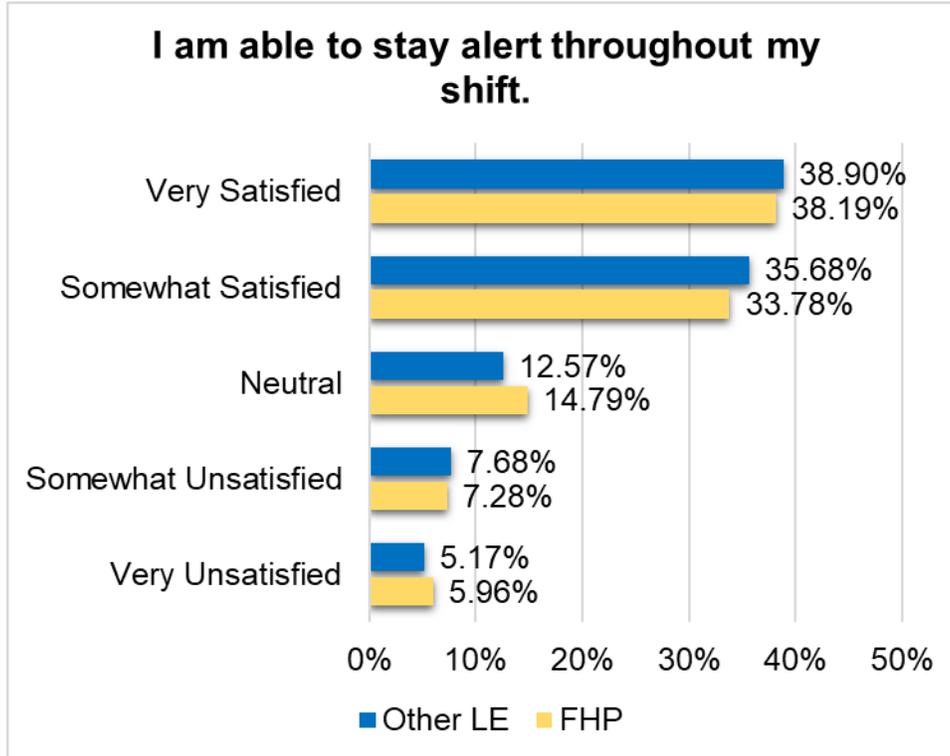


### ***Shift Alertness***

For the eighth statement, respondents rated their satisfaction with their ability to stay alert throughout their current shift. For the FHP Survey, 27 (5.96%) were very unsatisfied, 33 (7.28%) were somewhat unsatisfied, 67 (14.79%) were neutral, 153 (33.78%) were somewhat satisfied, and 173 (38.19%) were very satisfied with their ability to stay alert throughout their shift. The average of the responses for the eighth statement was 3.91.

For the LE Survey, 74 (5.17%) were very unsatisfied, 110 (7.68%) were somewhat unsatisfied, 180 (12.57%) were neutral, 511 (35.68%) were somewhat satisfied, and 557 (38.90%) were very satisfied with their ability to stay alert throughout their shift. The average of the responses for the eighth statement was 3.95.

Table 21. Combined Surveys Current Alertness

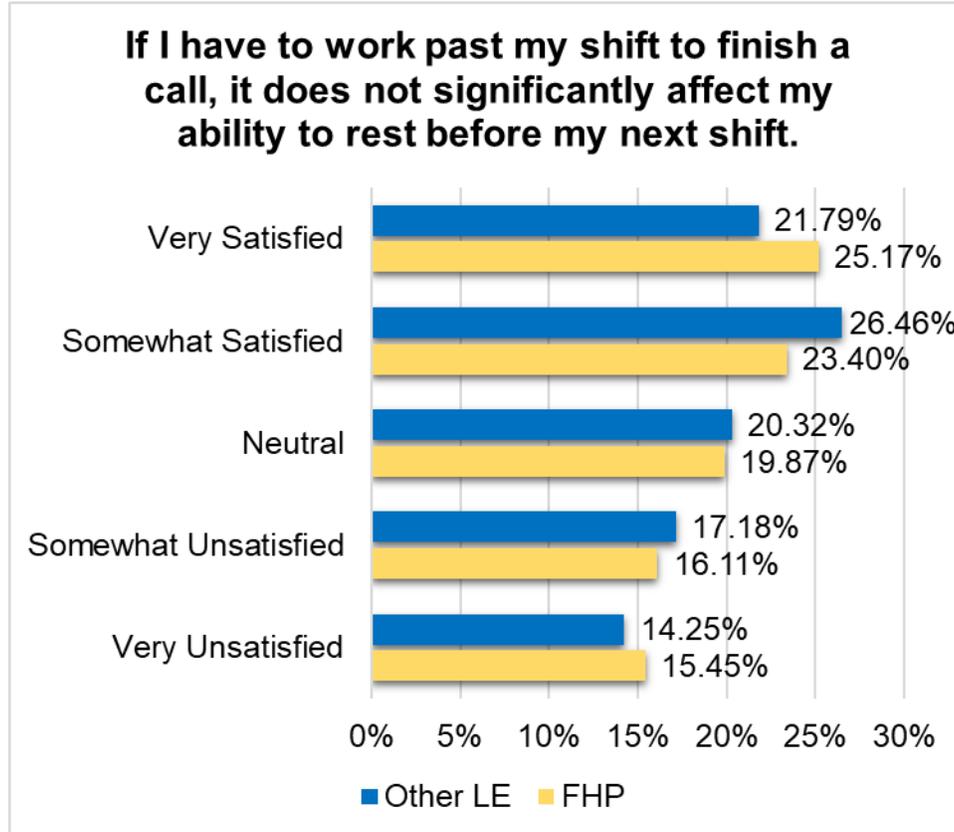


***Working Past End of Shift***

For the ninth statement, respondents rated how satisfied they were with whether working past their shift to finish a call would affect their ability to rest before their next shift. For the FHP Survey, 70 (15.45%) were very unsatisfied, 73 (16.11%) were somewhat unsatisfied, 90 (19.87%) were neutral, 106 (23.40%) were somewhat satisfied, and 114 (25.17%) were very satisfied that working past their shift to finish a call does not significantly impact their ability to rest before their next shift. The average of the responses for the ninth statement was 3.27.

For the LE Survey, 204 (14.25%) were very unsatisfied, 246 (17.18%) were somewhat unsatisfied, 291 (20.32%) were neutral, 379 (26.46%) were somewhat satisfied, and 312 (21.79%) were very satisfied that working past their shift to finish a call does not significantly impact their ability to rest before their next shift. The average of the responses for the ninth statement was 3.24.

Table 22. Combined Surveys Current Working Past Shift

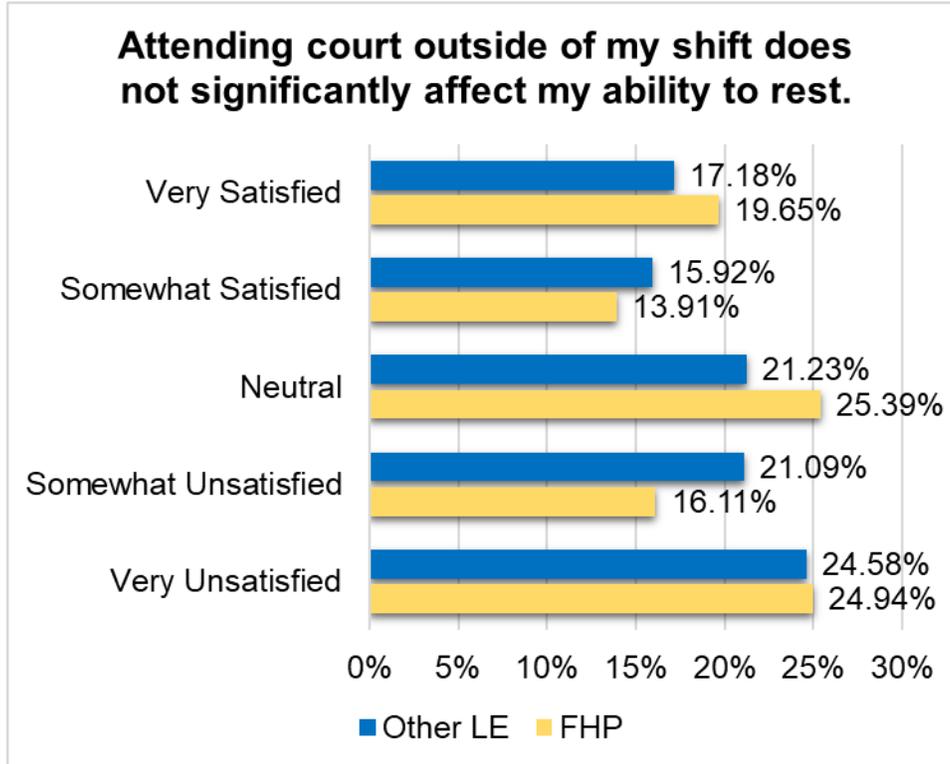


***Court Outside of Shift***

For the tenth statement, respondents rated whether attending court outside of their current shift significantly affected their ability to rest. For the FHP Survey, 113 (24.94%) were very unsatisfied, 73 (16.11%) were somewhat unsatisfied, 115 (25.39%) were neutral, 63 (13.91%) were somewhat satisfied, and 89 (19.65%) were very satisfied that attending court outside of their shift does not significantly affect their ability to rest. The average of the responses for the tenth statement was 2.87.

For the LE Survey, 352 (24.58%) were very unsatisfied, 302 (21.09%) were somewhat unsatisfied, 304 (21.23%) were neutral, 228 (15.92%) were somewhat satisfied, and 246 (17.18%) were very satisfied that attending court outside of their shift does not significantly affect their ability to rest. The average of the responses for the tenth statement was 2.8.

Table 23. Combined Surveys Current Court Time

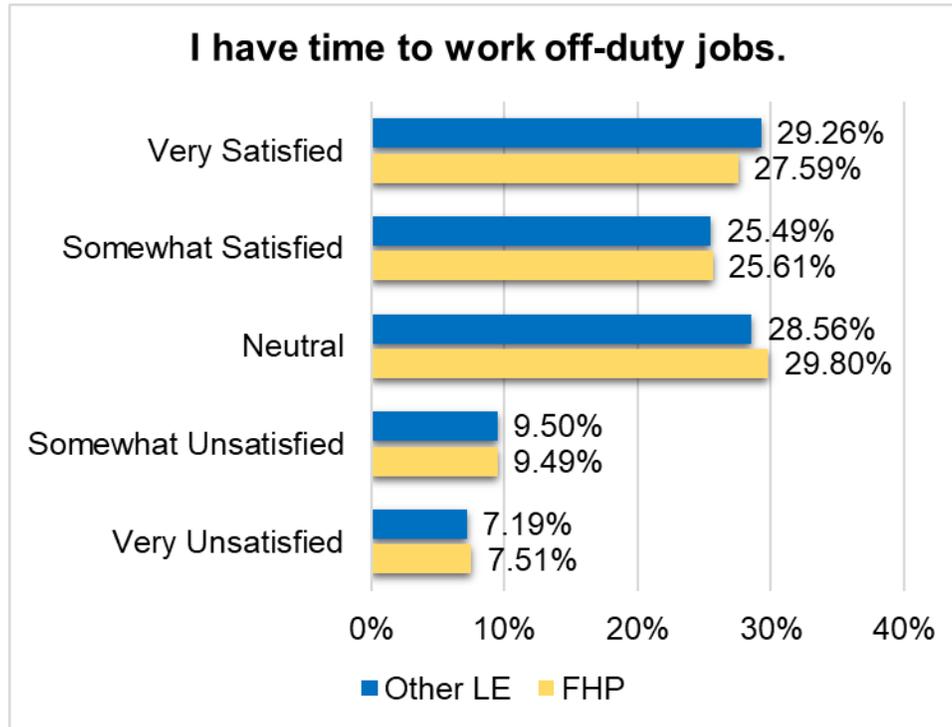


***Working Off-Duty***

For the eleventh statement, respondents rated how satisfied they were with having time to work off-duty jobs on their current shifts. For the FHP Survey, 34 (7.51%) were very unsatisfied, 43 (9.49%) were somewhat unsatisfied, 135 (29.80%) were neutral, 116 (25.61%) were somewhat satisfied, and 125 (27.59%) were very satisfied with having time to work off-duty jobs. The average of the responses for the eleventh statement was 3.56.

For the LE Survey, 103 (7.19%) were very unsatisfied, 136 (9.50%) were somewhat unsatisfied, 409 (28.56%) were neutral, 365 (25.49%) were somewhat satisfied, and 419 (29.26%) were very satisfied with having time to work off-duty jobs. The average of the responses for the eleventh statement was 3.6.

