



2005

# Survey of Physical Agility Testing and Officer Fitness Levels in Kentucky Police Departments

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**SURVEY OF PHYSICAL AGILITY  
TESTING AND OFFICER  
FITNESS LEVELS IN KENTUCKY  
POLICE DEPARTMENTS  
SPRING, 2005 CAPSTONE**



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# Physical Agility Levels of Kentucky Police

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# Physical Agility Levels of Kentucky Police

## EXECUTIVE SUMMARY

### **Statement of Problem**

HB 455 brought about the 1998 Omnibus Crime Act which created the Police Officer Professional Standards;16 requirements to becoming a peace officer in Kentucky. Five of the standards defined minimum physical agility standards. Though physical agility testing has had a history of controversy, validation studies have been created to support this practice. Though officers are testing for a level of physical agility upon entering the police officer field in Kentucky, no statewide policy has been passed to ensure that this level be maintained. This study examines the presence of physical agility testing in Kentucky police departments and the level of current agility levels of all sworn, full-time officers.

### **Research Question**

The purpose of the study is to answer:

*What percentage of full-time, sworn officers in Kentucky police departments could pass the Police Officer Professional Standards' physical agility test?*

This study will identify the departments that have recurring physical agility testing, what the department heads feel about physical agility testing, the number of officers in the agencies, the amount of gym time allocation provided by agencies, and the relationships between these variables.

### **Methodology**

A self-created survey was sent to all police departments in Kentucky (N=286). The response rate was 54.2 percent (n=155). The data were analyzed using descriptive statistics, Pearson correlation, and linear regression models.

### **Results**

The study found that 22 police departments employee recurring physical agility testing. There was there was little statistical significance between officers ability to pass the POPS testing and a departments' institution of recurring agility tests. Responses indicate that a range of 58.5 – 72.7 percent of Kentucky police officers could pass the physical agility test.

### **Recommendations**

The subjectivity of the response to officers passing the agility test was a limitation of this study. This study was dependent on an agency head's ability to access the performance levels of his or her officers without actually testing the officers. Because of this, the major recommendation from this study is for future research. Actual testing of a sample of officers from the police departments in Kentucky would create of more accurate depiction of the physical agility levels of officers.

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### STATEMENT OF PROBLEM

#### HB 455

The Omnibus Crime Act (HB 455)<sup>1</sup> was enacted in 1998 with the intention of improving the quality of new Kentucky law enforcement personnel by increasing funding to law enforcement agencies and creating the Police Officer Professional Standards (POPS), 16 requirements to becoming a peace officer in Kentucky. Of the 16 standards created, five tested physical agility. Upon entering the peace officer field, individuals must be able to bench 64 percent of their body weight, complete 18 sit-ups within one minute, finish a 300-meter run in 65 seconds, perform 20 push-ups and run 1.5 miles within 17 minutes and 12 seconds (Department of Criminal Justice Training, 2005). These five standards were chosen from the results of a study conducted by Dr. Thomas A. Collingwood of Fitness Intervention Technology for the Department of Criminal Justice Training (DOCJT) in Kentucky. Dr. Collingwood conducted a stratified sample of 192 incoming police officers in Kentucky from May-August 1998 performing job tasks that were essential to police work. The incoming officers were measured on their performances and correlating factors to the successful completion of the tasks were defined.

The changes instituted by HB 455 was not the introduction of physical agility testing in Kentucky police departments, but it was the first time minimum standards were set for all incoming peace officers. These requirements are also the minimum standards required by the state; higher requirements can be set if a department chooses to do so. This bill did not require current officers at the time of its passing to take the tests either; it only applied to new recruits.

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<sup>1</sup> Kentucky Revised Statutes. KRS 15.382.

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Though these changes have set the minimum physical agility requirements for an individual to become a peace officer, there has been no policy enacted that requires officers to maintain these standards. After an officer completes basic training, there are no state requirements for that officer to continue to possess the abilities to complete tasks defined as important to the success of an officer. If these standards set Bona Fide Occupational Requirements (BFOQ) to become an officer, one might assume maintaining these abilities is equally important.