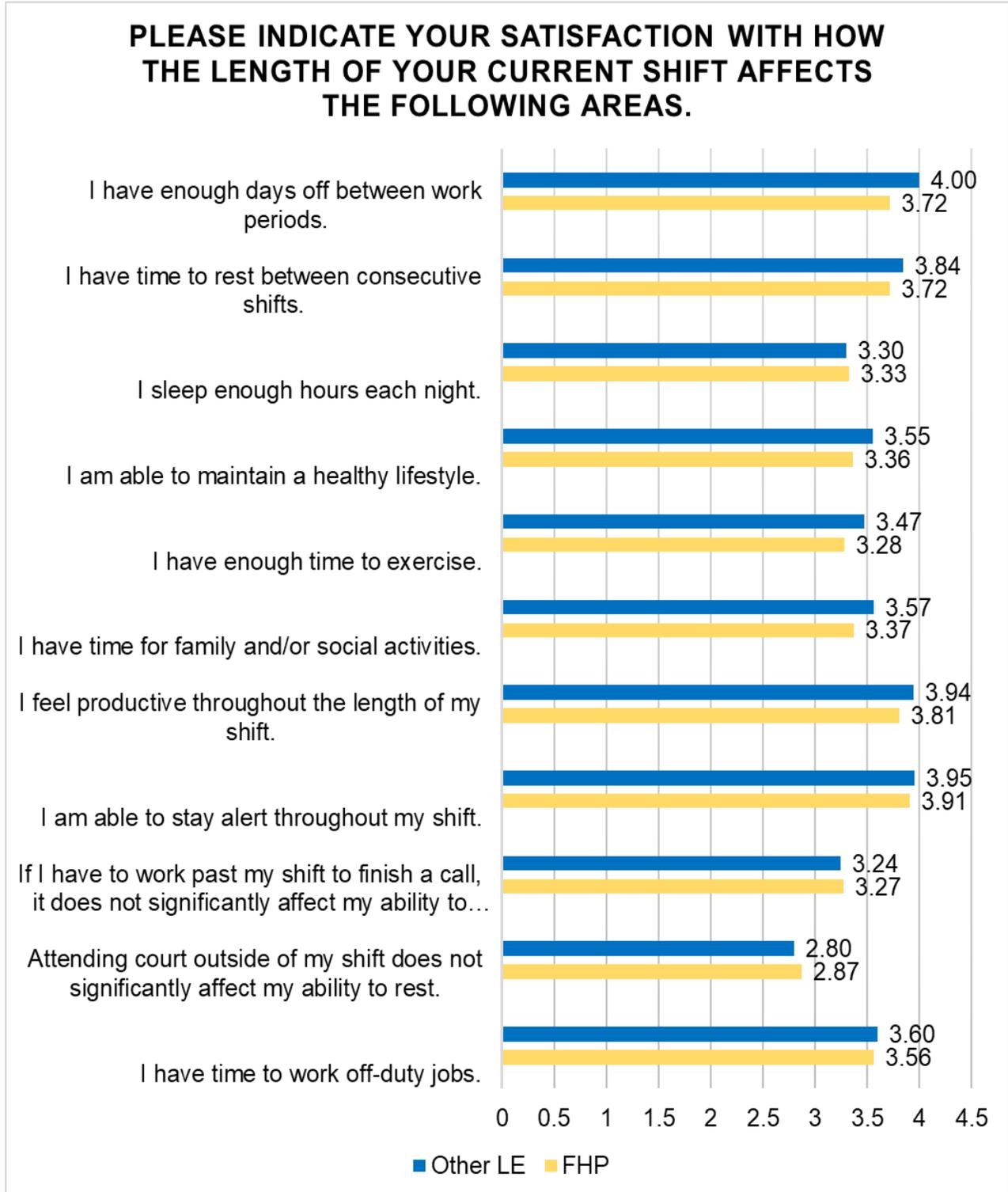
Table 24. Combined Surveys Current Time for Off-Duty



**Overall**

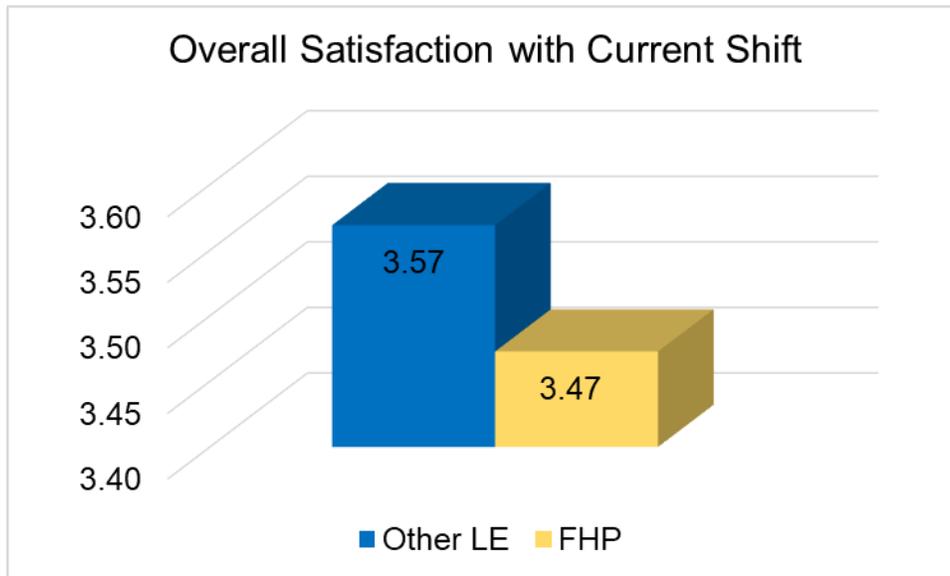
In addition to the results for the individual statements, this research reviewed the averages for each statement. These averages were provided above with the response rates for each statement and are depicted in the table below. Additionally, this section relates the averages to the different demographic segments.

Table 25. Combined Surveys Current Averages for Each Statement



Additionally, a total overall satisfaction score for the current shifts was calculated for the respondents to each survey by taking the average of the mean responses to each statement. For the FHP Survey, the overall satisfaction rating for all respondents was 3.46 out of 5.0. For the LE Survey, the overall satisfaction rating for all respondents was 3.57 out of 5.0. These overall ratings fall between neutral and somewhat satisfied.

Table 26. Combined Surveys Current Shifts Overall Satisfaction Rating



The average response rates for each statement were separated by the current shifts worked by the respondents. The two tables below show this information for the FHP Survey and the LE Survey. The rates are color coded to distinguish the score ranges of 1.00 through 1.99 for extremely unsatisfied, 2.00 through 2.99 for somewhat unsatisfied, 3.00 through 3.99 for neutral, 4.00 through 4.99 for somewhat satisfied, and 5.00 for extremely satisfied.

Table 27. FHP Survey Statement Response Averages by Current Shift

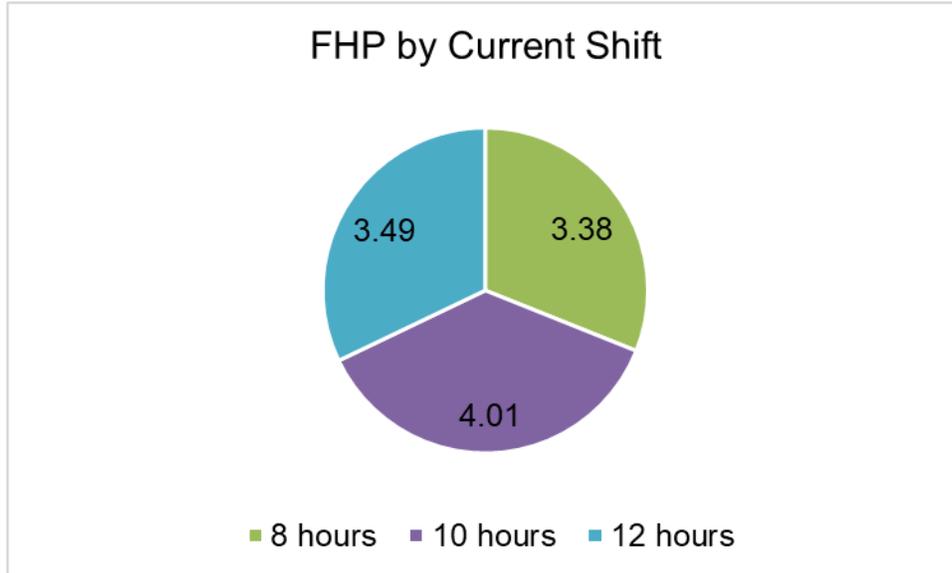
Shift	Sample Size	Statement											Average
		1	2	3	4	5	6	7	8	9	10	11	
8 Hours	249	3.31	3.57	3.21	3.28	3.19	3.17	3.74	3.91	3.36	2.85	3.58	3.38
10 Hours	38	4.47	4.37	3.87	3.87	3.89	3.84	4.29	4.34	3.82	3.63	3.71	4.01
12 Hours	166	4.17	3.80	3.39	3.36	3.27	3.57	3.81	3.81	3.01	2.73	3.50	3.49
<b>Average</b>		3.72	3.72	3.33	3.36	3.28	3.37	3.81	3.91	3.27	2.87	3.56	3.47

Table 28. LE Survey Statement Responses by Current Shift

Shift	Sample Size	Statement											Average
		1	2	3	4	5	6	7	8	9	10	11	
8 Hours	167	3.54	3.99	3.69	3.76	3.64	3.78	3.94	4.16	3.75	3.54	3.31	3.51
8-9 Hours	148	3.32	3.68	3.30	3.56	3.48	3.53	3.88	4.03	3.45	3.21	3.27	3.31
9 Hours	28	3.18	3.68	2.79	3.21	3.39	3.46	3.79	3.93	3.32	3.18	3.11	3.17
9-10 Hours	28	3.46	3.79	3.25	3.43	3.57	3.36	3.89	4.11	3.57	3.04	3.21	3.31
10 Hours	154	4.24	4.15	3.50	3.64	3.67	3.66	4.05	3.98	3.55	3.12	3.68	3.53
10-11 Hours	93	4.27	4.19	3.69	3.68	3.58	3.73	4.20	4.31	3.81	3.22	3.71	3.63
11 Hours	3	3.33	3.33	3.33	3.00	3.00	3.00	3.67	3.67	3.00	2.67	2.33	2.94
11-12 Hours	152	4.09	3.67	3.10	3.35	3.21	3.34	3.70	3.66	2.91	2.53	3.68	3.20
12 Hours	589	4.24	3.82	3.21	3.57	3.47	3.58	3.98	3.90	3.03	2.47	3.77	3.36
12-13 Hours	69	3.97	3.35	2.78	3.17	2.99	3.22	3.77	3.81	2.55	2.06	3.52	3.05
13+ Hours	1	3.00	4.00	2.00	2.00	2.00	1.00	5.00	5.00	4.00	1.00	1.00	2.67
<b>Average</b>		4.00	3.84	3.30	3.55	3.47	3.57	3.94	3.95	3.24	2.80	3.60	3.37

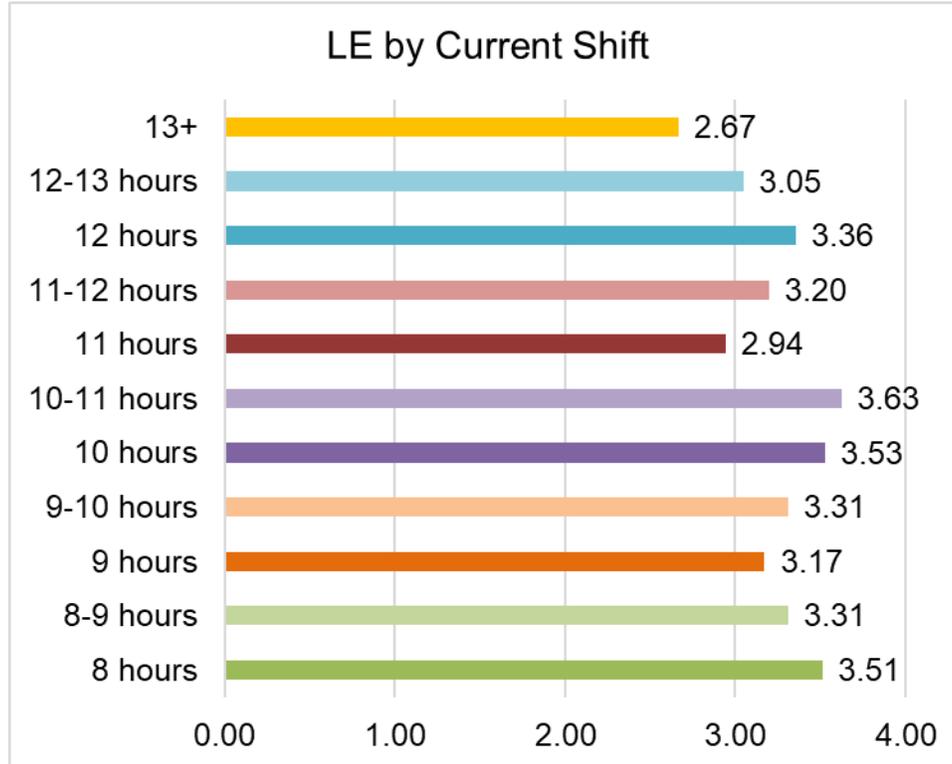
The overall averages by shift type are depicted below. The average response rate for the FHP Survey for satisfaction with current shifts was 3.47. The average satisfaction level of those on 8-hour shifts was 3.38, on 10-hour shifts was 4.01, and 12-hour shifts 3.49.

Table 29. FHP Survey: Satisfaction with Current Shift by Shift



The average response rate for the LE Survey for satisfaction with current shifts was 3.57. The average satisfaction level of those on 8-hour shifts was 3.51, shifts from 8 to 9 hours was 3.31, 9-hour shifts 3.17, shifts 9 to 10 hours 3.31, 10-hour shifts 3.53, shifts 10 to 11 hours 3.63, 11-hour shifts 2.94, shifts 11 to 12 hours 3.20, 12-hour shifts 3.36, shifts 12 to 13 hours 3.05, and shifts of 13 or more hours 2.67.

Table 30. LE Survey: Satisfaction with Current Shift by Shift



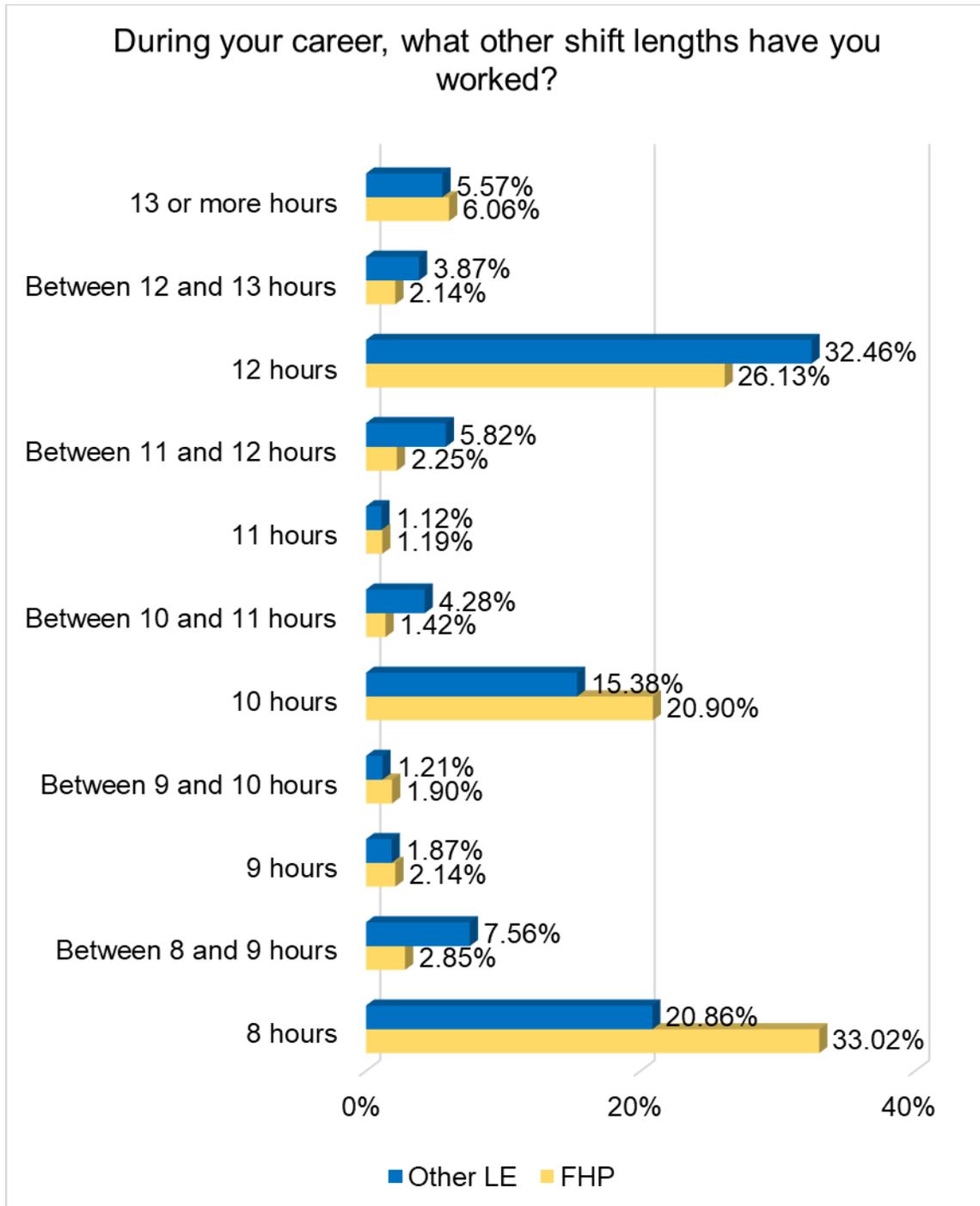
### Shift Work History

FHP Survey Question 8 asked respondents to indicate what other shifts they have worked during their careers. All participants responded to this question. Respondents were permitted to choose more than one answer choice, resulting in 842 answer selections. Two hundred seventy-eight (33.02%) reported working 8-hour shifts, 24 (2.85%) reported working between 8- and 9-hour shifts, and 18 (2.14%) reported working 9-hour shifts. Sixteen (1.90%) reported working shifts between 9 and 10 hours, 176 (20.90%) reported working 10-hour shifts, 12 (1.42%) reported shifts between 10 and 11 hours, 10 (1.19%) reported working 11-hour shifts, and 19 (2.25%) reported working shifts between 11 and 12 hours. Two hundred twenty (26.13%) of respondents reported working 12-hour shifts, 18 (2.14%) shifts between 12 and 13 hours, and 51 (6.06%) have worked shifts of 13 hours or longer during their career.

LE Survey Question 10 asked respondents what other shifts they have worked during their careers. Respondents were able to select more than one option, resulting in 2,406 selections by the 1,432 respondents. Five hundred two (20.86%) have previously worked 8-hour shifts, 182 (7.56%) worked a shift between 8 and 9 hours, 45 (1.87%) worked 9-hour shifts, and 29 (1.21%) worked a shift between 9 and 10 hours. Three hundred seventy (15.38%) have worked a 10-hour shift, 103 (4.28%) worked a shift between 10 and 11 hours, 27 (1.12%) worked an 11-hour shift, and 140 (5.82%) worked a shift between 11 hours and 12 hours. Seven hundred eighty-one (32.46%) have worked

a 12-hour shift, 93 (3.87%) have worked a shift between 12 and 13 hours, and 134 (5.57%) have worked a shift lasting 13 hours or more.

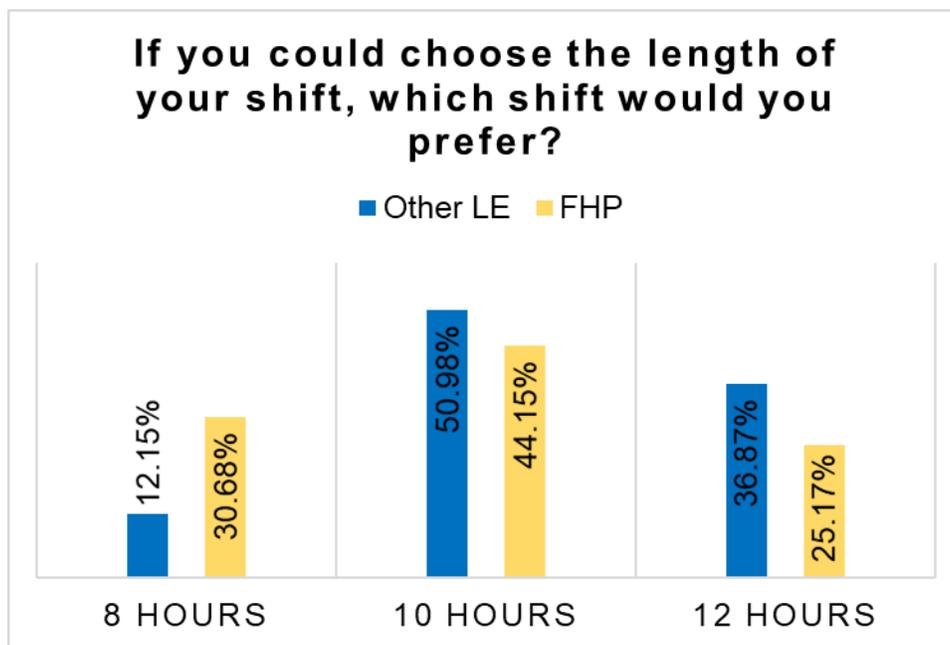
Table 31. Combined Surveys Previous Shift Experience



## Shift Preference

FHP Survey Question 9 and LE Survey Question 11 asked respondents which shift they would choose if they had the option and allowed them the choices of 8, 10, or 12-hour shifts. All respondents who completed the surveys provided a response. For the FHP Survey, 139 (30.68%) responded they would prefer 8-hour shifts, 200 (44.15%) responded they would prefer 10-hour shifts, and 114 (25.17%) responded they would prefer 12-hour shifts. For the LE Survey, 174 (12.15%) indicated they would prefer 8-hour shifts, 730 (50.98%) indicated they would prefer 10-hour shifts, and 528 (36.87%) indicated they would prefer 12-hour shifts.

Table 32. Combined Surveys Desired Shifts



## Shift Preference Rationale

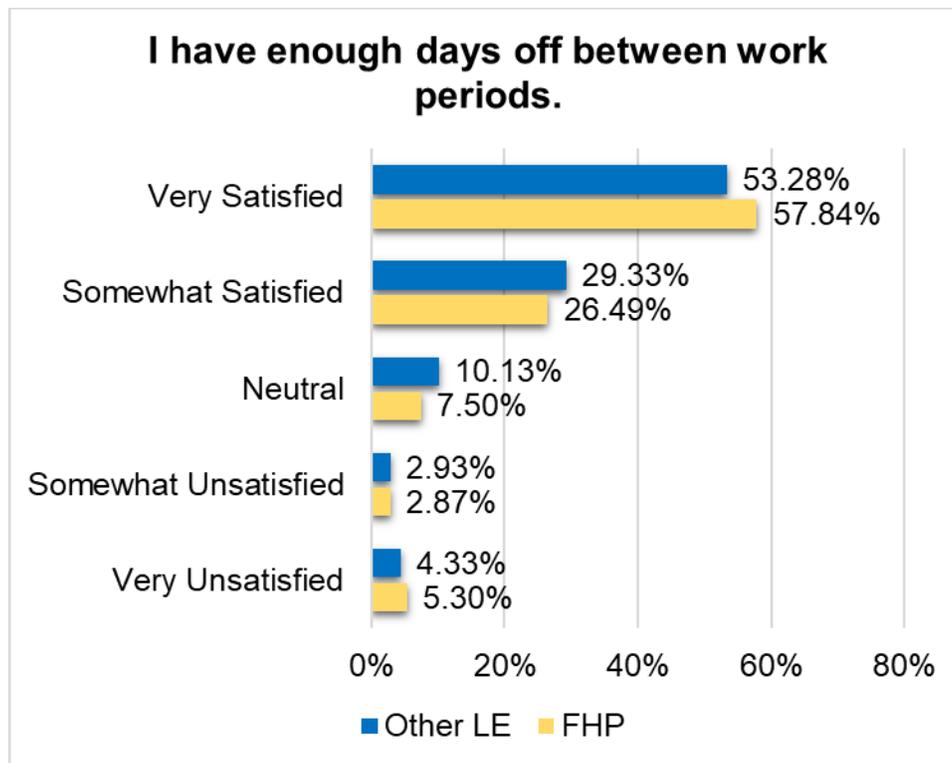
FHP Survey Question 10 and LE Survey Question 12 asked respondents to explain their responses for their preferred shifts by rating how satisfied they believed they would be with 11 statements if they worked their desired shifts. These were the same 11 statements that were used in FHP Survey Question 7 and LE Survey Question 9 to rate their satisfaction with their current shifts. Respondents were provided with a 5-point Likert scale to rate their satisfaction for each area. The options for rating each area were very unsatisfied, somewhat unsatisfied, neutral, somewhat satisfied, or very satisfied. The results for both surveys are presented by statement.

### **Days Off Between Work Periods**

The first statement asked respondents to rate how satisfied they thought they would with the amount of days off between work periods. For the FHP Survey, 24 (5.30%) respondents reported they would be very unsatisfied, 13 (2.87%) somewhat unsatisfied, 34 (7.50%) neutral, 120 (26.49%) somewhat satisfied, and 262 (57.84%) very satisfied with the amount of days off they would have between work periods. The average score was 4.29.

For the LE Survey, 62 (4.33%) respondents thought they would be very unsatisfied, 42 (2.93%) somewhat unsatisfied, 145 (10.13%) neutral, 420 (29.33%) somewhat satisfied, and 763 (53.28%) very satisfied with the amount of days off they would have between work periods. The average of the responses was 4.24.

Table 33. Combined Surveys Desired Shift Days Off



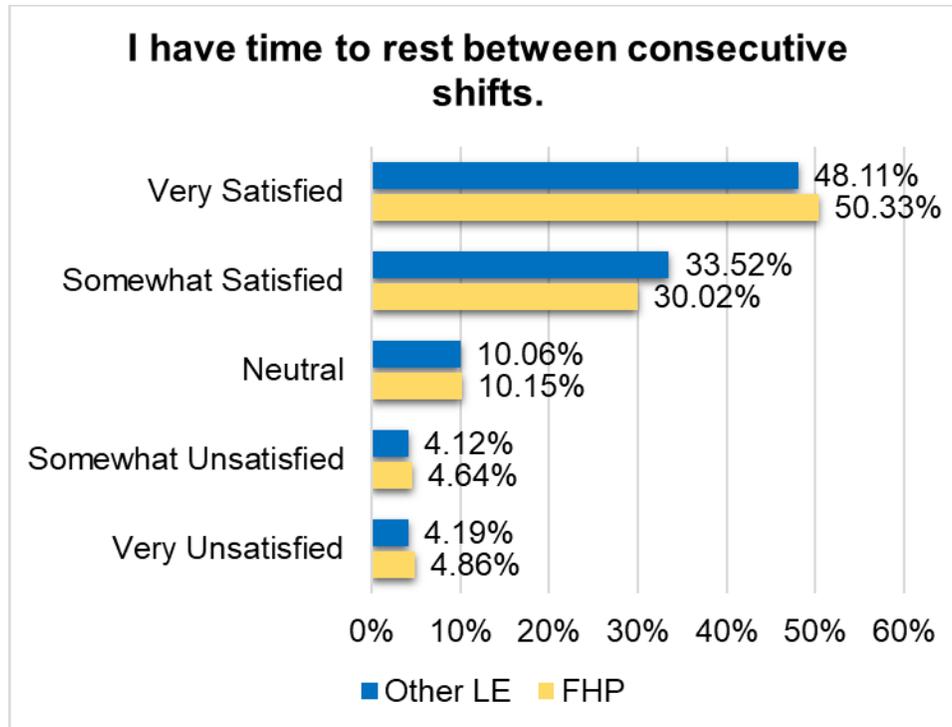
### **Rest Between Consecutive Shifts**

The second statement asked respondents to rate whether they thought they would have enough time to rest between consecutive shifts. For the FHP Survey, 22 (4.86%) thought they would be very unsatisfied, 21 (4.64%) somewhat unsatisfied, 46 (10.15%) neutral, 136 (30.02%) somewhat satisfied, and 228 (50.33%) very satisfied with the time to rest between consecutive shifts. The average for statement 2 was 4.16.