The purpose of this study is to survey chiefs and department heads of police departments across Kentucky to determine:

- Which police departments have instituted policy requiring an officer to maintain a level of physical fitness
- How often physical agility tests are conducted
- Who participates in the physical agility tests
- How often department heads believe tests should be conducted
- What percentage of their current officers department heads believe could pass the POPS physical agility tests

### **LITERATURE REVIEW**

Though this study is intended to study physical agility testing in Kentucky police departments post-academy, it is important to understand the historical and current controversy of physical agility requirements in police recruitment and selection. The use of physical agility tests as BFOQ in the police officer selection process has had a checkered past. Prior to the use of physical agility requirements, departments often used minimum height and weight standards. These requirements

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significantly decreased the candidate pool for those wishing to become police officers. *Dothard v. Rawlins* (1977) challenged these requirements and the U.S. Supreme Court ruled it was a violation of Title VII of the 1964 Civil Rights Act because height and weight could not be proven to be directly related to strength (Gaines & Falkenberg, 1993). In the opinion, the justices stated that if strength was going to be measured, validated tests should be instituted to measure it directly. From this ruling, police departments began instituting physical agility tests that set the minimum requirements for tasks necessary to police work, such as “chasing and wrestling suspects into submission, intervening in physical disputes, and pulling victims from wrecked vehicles” (Charles, 1982). Job analysis studies, such as that which Dr. Collingwood conducted for DOCJT, were performed to determine the tasks police officers encountered in their profession and, from those studies, tests were developed that, if passed, would predict successful completion of those tasks.

Though job analyses begin to validate the relationship between strength and the use of physical agility testing, researchers question the reality of the use of physical agility in police work. Wilmore and Davis believe that “the normal sedentary nature of the officer’s lead to a rapid deterioration in physical fitness” (Wilmore & Davis, 1979). Officers may exit the academy having met all physical requirements, but daily police work does not always involve the use of high physical activity. Officer physical fitness will begin to degrade after the academy due to this lack of daily physical agility usage, thus the officer will fall below the aforementioned standards.



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Many researchers continue to question the use of physical agility testing, but others suggest the need for physical agility programs in departmental standard operating procedures. “In physically demanding emergencies and confrontations, an unfit (inadequately trained) officer increases the probability of injury to himself and to others. Therefore, a department with no physical fitness training program, policies, or standards is potentially exposed to legal liability for resulting injuries (Boyce, 1989a, 1989b)” (Boyce & Hiatt, 1992). In this study, Boyce suggests that if a level of physical agility is required for an individual to become an officer, the public and fellow officers should be able to expect that level of agility from the police. If an officer fails in an incident that requires the use of this physical agility, the department can be held legally responsible. For this reason, departments may consider instituting recurring agility tests.

### **METHODOLOGY**

#### **Instrument**

This study was conducted using a 14-question, self-created instrument to survey police departments across Kentucky (N=286).<sup>2</sup> The departments were identified through a request to the Department of Criminal Justice Training (DOCJT). DOCJT maintains the records of police training and ensures all recruits successfully complete the Peace Officer Professional Standards (POPS). The surveys were mailed from the University of Kentucky Police Department with return envelopes. Included in the survey was an explanation<sup>3</sup> describing the objectives of the study and a request for a two-week deadline (February 28, 2005). Those not responding received a

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<sup>2</sup> Appendix A: University of Kentucky Police Department Survey of Physical Agility Testing in Kentucky.

<sup>3</sup> Appendix B: Physical Agility Testing Cover Letter

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postcard that was sent on March 10 requesting the completion of the survey. The response rate for the study (n=155) was 54.2 percent.

### **Dependent Variable**

The dependent variable for this study is defined as the percent of officers the department head believes could pass the POPS physical agility requirements if the full-time, sworn officers were to take the test the same day the survey was completed. The choices available for answer were 0-15 percent, 16-30 percent, 31-45 percent, 46-60 percent, 61-75 percent, 76-90 percent, and 91-100 percent. This asks the department head to consider the physical agility levels of his/her officers and select the range that best describes those that could pass the tests. This requires a great deal of subjectivity, especially in departments with larger numbers of officers. To ensure that a level of honesty, or reliability, was maintained, the department head was presented with the statement, “the officers in my department are physically fit.” The department head was then asked to select an answer from a Likert scale 1 (strongly disagree) to 10 (strongly agree). Responses to these two questions should yield similar results.

### **Independent Variables**

The independent variables in the data are; agency size, POPS compliance, leadership, gym benefits, and the presence of physical agility tests in standard operating procedures.

*Agency Size* - Agency size is defined as the total number of sworn, full-time officers in a police department. If sworn, the chief or agency head should be included.

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*POPS Compliance*- POPS compliance is defined as whether the department has met the POPS certification process to receive Kentucky Law Enforcement Foundation Program Fund (KLEFPF) monies. This certification is independent of the requirements for an individual to become a peace officer. This requires the department to maintain professional training records, personnel files, and departmental policies (such as policy against racial profiling and statements of ethics). If the department successfully completes the POPS compliance process, officers receive state incentive pay.

*Leadership*-Leadership, for this study, is defined as the department head's beliefs towards physical agility. Leadership has been measured with two questions. The first question asks the department head to gauge the need of physical agility in an officer's daily activities. This is measured using a Likert scale from 1 (strongly disagree) to 10 (strongly agree). The second question requires the department head to describe how often he/she feels physical agility tests should be conducted. The answers to select from include; never, monthly, quarterly, bi-annually, annually, or other. These questions are defined as leadership because they attempt to measure the how important physical agility is to the agency head and the affect that has on the percentage of officers' passing. Leadership is an important measure in this study because in Kentucky police departments, the chiefs and agency heads are the gatekeepers of policy in the individual departments. Unless a policy is mandated by legislation, the chiefs and agency heads must initiate, or designate, new policy. If the chief or agency head does not believe in a practice, such as physical agility testing, the likelihood this policy will be enacted is significantly decreased.

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*Gym Time* - The survey measured if the departments offered paid time during the week for officers to attend a gym or fitness center, and asked how many hours were allocated for officers to claim each week.

*Presence of Policy* - The final measurement was the presence of a recurring physical agility test. This question first asks if such a policy exists. If the policy exists, the department head was asked who is required to take the tests (department heads, supervisors, patrol officers, and/or other) and then how frequently the tests are performed (monthly, quarterly, bi-annually, annually, and other). These factors help to researcher to understand the intensity of the testing. If few officers are required to participate in the test, its effects will be limited to those officers. If the test is administered at larger intervals, it is possible that routine maintenance of the requirements may be limited to a short period before and after the testing. In other words, if the test is conducted annually, the officer could begin training to pass it a month or so before, pass the test, and then discontinue physical training. Finally, data are collected on whether benefits, such as tuition payments or salary bonuses, are awarded based on the successful completion of the recurring physical agility test. This helps to measure the incentives for passing.

### **Hypothesis**

The researcher expects agency size to have either no change or a negative correlation with the percentage of passing officers. The larger agencies are more likely to have administrative positions that do not require much physical agility, such as community affairs officer, accreditation officer, or a policy officer. POPS compliance will have a positive effect on passing rates. The purpose of POPS is to

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increase the qualifications of a police officer to “professionalize” the job. This requires higher expectations of officers and more dedicated officers, which should increase the physical abilities of officers. This study expects higher levels of leadership to be positively correlated with higher percentages of passing officers. A department head that believes physical agility is important will more likely stress physical agility maintenance and testing; this will increase the overall physical levels of the officers. The allocation of paid gym time will positively correlate with higher passing rates. Gym time provides the opportunity for officers to attend a gym and allows the officers to do so during the work week. Officers may find it difficult to maintain fitness routines without allocated gym time due to the demands of their personal lives. The presence of a physical agility policy will have positive effects on the percentage of officers passing a physical agility test. If officers have a standard which they must maintain the department routinely, the ability to pass the POPS physical agility test should be less difficult than if a policy does not exist.

### **DESCRIPTIVES**

#### **Agency Size<sup>4</sup>**

The range of total sworn, full-time officers of responding agencies (n=155) is 1063, the sum of total officers is 4016, the mean is 25.91, and the median is 10 officers per department (Figure 1). Eighty-one percent of the respondents have less total officers than 25. The 2003 total population of officers in departments that received the survey is 4892 (N=286), with a mean of 17.01 officers per department (2003 Crime in Kentucky). The most frequent agency size in this study is 1 total

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<sup>4</sup> Missing agency size information was obtained from the 2003 FBI Uniform Crime Reports.

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officer (12 departments), followed by 6 total (10 departments), 8 (10 departments), and 7 (9 departments).