For the LE Survey, 60 (4.19%) respondents thought they would be very unsatisfied, 59 (4.12%) somewhat unsatisfied, 144 (10.06%) neutral, 480 (33.52%)

somewhat satisfied, and 689 (48.11%) very satisfied with the time to rest between consecutive shifts. The average for statement 2 was 4.17.

Table 34. Combined Surveys Desired Shift Time to Rest Between Shifts

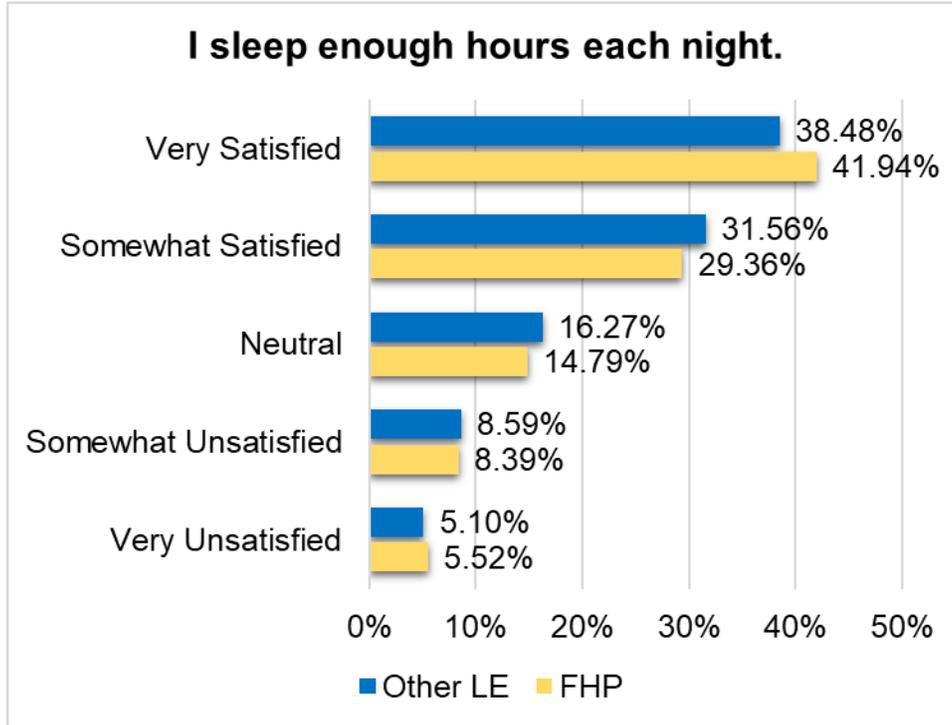


### ***Sleep Each Night***

The third statement asked respondents to rate if they thought they would have enough sleep each night. For the FHP Survey, 25 (5.52%) of respondents thought they would be very unsatisfied, 38 (8.39%) somewhat unsatisfied, 67 (14.79%) neutral, 133 (29.36%) somewhat satisfied, and 190 (41.94%) very satisfied with sleeping enough each night. The average for statement 3 was 3.94.

For the LE Survey, 73 (5.10%) respondents thought they would be very unsatisfied, 123 (8.59%) somewhat unsatisfied, 233 (16.27%) neutral, 452 (31.56%) somewhat satisfied, and 551 (38.48%) very satisfied with sleeping enough each night. The average for statement 3 was 3.9.

Table 35. Combined Surveys Desired Shift Sleep

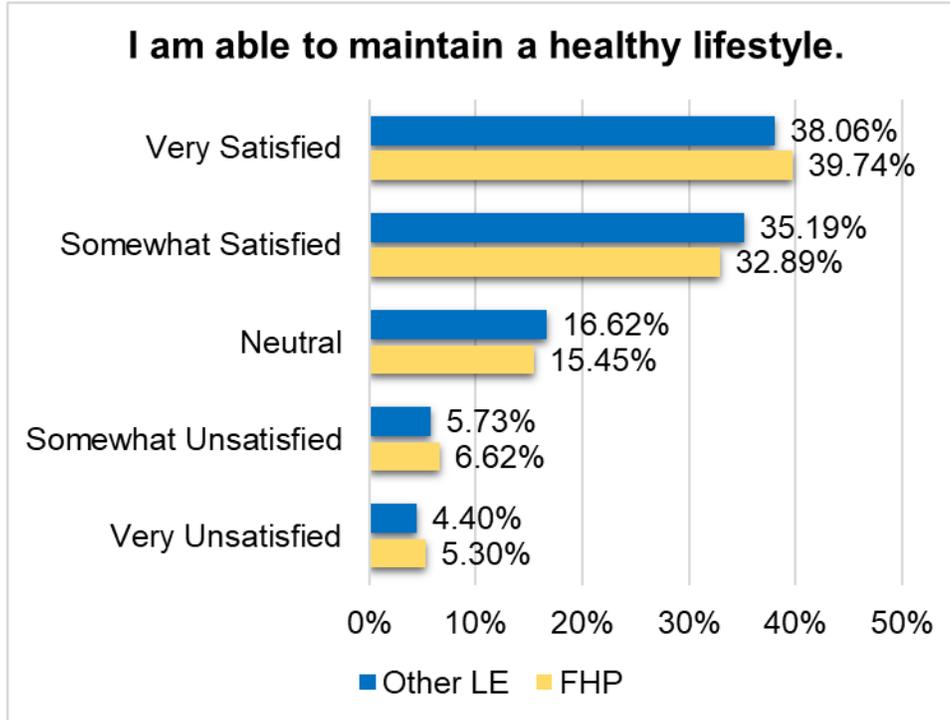


***Maintaining a Healthy Lifestyle***

For the fourth statement, respondents rated how well they thought they would be able to maintain a healthy lifestyle on their desired shift. For the FHP Survey, 24 (5.30%) thought they would be very unsatisfied, 30 (6.62%) somewhat unsatisfied, 70 (15.45%) neutral, 149 (32.89%) somewhat satisfied, and 180 (39.74%) very satisfied with their ability to maintain a healthy lifestyle. The average response for the fourth statement was 3.95.

For the LE Survey, 63 (4.40%) thought they would be very unsatisfied, 82 (5.73%) somewhat unsatisfied, 238 (16.62%) neutral, 504 (35.19%) somewhat satisfied, and 545 (38.06%) very satisfied with their ability to maintain a healthy lifestyle. The average response for the fourth statement was 3.97.

Table 36. Combined Surveys Desired Shift Healthy Lifestyle

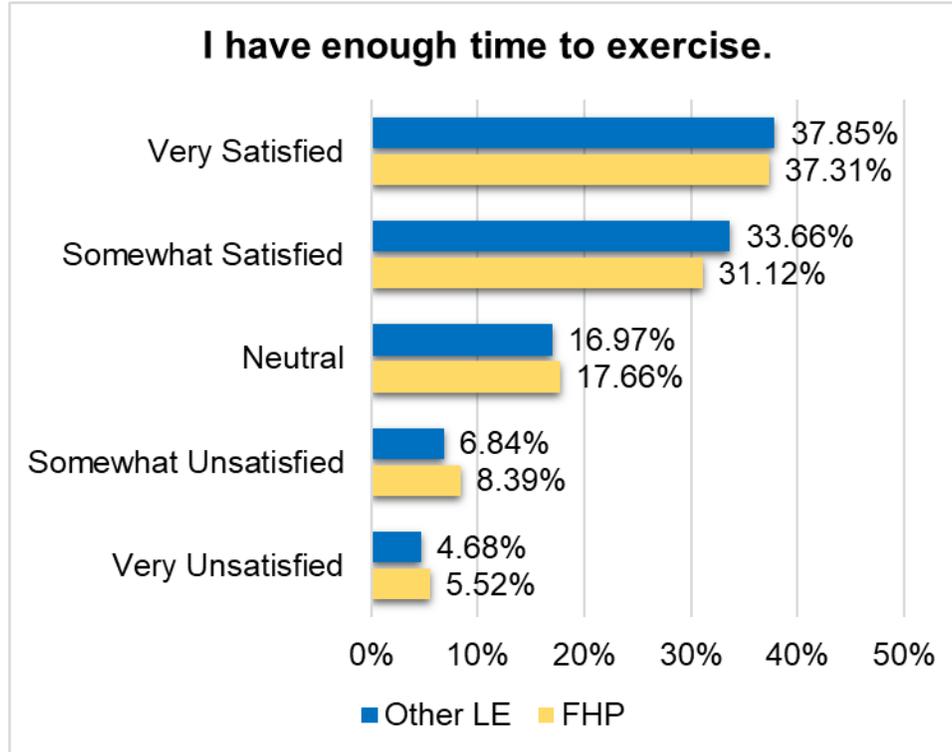


### **Exercise**

For the fifth statement, respondents were asked to rate how satisfied they would be with the time they have to exercise on their desired shift. For the FHP Survey, 25 (5.52%) respondents thought they would be very unsatisfied, 38 (8.39%) somewhat unsatisfied, 80 (17.66%) neutral, 141 (31.12%) somewhat satisfied, and 169 (37.31%) very satisfied with having enough time to exercise. The average response for the fifth statement was 3.86.

For the LE Survey, 67 (4.68%) respondents thought they would be very unsatisfied, 98 (6.84%) somewhat unsatisfied, 243 (16.97%) neutral, 482 (33.66%) somewhat satisfied, and 542 (37.85%) very satisfied with having enough time to exercise. The average response for the fifth statement was 3.93.

Table 37. Combined Surveys Desired Shift Exercise Time

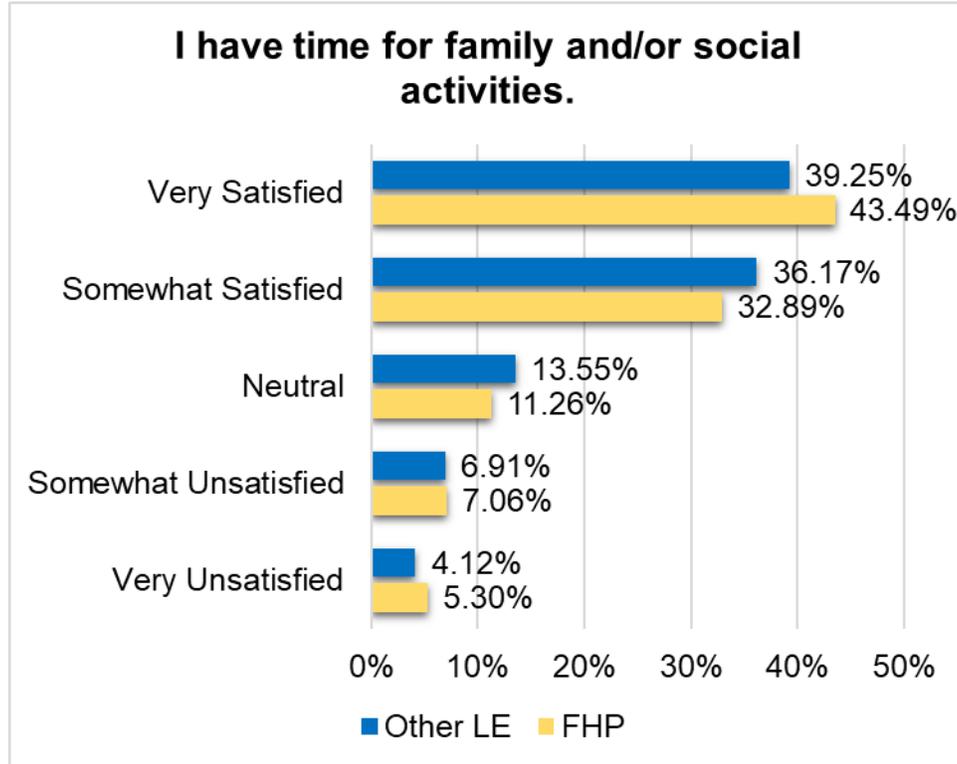


***Family and/or Social Activities***

For the sixth statement, respondents rated whether they thought they would have time for family and/or social activities on their desired shifts. For the FHP Survey, 24 (5.30%) of respondents thought they would be very unsatisfied, 32 (7.06%) somewhat unsatisfied, 51 (11.26%) neutral, 149 (32.89%) somewhat satisfied, and 197 (43.49%) very satisfied with having time for family and/or social activities. The average response for the sixth statement was 4.02.

For the LE Survey, 59 (4.12%) of respondents thought they would be very unsatisfied, 99 (6.91%) somewhat unsatisfied, 194 (13.55%) neutral, 518 (36.17%) somewhat satisfied, and 562 (39.25%) very satisfied with having time for family and/or social activities. The average response for the sixth statement was 3.99.

Table 38. Combined Surveys Desired Shift Social/Family Time

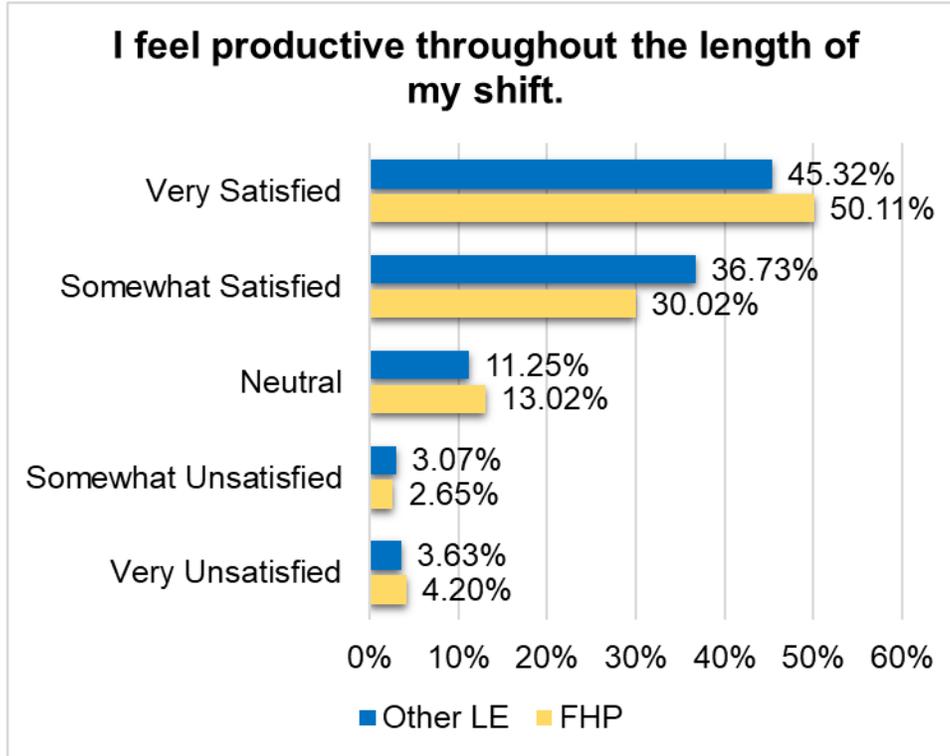


### ***Shift Productivity***

For the seventh statement, respondents rated their own satisfaction with how productive they thought they would be throughout the length of their desired shift. For the FHP Survey, 19 (4.20%) respondents thought they would be very unsatisfied, 12 (2.65%) somewhat unsatisfied, 59 (13.02%) neutral, 136 (30.02%) somewhat satisfied, and 227 (50.11%) very satisfied with feeling productive throughout the length of their desired shift. The average of the responses for the seventh statement was 4.19.

For the LE Survey, 56 (3.63%) respondents thought they would be very unsatisfied, 44 (3.07%) somewhat unsatisfied, 161 (11.25%) neutral, 526 (36.73%) somewhat satisfied, and 649 (45.32%) very satisfied with feeling productive throughout the length of their desired shift. The average of the responses for the seventh statement was 4.17.

Table 39. Combined Surveys Desired Shift Productivity

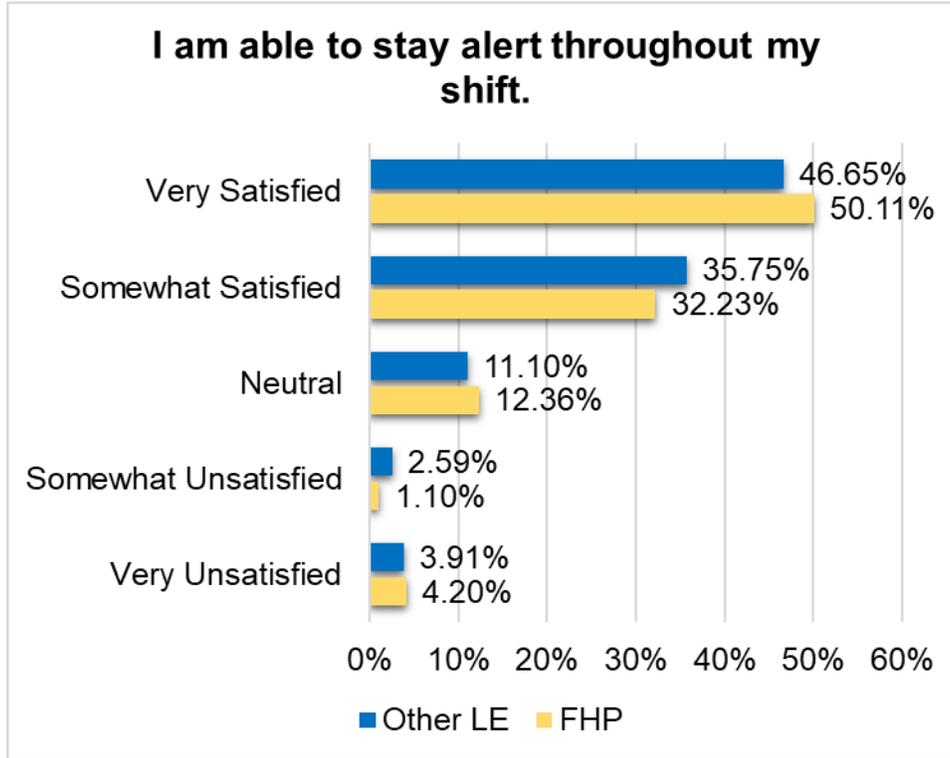


**Shift Alertness**

For the eighth statement, respondents rated their satisfaction with their anticipated ability to stay alert throughout their desired shift. For the FHP Survey, 19 (4.20%) thought they would be very unsatisfied, 5 (1.10%) somewhat unsatisfied, 56 (12.36%) neutral, 146 (32.23%) somewhat satisfied, and 227 (50.11%) very satisfied with their ability to stay alert throughout their desired shift. The average of the responses for the eighth statement was 4.23.

For the LE Survey, 56 (3.91%) thought they would be very unsatisfied, 37 (2.59%) somewhat unsatisfied, 159 (11.10%) neutral, 512 (35.75%) somewhat satisfied, and 668 (46.65%) very satisfied with their ability to stay alert throughout their desired shift. The average of the responses for the eighth statement was 4.19.

Table 40. Combined Surveys Desired Shift Alertness

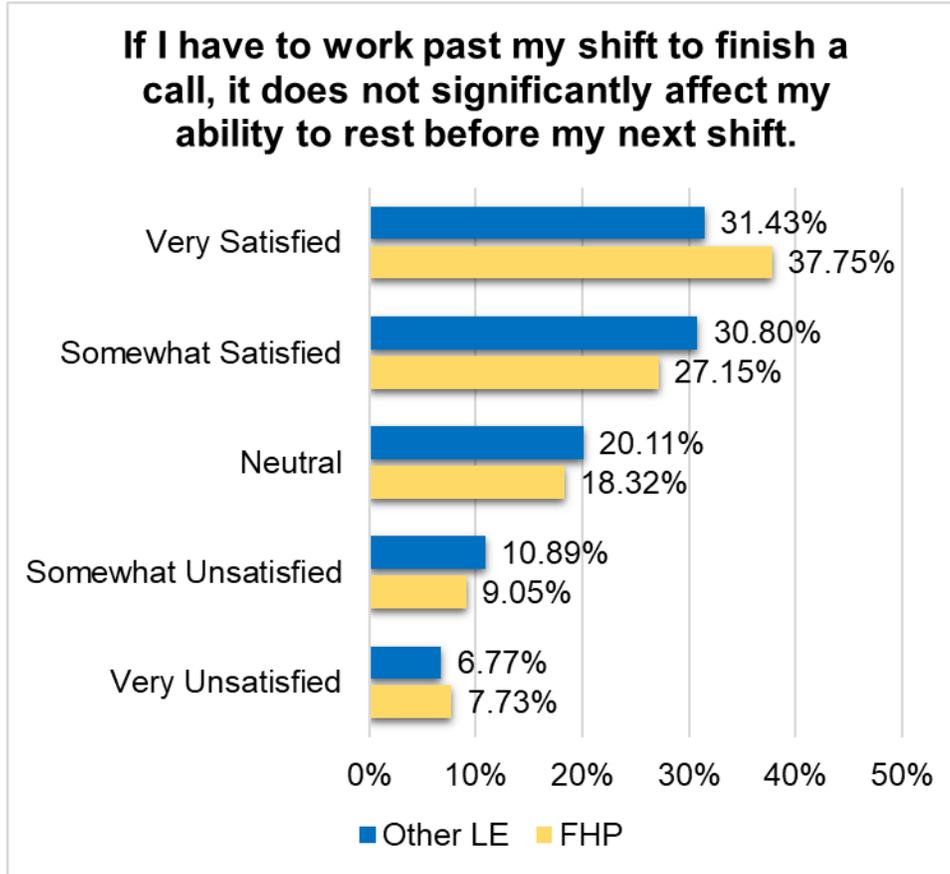


***Working Past End of Shift***

For the ninth statement, respondents rated how satisfied they thought they would be with whether working past their desired shift to finish a call would affect their ability to rest before their next shift. For the FHP Survey, 35 (7.73%) thought they would be very unsatisfied, 41 (9.05%) somewhat unsatisfied, 83 (18.32%) neutral, 123 (27.15%) somewhat satisfied, and 171 (37.75%) very satisfied that working past their shift to finish a call would not significantly impact their ability to rest before their next shift. The average of the responses for the ninth statement was 3.78.

For the LE Survey, 97 (6.77%) respondents thought they would be very unsatisfied, 156 (10.89%) somewhat unsatisfied, 288 (20.11%) neutral, 441 (30.80%) somewhat satisfied, and 450 (31.43%) very satisfied that working past their shift to finish a call would not significantly impact their ability to rest before their next shift. The average of the responses for the ninth statement was 3.69.

Table 41. Combined Surveys Desired Shift Working Past Shift

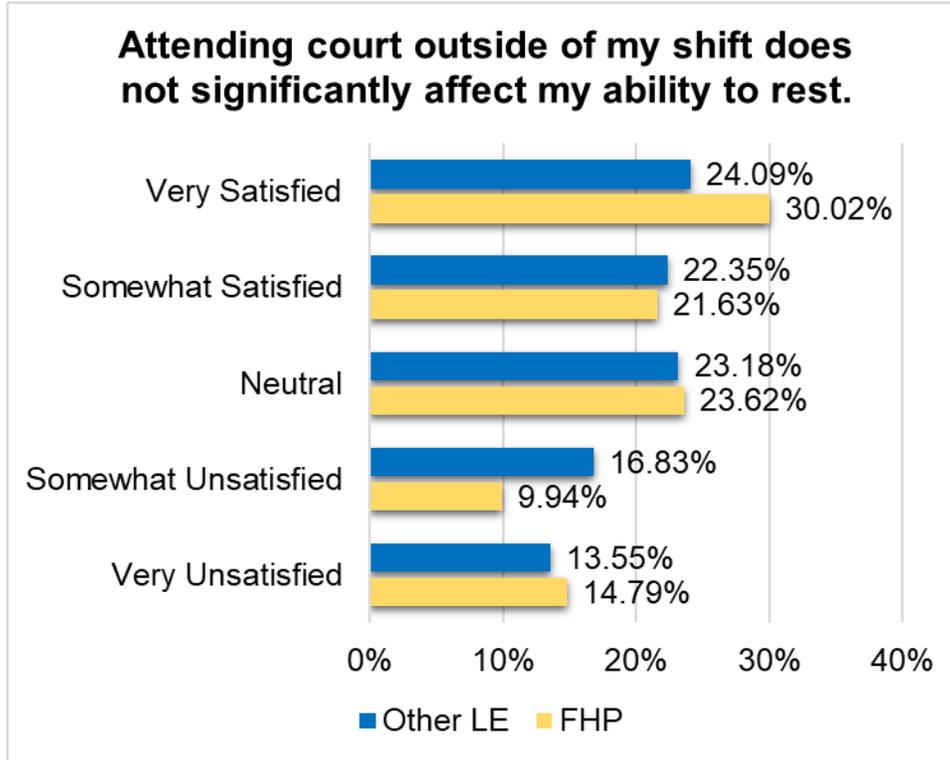


***Court Outside of Shift***

For the tenth statement, respondents rated whether they thought attending court outside of their desired shift would significantly affect their ability to rest. For the FHP Survey, 67 (14.79%) thought they would be very unsatisfied, 45 (9.94%) somewhat unsatisfied, 107 (23.62%) neutral, 98 (21.63%) somewhat satisfied, and 136 (30.02%) very satisfied that attending court outside of their shift would not significantly affect their ability to rest. The average of the responses for the tenth statement was 3.42.

For the LE Survey, 194 (13.55%) respondents thought they would be very unsatisfied, 241 (16.83%) somewhat unsatisfied, 332 (23.18%) neutral, 320 (22.35%) somewhat satisfied, and 345 (24.09%) very satisfied that attending court outside of their shift would not significantly affect their ability to rest. The average of the responses for the tenth statement was 3.26.

Table 42. Combined Surveys Desired Shift Court Time

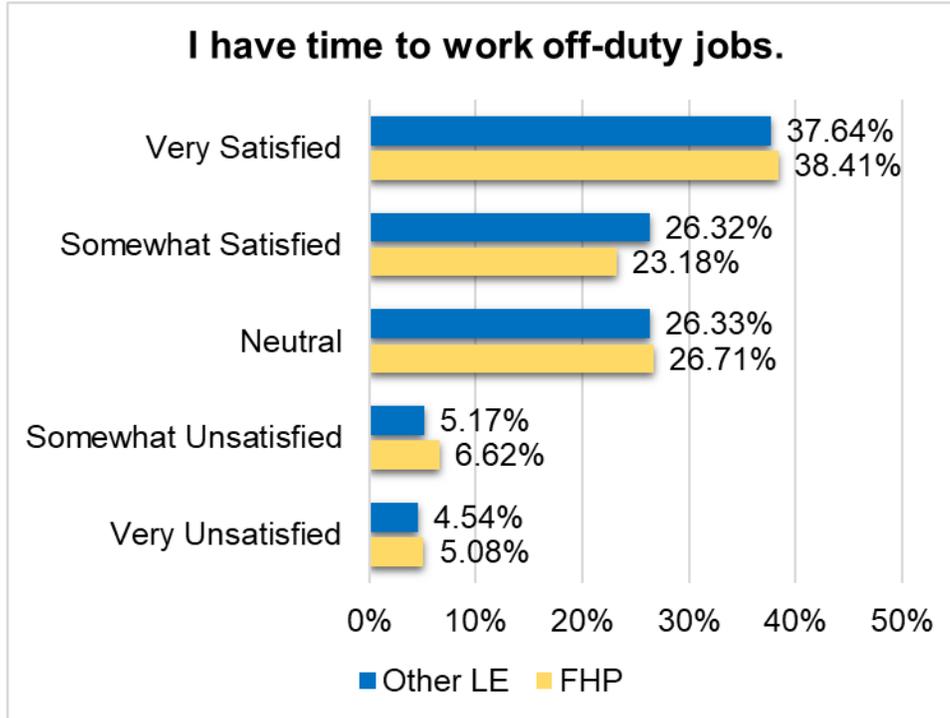


**Working Off-Duty**

For the eleventh statement, respondents rated how satisfied they thought they would be with having time to work off-duty jobs on their desired shifts. For the FHP Survey, 23 (5.08%) thought they would be very unsatisfied, 30 (6.62%) somewhat unsatisfied, 121 (26.71%) neutral, 105 (23.18%) somewhat satisfied, and 174 (38.41%) very satisfied with having time to work off-duty jobs. The average of the responses for the eleventh statement was 3.83.