**Figure 1: Total Number of Sworn, Full-Time Officers**

#	Frequency	%	Cumulative %	#	Frequency	%	Cumulative %
1	12	7.74	7.74	24	5	3.23	81.29
2	8	5.16	12.90	26	1	0.65	81.94
3	6	3.87	16.77	27	1	0.65	82.58
4	8	5.16	21.94	28	2	1.29	83.87
5	7	4.52	26.45	30	1	0.65	84.52
6	10	6.45	32.90	31	4	2.58	87.10
7	9	5.81	38.71	34	1	0.65	87.74
8	10	6.45	45.16	35	3	1.94	89.68
9	6	3.87	49.03	39	1	0.65	90.32
10	8	5.16	54.19	40	1	0.65	90.97
11	5	3.23	57.42	42	1	0.65	91.61
12	4	2.58	60.00	45	1	0.65	92.26
13	3	1.94	61.94	48	1	0.65	92.90
14	2	1.29	63.23	50	1	0.65	93.55
15	5	3.23	66.45	54	3	1.94	95.48
16	2	1.29	67.74	70	1	0.65	96.13
17	2	1.29	69.03	73	1	0.65	96.77
18	1	0.65	69.68	78	1	0.65	97.42
19	1	0.65	70.32	99	1	0.65	98.06
20	3	1.94	72.26	109	1	0.65	98.71
21	3	1.94	74.19	518	1	0.65	99.35
22	2	1.29	75.48	1064	1	0.65	100.00
23	4	2.58	78.06		<b>Total</b>	<b>155</b>	<b>100.00</b>

\*n=155, mean=25.9, median=10.0, mode=1

### POPS Compliance

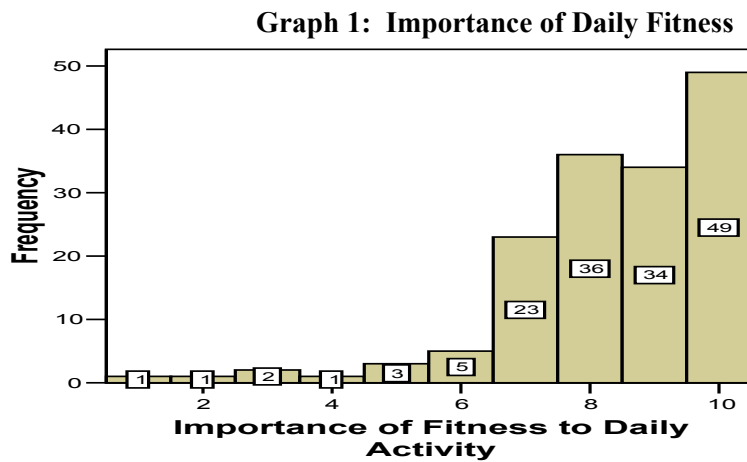
Of the 155 respondents, only one department reported not being compliant to POPS requirements. This means that this one department does not receive KLEFPF monies or that the question was misinterpreted. Because 99.4 percent of the

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responses stated POPS compliance, this variable did not yield statistically significant results.

### Leadership

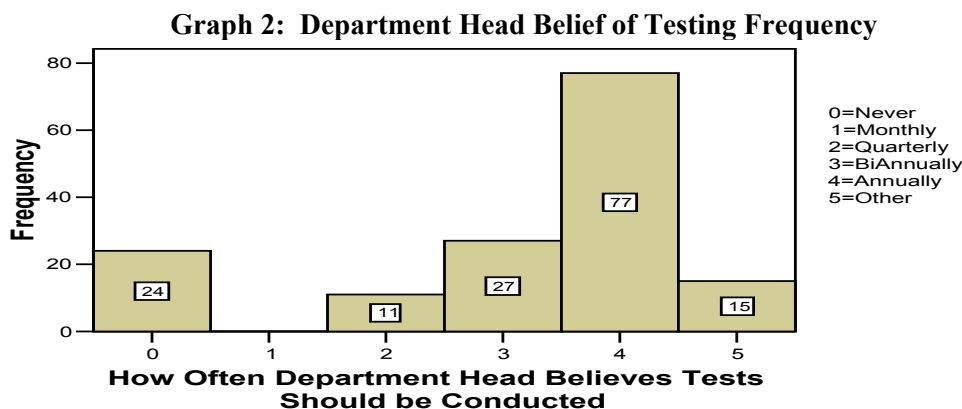
Leadership was measured using two measures. The first measure was how strongly the agency head believed the importance of physical agility was to an officer's daily activity. The histogram below shows the distribution of responses to this question.



This graph illustrates that the majority of department heads feel that physical agility is highly important to an officer's daily activities. This is not a surprising result, but it can be concluded from this information that if physical fitness is necessary on a daily basis, physical fitness should be maintained.