For the LE Survey, 65 (4.54%) thought they would be very unsatisfied, 74 (5.17%) somewhat unsatisfied, 377 (26.33%) neutral, 377 (26.32%) somewhat satisfied, and 539 (37.64%) very satisfied with having time to work off-duty jobs. The average of the responses for the eleventh statement was 3.87.

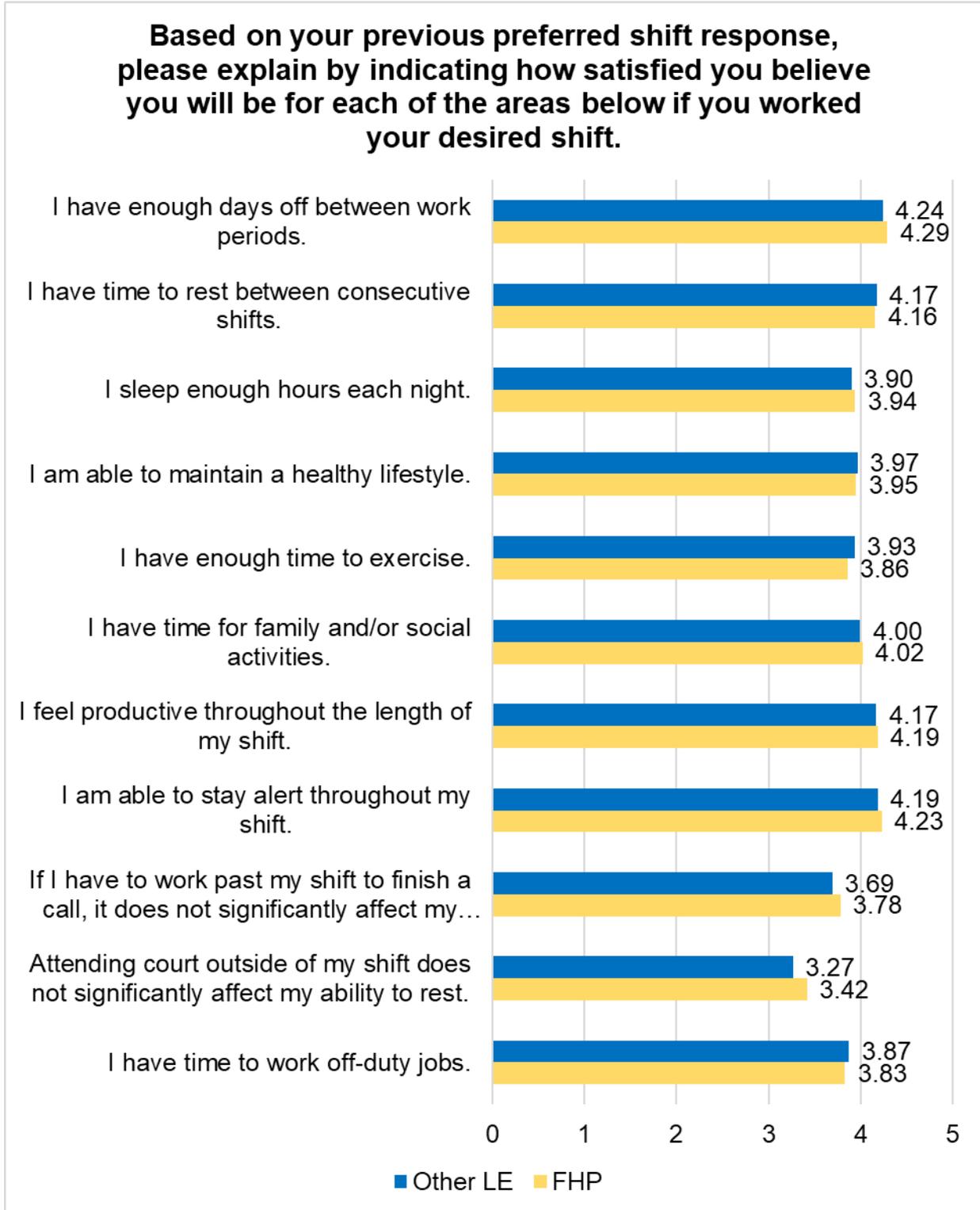
Table 43. Combined Surveys Desired Shift Time for Off-Duty



**Overall**

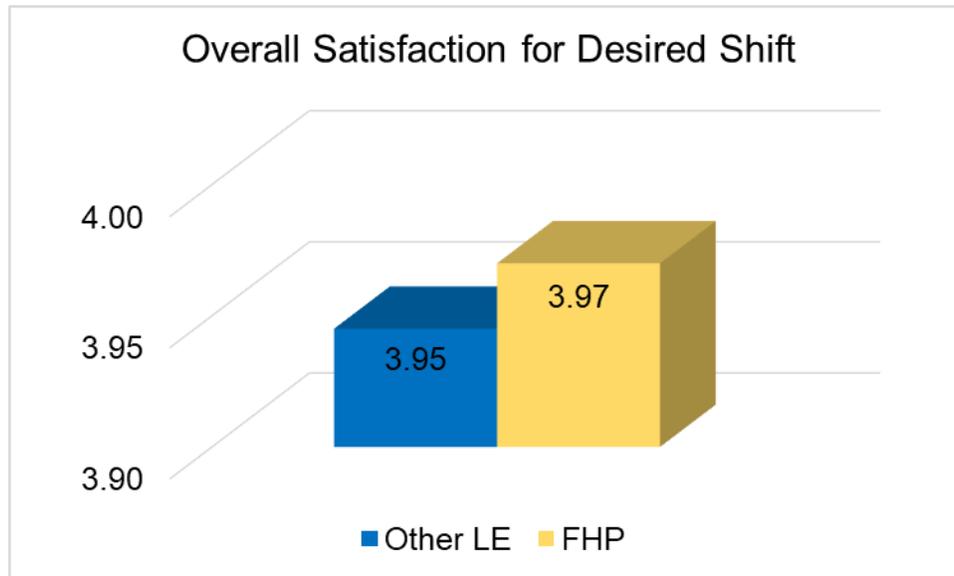
In addition to the results for the individual statements, this research reviewed the averages for each statement. These averages were provided above with the response rates for each statement and are depicted in the table below.

Table 44. Combined Surveys Desired Shift Averages for Each Statement



Additionally, a total overall satisfaction score for the desired shifts was calculated for the respondents to each survey by taking the average of the mean responses to each statement. For the FHP Survey, the overall satisfaction rating for all respondents was 3.97 out of 5.0. For the LE Survey, the overall satisfaction rating for all respondents was 3.95 out of 5.0. These overall ratings fall between neutral and somewhat satisfied.

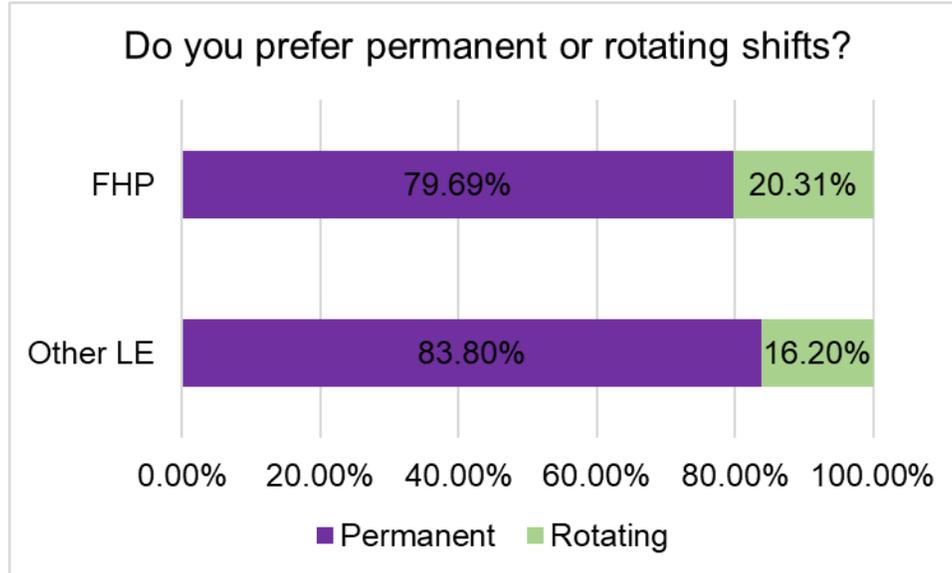
Table 45. Combined Surveys Desired Shifts Overall Satisfaction Rating



### Preference for Permanent or Rotating Shifts

FHP Survey Question 11 and LE Survey Question 13 asked whether the respondents preferred permanent or rotating shifts. All respondents who completed the surveys provided a response. On the FHP Survey, 361 (79.69%) respondents indicated they preferred permanent shifts and 92 (20.31%) preferred rotating shifts. On the LE Survey, 1,200 (83.80%) respondents said they would prefer permanent shifts and 232 (16.20%) preferred rotating shifts.

Table 46. Combined Surveys Permanent Shift Preference



### Shift Importance

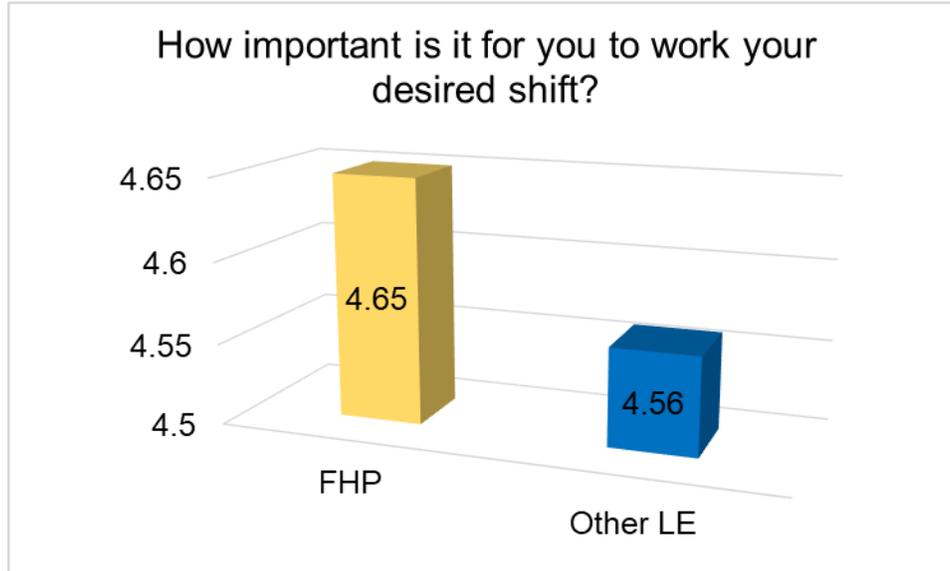
FHP Survey Question 12 and LE Survey Question 14 asked how important it was for the respondents to work their desired shift. All respondents who completed the survey provided a response. For the FHP Survey, 1 (0.22%) respondent indicated it was not at all important, 6 (1.33%) indicated it was slightly important, and 25 (5.52%) were neutral about working their desired shift. Eighty-six (18.98%) responded it was somewhat important and 335 (73.95%) responded it was very important to work their desired shift. For the LE Survey, 3 (0.21%) respondents indicated it was not at all important, 32 (2.23%) indicated it was slightly important, and 85 (5.94%) were neutral about working their desired shift. Three hundred forty-six (24.16%) respondents thought it was somewhat important and 966 (67.46%) respondents said it was very important to work their desired shift.

Table 47. Both Survey Results for Shift Importance

	Not at all important.		Slightly important.		Neutral.		Somewhat important.		Very important.	
FHP Survey	1	0.22%	6	1.33%	25	5.52%	86	18.98%	335	73.95%
LE Survey	3	0.21%	32	2.23%	85	5.94%	346	24.16%	966	67.46%

In addition to the percentages of the responses to each answer option, each answer was weighted from 1 through 5 in order of importance, with 1 being not at all important and five being very important. The average of the responses from the FHP survey was 4.65. The average of the responses from the LE Survey was 4.56.

Table 48. Combined Surveys Average Response for Importance of Shift



### Discussion

The data collected through this research presents an interesting picture of the shifts being worked throughout the state as well as the shifts law enforcement officers would prefer. The statements which asked respondents to rate their satisfaction with their current and desired shifts may provide insight into how they feel about their shifts. Additionally, agency and geography information may provide trends to help individual agencies when considering which shifts their officers may prefer.

Out of the three shifts focused on during this research, the shift most respondents reported working was the 12-hour shift. This was the most reported shift for agencies of all sizes. While this was the most reported shift for sheriffs' offices, this was only the second most frequent shift used by respondents from FHP and city agencies. When observing the current shifts by officer function, patrol officers and patrol supervisors most frequently reported working 12-hour shifts. However, patrol supervisors in FHP reported working more 8-hour shifts than 12-hour shifts, which may be attributed to there being less than 10 percent difference between patrol officers who reported working 12-hour shifts and 8-hour shifts in FHP. The 12-hour shift was the least used shifts by respondents who work in non-patrol functions.

Although the 12-hour shift was the most frequently used shift, respondents working the 12-hour shift were the least satisfied. Those working the 12-hour shifts reported the lowest average overall satisfaction rating out of the three shifts that were the focus of this research. These respondents reported the lowest average ratings for the statements regarding sleeping enough each night, being able to stay alert throughout the shift, and not having their rest significantly impacted if they work past the end of their shift or attend court on their days off. These ratings may be of concern when considered with previous research which suggested that 12-hour shifts cause greater fatigue that may mirror impairment. Additionally, fatigue can lead to issues with health, safety, and increased

mistakes. The one statement respondents working 12-hour shifts reported higher satisfaction than the other shifts was for having time to work off-duty, which is in line with previous studies that found a preference for 12-hour shifts for this reason.

The second most frequently reported shift was the 8-hour shift. While only the second most frequent shift in other agency types, the 8-hour shift was the most frequently reported shift for FHP, especially in Troops D and E. Additionally, this was the most frequently reported shift for all agency types within the geographic area of Troop L. The 8-hour shift was reported as the most used among officers and supervisors assigned to non-patrol functions, such as investigations.

Although respondents working 8-hour shifts did not report the lowest overall satisfaction rating, they did report the lowest averages for more individual statements than those working 12-hour shifts. They reported the lowest satisfaction ratings for the statements regarding having enough days off between work periods, having enough rest between consecutive shifts, being able to maintain a healthy lifestyle, having enough time to exercise, having time for family and/or social activities, feeling productive throughout the length of the shift, and having time to work off-duty jobs.

The least used shift was the 10-hour shift. However, the 10-hour shift was the most reported shift by officers from city agencies, which supports the survey conducted by the Police Foundation of police department shift schedules. In the geographic areas of Troops G and H, the 10-hour shift was reported as the most frequent shift used for respondents from city and county agencies. Additionally, the 10-hour shift was the second most frequently reported shift in smaller agencies of 500 officers or less, which is interesting since there was some speculation in previous research that this shift choice may be a challenge for agencies with limited officers. However, like previous research, this research did not collect information as to how these shifts affect costs and resources.

Those working 10-hour shifts reported the highest average satisfaction rating out of all shift options. Additionally, they reported the highest average rating for each statement except for the statement regarding having time to work off-duty jobs. However, those working 10-hour shifts provided the second highest rating for their ability to work off-duty jobs. Additionally, the 10-hour shift did not receive the lowest average for any individual statement on either survey, which may correlate with officers reporting this as the most satisfying shift. These results support similar research which concluded that the quality of work-life for officers on the 10-hour shift was higher than the other two shifts.

In addition to being the most satisfying shift, the 10-hour shift was also the most desired shift. The 10-hour shift was selected as the most desired shift by officers from all types of agencies as well as by officers from agencies with over 100 officers and officers with more than 5 years of service. Additionally, the 10-hour shift was most desired by officers and supervisors who perform non-patrol functions, as well as the patrol supervisors in FHP.

The second most desired shift was the 12-hour shift. Officers from agencies with 100 or less officers and with 5 years or less of service chose 12-hour shifts most frequently. Additionally, officers from the geographic areas of Troops F and G selected 12-hour shifts as their shift of choice most frequently. Officers and supervisors assigned to patrol also preferred the 12-hour shift option, except for patrol supervisors in FHP who preferred 10-hour shifts. The exception to desiring 12-hour shifts was observed in FHP respondents, who chose the 12-hour shift the least out of the three shift options.

The 8-hour shift was the least desired shift overall. However, FHP respondents chose the 8-hour shifts more frequently than the 12-hour shifts. Additionally, in the FHP Troops of E and I, the 8-hour shift was the preferred shift choice.

While reviewing the results of this research, it was interesting to note that there are multiple variations of shifts used throughout law enforcement agencies in Florida. The frequency of use of other shift lengths increases with agency size, with agencies with 501 to 1,000 officers most frequently reporting the use of alternate shift lengths, before the frequency lowers. Also, there was a lower number of respondents from city agencies, and further research may reveal different correlations with more equal representations from the different agency types.

Although this research desired to assist both officers and agencies with identifying the best shift option, the information collected focused on the officer's perspective of the shifts. The information collected did not provide any insight into the effects that these shifts have on agency resources, productivity, or other effects such as injuries, complaints, or use of leave. Additionally, the officers self-reported their feelings towards their shifts, which may have been exaggerated or under-rated by the officers in order to make their shifts appear in the light they desired. Further research on this subject may wish to collect information from leadership of the agencies who utilize the various shifts to examine how the shifts affect resources, costs, officer performance, attendance and leave, injuries, or any other areas of concern.

## **Recommendations**

The results of this research suggest that most law enforcement officers in Florida would prefer to work 10-hour shifts. Based on these results, most law enforcement agency officials should seek to implement 10-hour shifts. However, previous research has suggested that 10-hour shifts may not be practical due to the amount of resources needed to utilize them. This research found that there are agencies, including smaller agencies, in Florida who are utilizing 10-hour shifts. Additionally, there are two geographical regions in north Florida where 10-hour shifts were the predominant shift reported by county and city law enforcement agencies. Agencies who are interested in offering 10-hour shifts should identify those agencies who are successfully utilizing them to research how they managed their resources to provide 10-hour shifts to their officers.

County and city agency officials should consider the 12-hour shift as the next alternative; however, they should be cautious in this consideration. Officers from county and city agencies chose the 12-hour shift the second most frequently when asked for their preferred shift. The 12-hour shift was also the second most preferred shift by officers from agencies of different sizes, with the exception that officers in agencies with 100 officers or less preferred the 12-hour shift the most. Additionally, the 12-hour shift was the first choice for officers and supervisors working patrol. However, this research found that officers currently working 12-hour shifts were the least satisfied, especially with their ability to get enough sleep or rest and to stay alert during their entire shift. In addition to these findings, agency officials should consider the previous research which cautioned policy makers of moving in the direction of 12-hour shifts because they found officers on 12-hour shifts reported significantly lower levels of alertness.

If the 10-hour shifts are not practical for FHP, FHP executive staff should consider the 8-hour shift as the next alternative, as it was chosen the second most frequently by FHP respondents. Currently, FHP is divided into several troops, each with its own schedule. If each troop were allowed to maintain its own schedule, the desired shift choice varies by troop. Troops A, B, F, G, and H most frequently chose the 12-hour shifts; Troops C, E, and I most frequently chose the 8-hour shifts; and Troops D, F, J, K, L, and Q preferred the 10-hour shifts. For those troops whose first choice was the 10-hour shift, their second choice was the 8-hour shift. Comparatively, if FHP wished to make shifts uniform by function, then troopers on patrol preferred the 12-hour shift while non-patrol troopers and supervisors preferred the 10-hour shifts, followed by the 8-hour shift. Again, previous research cautioned about the effects of the 12-hour shift on officers when driving and related fatigue to impairment, so executive staff would want to review whether this is the safest shift for their troopers. The review may consist of the use of sick leave, workers' compensation claims, citizen complaints, and patrol car crashes compared across the different shifts.

All law enforcement agencies may want to review their policies and procedures for attending court outside of the shift. This research found that officers were least satisfied with their ability to get enough rest when attending court outside of their shift. The longer the shift the respondents worked, the less satisfied they were. If possible, agencies may consider working with the court systems to alleviate the need for officers to attend court outside of their assigned shift or reduce the amount of time they are attending court.

In a time when recruiting and retaining law enforcement officers is challenging, law enforcement agencies should note the feedback on the importance of officers working their desired shifts. Although the 10-hour shift was most often the preferred choice, it was not always the option which was chosen. A great proportion of the respondents indicated they would prefer to work the shift of their choice. Agencies may not be able to provide each individual the shift that they desire, but they should consider asking their officers for feedback when choosing which shift their officers will work.

Major Lisa Barnett began her law enforcement career with the Florida Highway Patrol in 2009 in Troop F, Manatee County. She promoted to Corporal as a Traffic Homicide Investigator in Troop C - Tampa prior to returning to Troop F as a Sergeant. In 2016, she was promoted to Lieutenant and moved to Tallahassee, where she served as a training officer at the Florida Highway Patrol Training Academy. In 2020, she was promoted to Captain and served as the commander of the Policy, Accreditation, Inspections and Forms unit. In 2021, she was promoted to the rank of Major, where she oversees the FHP's personnel; business intelligence; promotional process administration; and background and recruitment functions. Major Barnett has a bachelor's degree in criminology from the University of Florida and a Master of Arts in Security Studies from the Naval Postgraduate School's Center for Homeland Defense and Security.

## References

- Amendola, K.L., Slipka, M.G., Hamilton, E.E., with Soelberg, M. & Koval, K. (2011). *Trends in shift length: Results of a random national survey of police agencies*. (Report No. 242604). National Institute of Justice. Retrieved from <https://nij.ojp.gov/library/publications/trends-shift-length-results-random-national-survey-police-agencies>
- Amendola, K.L., Weisburd, D., Hamilton, E.E., Jones, G., & Slipka, M. (2011b). *The shift length experiment: What we know about 8-, 10-, and 12-Hour shifts in policing*. (Report No. 242603). National Institute of Justice. Retrieved from <https://www.policefoundation.org/publication/shift-length-experiment/>
- Amendola, K.L., Weisburd, D., Hamilton, E.E., Jones, G., Slipka, M., Heitmann, A., Shane, J., Ortiz, C., & Tarkghen, E. (2012). *The impact of shift length in policing on performance, health, quality of life, sleep, fatigue, and extra-duty employment*. (Report No. 237330). National Institute of Justice. Retrieved from <https://nij.ojp.gov/library/publications/impact-shift-length-policing-performance-health-quality-life-sleep-fatigue-and>
- Barnum, C. (2011). Efficiency in continually operating public organizations: A case study. *Public Personnel Management, 40*(4), 279–292. <https://doi.org/10.1177/009102601104000401>
- Bell, L.B., Virden, T.B., Lewis, D.J., & Cassidy, B.A. (2015). Effects of 13-Hour 20-minute work shifts on law enforcement officers' sleep, cognitive abilities, health, quality of life, and work performance: The Phoenix Study. *Police Quarterly, 18*(3), 293–337. <https://doi.org/10.1177/1098611115584910>
- Charles, L. E., Burchfiel, C. M., Fekedulegn, D., Vila, B., Hartley, T. A., Slaven, J., Mnatsakanova, A., & Violanti, J. M. (2007). Shift work and sleep: The buffalo police health study. *Policing, 30*(2), 215-227. <http://dx.doi.org/10.1108/13639510710753225>
- Dawson, D. & Reid, K. (1997) Fatigue, alcohol and performance impairment. *Nature 388*, 235. <https://doi.org/10.1038/40775>
- DiMambro, A. (2008). Patrol shift schedules. *TELEMASP Bulletin, 15*(2), 1-7. Retrieved from <https://login.proxy.lib.fsu.edu/login?url=https://www.proquest.com/trade-journals/patrol-shift-schedules/docview/198083985/se-2?accountid=4840>
- Elliott, J. L., & Lal, S. (2016). Blood pressure, sleep quality and fatigue in shift working police officers: Effects of a twelve hour roster system on cardiovascular and sleep health. *International Journal of Environmental Research and Public Health, 13*(2), 1-8. <http://dx.doi.org/10.3390/ijerph13020172>

- Holst, M.M., Wirth, M.D., Allison, P., Burch, J.B., Andrew, M.E., Fekedulegn, D., Hussey, J., Charles, L.E., & Violanti, J.M. (2021). An analysis of shiftwork and self-reported depressive symptoms in a police cohort from Buffalo, New York. *Chronobiology International*, 38(6), 830-838. <https://doi.org/10.1080/07420528.2021.1895197>
- James, S.M., & Vila, B. (2015) Police drowsy driving: Predicting fatigue-related performance decay. *Policing*, 38(3), 517-538. <http://dx.doi.org/10.1108/PIJPSM-03-2015-0033>
- Ma, C., Burchfiel, C., Fekedulegn, D., Andrew, M., Charles, L., Gu, J., Mnatsakanova, A. & Violanti, J. (2011). Association of shift work with physical activity among police officers. *Journal of Occupational and Environmental Medicine*, 53 (9), 1030-1036. <https://doi.org/10.1097/JOM.0b013e31822589f9>
- Oliver, B. (2005). Ten-hour shifts: A good fit. *Law & Order*, 53(7), 102-105. Retrieved from <https://login.proxy.lib.fsu.edu/login?url=https://www.proquest.com/trade-journals/ten-hour-shifts-good-fit/docview/197232139/se-2?accountid=4840>
- Peterson, S.A., Wolkow, A.P., Lockley, S.W., O'Brien, C.S., Qadri, S., Sullivan, J.P., Czeisler, C.A., Rajaratnam, S.M.W., & Barger, L.K. (2019). Associations between shift work characteristics, shift work schedules, sleep and burnout in North American police officers: A cross-sectional study. *BMJ Open* 2019. <http://doi.org/10.1136/bmjopen-2019-030302>
- Rajaratnam S.M.W., Barger L.K., Lockley S.W., & et al. (2011) Sleep disorders, health, and safety in police officers. *JAMA*, 306(23), 2567–2578. <https://doi.org/10.1001/jama.2011.1851>
- Ramey, Sandra L., Perkhounkova, Y., Moon, Mikyung, Budde L., Tseng, H., & Clark, M. K. (2012). The effect of work shift and sleep duration on various aspects of police officers' health. *Workplace Health & Safety*, 60(5), 215-22. <http://dx.doi.org/10.3928/21650799-20120416-22>
- Riedy, S., Dawson, D., Fekedulegn, D., Andrew, M., Vila, B., & Violanti, J. M. (2020). Fatigue and short-term unplanned absences among police officers. *Policing*, 43(3), 483–494. <https://doi.org/10.1108/pijpsm-10-2019-0165>
- Riedy, S. M., Fekedulegn, D., Vila, B., Andrew, M., & Violanti, J. M. (2021). Shift work and overtime across a career in law enforcement: A 15-year study. *Policing*, 44(2), 200–212. <https://doi.org/10.1108/PIJPSM-08-2020-0134>
- Scism, R. (2017, August). Human fatigue in 24/7 operations: Law Enforcement considerations and strategies for improved performance. *Police Chief Magazine*. Retrieved from <https://www.policechiefmagazine.org/human-fatigue-in-247-operations/?ref=4e63e5c423ffc023857a2f5868da1a29>

- Senjo, S.R. (2010) Danger fatigue conditions: A study of police work and law enforcement administration. *Police Practice and Research: An International Journal*, 12(3), 235-252. <https://doi.org/10.1080/15614263.2010.497659>
- Simpson, M., & Richbell, S. (2000). British policing and the Ottawa shift system: Easing the stress of rotating shifts. *FBI Law Enforcement Bulletin*, 69(1), 19-26. Retrieved from <https://login.proxy.lib.fsu.edu/login?url=https://www.proquest.com/trade-journals/british-policing-ottawa-shift-system-easing/docview/204124392/se-2?accountid=4840>
- Smith, L., Folkard, S., Tucker, P., & Macdonald, I. (1998). Work shift duration: A review comparing eight hour and 12 hour shift systems. *Occupational and Environmental Medicine*, 55(4), 217–229. <https://doi.org/10.1136/oem.55.4.217>
- Tucker, P., Macdonald, I., Folkard, S., & Smith, L. (1998). The impact of early and late shift changeovers on sleep, health, and well-being in 8- and 12-hour shift systems. *Journal of Occupational Health Psychology*, 3(3), 265-275. <https://doi.org/10.1037/1076-8998.3.3.265>
- Vila, B. (1996). Tired cops: Probable connections between fatigue and the performance, health and safety of patrol officers. *American Journal of Police*, 15(2), 51-92. <https://doi.org/10.1108/07358549610122485>
- Vila, B., Kenney, D.J., Morrison, G.B., & Reuland, M. (2000). *Evaluating the effects of fatigue on police patrol officers: Final Report*. (Report No. 184188). National Institute of Justice. Retrieved from <https://nij.ojp.gov/library/publications/evaluating-effects-fatigue-police-patrol-officers-final-report>
- Vila, B., Morrison, G. B., & Kenney, D. J. (2002). Improving shift schedule and work-hour policies and practices to increase police officer performance, health, and safety. *Police Quarterly*, 5(1), 4–24. <https://doi.org/10.1177/109861102129197995>
- Violanti, J.M. (2012). *Shifts, extended work hours, and fatigue: An assessment of health and personal risks for police officers*. (Report No. 237964). National Institute of Justice. Retrieved from <https://www.ojp.gov/ncjrs/virtual-library/abstracts/shifts-extended-work-hours-and-fatigue-assessment-health-and>
- Violanti, J.M., Charles, L.E., Hartley, T.A., Mnatsakanova, A., Andrew, M.E., Fekedulegn, D., Vila, B. & Burchfiel, C.M. (2008). Shift-work and suicide ideation among police officers. *American Journal of Industrial Medicine*, 51, 758-768. <https://doi.org/10.1002/ajim.20629>

- Violanti, J.M., Fekeduleon, D., Andrew, M.E., Charles, L.E., Hartley, T.A., Vila, B., & Burchfiel, M. (2012). Shift work and the incidence of injury among police officers. *American Journal of Industrial Medicine, 55*(3), 217-227.  
<https://doi.org/10.1002/ajim.22007>
- Violanti, J. M., Owens, S. L., Fekedulegn, D., Ma, C. C., Charles, L. E., & Andrew, M. E. (2018). An exploration of shift work, fatigue, and gender among police officers: The BCOPS Study. *Workplace Health & Safety, 66*(11), 530–537.  
<https://doi.org/10.1177/2165079918754586>
- Williamson A.M., & Feyer, A. (2000). Moderate sleep deprivation produces impairments in cognitive and motor performance equivalent to legally prescribed levels of alcohol intoxication. *Occupational and Environmental Medicine, 57*, 649-655.  
<http://dx.doi.org/10.1136/oem.57.10.649>

## Appendix A

### FHP Survey

This survey is being conducted as part of a research project for the Florida Criminal Justice Executive Institute's Senior Leadership Program.

This survey is for members of the Florida Highway Patrol who are troopers, corporals, or sergeants. This survey is designed to measure members' satisfaction with their current shifts and to identify what members are looking for in a preferred shift choice. The purpose of this research project is to evaluate the best shift options for both members and the agency.

This is an anonymous survey and all reasonable efforts will be made to keep your responses confidential. Your name will not be collected.

For accurate results, please be honest in your responses.

Definitions for the survey:

"Shift" refers to the hours an officer is regularly scheduled to work.

"Rotating shift" refers to working the same length of hours but alternating throughout a set period of time the shift starts and ends. (For example, day versus evening shift.)

"Permanent shift" refers to a standard start and end time for work which does not change. (For example, always working night shift.)

1. What troop are you assigned to?

- |   |   |
|---|---|
| A | H |
| B | I |
| C | J |
| D | K |
| E | L |
| F | Q |
| G |   |

2. (Only asked if respondent selected I, J, K, or Q for Question 1.)

Please select the troop your county of assignment is geographically located within.

- Troop A
- Troop B
- Troop C

Troop D  
Troop E  
Troop F  
Troop G  
Troop H  
Troop L

3. What is your primary assignment?

Patrol  
Motors  
CVE  
CIU/K-9  
DUI squad  
BCII  
THI  
Road Sergeant  
Specialty Unit Sergeant  
Other non-patrol function  
Other (please specify)

4. How many years have you worked for FHP?

0-5  
6-10  
11-15  
16-20  
21-25  
26-30  
31-35  
36-40  
Over 40

5. Do you have family members living at home with you? (This includes but is not limited to: significant other, children, or parents.)

Yes  
No

6. Please select the most accurate description of the length of your regularly scheduled shift.

8 hours  
10 hours  
12 hours

7. Please indicate your satisfaction with how the length of your current shift affects the following areas.

Very                  Somewhat          Neutral          Somewhat          Very  
Unsatisfied      Unsatisfied                                  Satisfied          Satisfied

I have enough days off between work periods.

I have time to rest between consecutive shifts.

I sleep enough hours each night.

I am able to maintain a healthy lifestyle.

I have enough time to exercise.

I have time for family and/or social activities.

I feel productive throughout the length of my shift.

I am able to stay alert throughout my shift.

If I have to work past my shift to finish a call, it does not significantly affect my ability to rest before my next shift.

Attending court outside of my shift does not significantly affect my ability to rest.

I have time to work off-duty jobs.

8. During your career, what other shift lengths have you worked?

8 hours

between 8 and 9 hours

- 9 hours
- between 9 and 10 hours
- 10 hours
- between 10 and 11 hours
- 11 hours
- between 11 and 12 hours
- 12 hours
- between 12 and 13 hours
- 13 or more hours

9. If you could choose the length of your shift, which shift would you prefer?

- 8 hours
- 10 hours
- 12 hours

10. Based on your previous preferred shift response, please explain by indicating below how satisfied you believe you will be for each of the areas below if you worked your desired shift.

Very Unsatisfied	Somewhat Unsatisfied	Neutral	Somewhat Satisfied	Very Satisfied
---------------------	-------------------------	---------	-----------------------	-------------------

I have enough days off between work periods.

I have time to rest between consecutive shifts.

I sleep enough hours each night.

I am able to maintain a healthy lifestyle.

I have enough time to exercise.

I have time for family and/or social activities.

I feel productive throughout the length of my shift.

I am able to stay alert throughout my shift.

If I have to work past my shift to finish a call, it does not significantly affect my ability to rest before my next shift.

Attending court outside of my shift does not significantly affect my ability to rest.

I have time to work off-duty jobs.

11. Do you prefer permanent or rotating shifts?

Permanent

Rotating

12. How important is it for you to work your desired shift?

Not at all important.

Slightly important.

Neutral.

Somewhat important.

Very important.

Thank you for taking the time to participate in this survey. The results of this survey will be presented in a research paper. To access the complete research paper, please visit [Senior Leadership Program \(SLP\) Research Papers](#). Thank you,

## Appendix B

### Law Enforcement Shift Length Survey

This survey is being conducted as part of a research project for the Florida Criminal Justice Executive Institute's Senior Leadership Program.

This survey is for law enforcement officers who serve as officers, investigators, or first line supervisors. This survey is designed to measure officers' satisfaction with their current shifts and to identify what officers are looking for in a preferred shift choice. The purpose of this research project is to evaluate the best shift options for both officers and law enforcement agencies.

This is an anonymous survey and all reasonable efforts will be made to keep your responses confidential. Your name will not be collected.

For accurate results, please be honest in your responses.

Definitions for the survey:

“Shift” refers to the hours an officer is regularly scheduled to work.

“Rotating shift” refers to working the same length of hours but alternating throughout a set period of time the shift starts and ends. (For example, day versus evening shift.)

“Permanent shift” refers to a standard start and end time for work which does not change. (For example, always working night shift.)

1. What type of agency do you work for?

City

County

State

2. Select the response which includes the county you work in.

- Bay, Calhoun, Escambia, Gulf, Holmes, Jackson, Okaloosa, Santa Rosa, Walton, or Washington County
- Alachua, Columbia, Dixie, Gilchrist, Hamilton, Lafayette, Levy, Marion, or Suwanee County
- Citrus, Hernando, Hillsborough, Pasco, Pinellas, Polk, or Sumter County
- Brevard, Lake, Orange, Osceola, Seminole, or Volusia County
- Dade or Monroe County
- Charlotte, Collier, Desoto, Glades, Hardee, Hendry, Highlands, Lee, Manatee, or Sarasota County
- Baker, Bradford, Clay, Duval, Flagler, Nassau, Putnam, St. Johns, or Union County
- Franklin, Gadsden, Jefferson, Leon, Liberty, Madison, Taylor, or Wakulla County
- Broward, Indian River, Martin, Okeechobee, Palm Beach, or St. Lucie County

3. How many full-time law enforcement officers work for your agency?

0-100

101-500

501-1,000

Over 1,000

4. What is your primary assignment?

Patrol

Investigations

Motors

DUI  
Drug enforcement  
K-9  
Patrol Supervisor  
Specialty Unit Supervisor  
Other (please specify)

5. How many years have you worked for your agency?
  - 0-5
  - 6-10
  - 11-15
  - 16-20
  - 21-25
  - 26-30
  - 31-35
  - 36-40
  - Over 40
6. Do you have family members living at home with you? (This includes but is not limited to: significant other, children, or parents.)
  - Yes
  - No
7. Please select the most accurate description of the length of your regularly scheduled shift.
  - 8 hours
  - between 8 and 9 hours
  - 9 hours
  - between 9 and 10 hours
  - 10 hours
  - between 10 and 11 hours
  - 11 hours
  - between 11 and 12 hours
  - 12 hours
  - between 12 and 13 hours
  - 13 or more hours
8. Please indicate whether you are on permanent or rotating shifts.
  - Permanent
  - Rotating

9. Please indicate your satisfaction with how the length of your current shift affects the following areas.

Very Unsatisfied      Somewhat Unsatisfied      Neutral      Somewhat Satisfied      Very Satisfied

I have enough days off between work periods.

I have time to rest between consecutive shifts.

I sleep enough hours each night.

I am able to maintain a healthy lifestyle.

I have enough time to exercise.

I have time for family and/or social activities.

I feel productive throughout the length of my shift.

I am able to stay alert throughout my shift.

If I have to work past my shift to finish a call, it does not significantly affect my ability to rest before my next shift.

Attending court outside of my shift does not significantly affect my ability to rest.

I have time to work off-duty jobs.

10. During your career, what other shift lengths have you worked?

- 8 hours
- between 8 and 9 hours
- 9 hours
- between 9 and 10 hours
- 10 hours
- between 10 and 11 hours
- 11 hours
- between 11 and 12 hours
- 12 hours
- between 12 and 13 hours
- 13 or more hours

11. If you could choose the length of your shift, which shift would you prefer?

- 8 hours
- 10 hours
- 12 hours

12. Based on your previous preferred shift response, please explain by indicating below how satisfied you believe you will be for each of the areas below if you worked your desired shift.

Very Unsatisfied	Somewhat Unsatisfied	Neutral	Somewhat Satisfied	Very Satisfied
---------------------	-------------------------	---------	-----------------------	-------------------

I have enough days off between work periods.

I have time to rest between consecutive shifts.

I sleep enough hours each night.

I am able to maintain a healthy lifestyle.

I have enough time to exercise.

I have time for family and/or social activities.

I feel productive throughout the length of my shift.

I am able to stay alert throughout my shift.

If I have to work past my shift to finish a call, it does not significantly affect my ability to rest before my next shift.

Attending court outside of my shift does not significantly affect my ability to rest.

I have time to work off-duty jobs.

13. Do you prefer permanent or rotating shifts?

Permanent

Rotating

14. How important is it for you to work your desired shift?

Not at all important.

Slightly important.

Neutral.

Somewhat important.

Very important.

Thank you for taking the time to participate in this survey. The results of this survey will be presented in a research paper. To access the complete research paper, please visit Senior Leadership Program (SLP) Research Papers. Thank you,