The next question asks how often physical agility tests should be conducted. This question seeks to serve as comparison to the previous except for in this question the chief or department head is likely to take much more into consideration, such as; who must conduct the test, time taken away to testing, and ramifications for not passing. The histogram below shows the responses to this question.

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Twenty-four, 15.6 percent, of the respondents felt physical agility tests should never be conducted. 74.7 percent of department heads believed the tests should be conducted at least annually. The responses of “other” indicated more of the considerations described above. Three respondents suggested that officers should be tested annually up to a certain age. Another respondent stated the individual departments should determine who gets tested, how often they should be tested, and that there should be no punishment for not passing. Other responses included annual physical exams from physicians, random physical agility tests, and simply “determined by department head.” Of the responses, there was some indication of a concern of possible regulation or control by an entity outside of the department.

### **Presence of Departmental Policy**

Twenty-two (14.1 percent) of the 155 departments reported having instituted a recurring physical agility test. The most common rate of recurrence of departmental testing was “annually” (Figure 2). The second most common response was “other”, which included responses of; “randomly”, “as the department head sees fit”, and “when needed”. Three of the “other” responses provided no frequency of the department’s testing.



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**Figure 2: Frequency of Testing**

<b>Frequency of Test</b>	<b>Frequency</b>	<b>%</b>	<b>Cumulative %</b>
Monthly	2	9.09	9.09
Quarterly	2	9.09	18.18
Bi-Annually	4	18.18	36.36
Annually	9	40.91	77.27
Other	5	22.73	100.00
<b>Total</b>	<b>22</b>	<b>100.00</b>	<b>100.00</b>

Twenty of the departments with a recurring physical agility test responded to which officers were required to be tested. Figure 3 indicates the divisions of rank required to participate in recurring physical agility tests. One department required only supervisors/management to take the test. Fourteen departments required the chief/department head, supervisors/management, and patrol to participate in testing. The “other” responses were “all sworn personnel” and “advanced tactics teams.”

**Figure 3: Personnel Participating in Physical Testing**

<b>Department</b>	<b>Chief</b>	<b>Supervisors</b>	<b>Patrol</b>	<b>Other</b>
1	X	X	X	
2	X	X	X	X
3	X		X	
4	X	X	X	
5	X	X	X	
6		X	X	
7	X	X	X	
8	X	X	X	
9		X	X	
10	X	X	X	X
11	X	X	X	
12	X	X	X	
13	X	X	X	
14	X	X	X	
15	X	X	X	
16	X		X	
17		X		
18	X	X	X	
19	X	X	X	X
20	X		X	
<b>Total</b>	<b>17</b>	<b>17</b>	<b>19</b>	<b>3</b>

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### Gym Time Allocation

Twenty-two departments allocated paid time during the week for officers to attend a gym. Eighteen of these departments reported the maximum number of hours that an officer can claim. The mean number of hours allotted was 2.4 hours, the mode was 3.0 hours, and the median was 2.75 hours.

### Officer Passing Rates

The median of department head responses to the percentage of their officers that could pass the POPS physical agility test if it was taken it today is 5 (61-75 percent). Sixty-five percent of the respondents indicated a passing percentage rate less than 75 percent (Figure 4).

**Figure 4: Officers Passing Rate Responses**

Officer Passing Range	Frequency	Percent	Cumulative Percent
1 (0 – 15%)	13	8.39	8.39
2 (16 – 30%)	9	5.81	14.19
3 (31 – 45%)	14	9.03	23.23
<b>4 (46 – 60%)</b>	<b>31</b>	<b>20.00</b>	<b>43.23</b>
<b>5 (61 – 75%)</b>	<b>34</b>	<b>21.94</b>	<b>65.16</b>
6 (76 – 90%)	32	20.65	85.81
7 (91 – 100%)	22	14.19	100.00
<b>Total</b>	<b>155</b>	<b>100.00</b>	<b>100.00</b>

\*n=155, mean=4.6, median=5, mode=5

### ANALYSIS

To gauge honesty and consistency of agency heads' responses to the officer physical agility levels in the respective police departments, a correlation table was created between officer passing rates and officer fitness levels (Figure 5). Correlation was found between how physically fit the department head felt officers were in the department and the percent of officers he or she felt could pass the test. The two variables had a correlation of 0.559 ( $\alpha=.01$ ); this indicates a high level of consistency.

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Due to this consistency, the researcher can more comfortably compare the independent variables to the dependent variable.

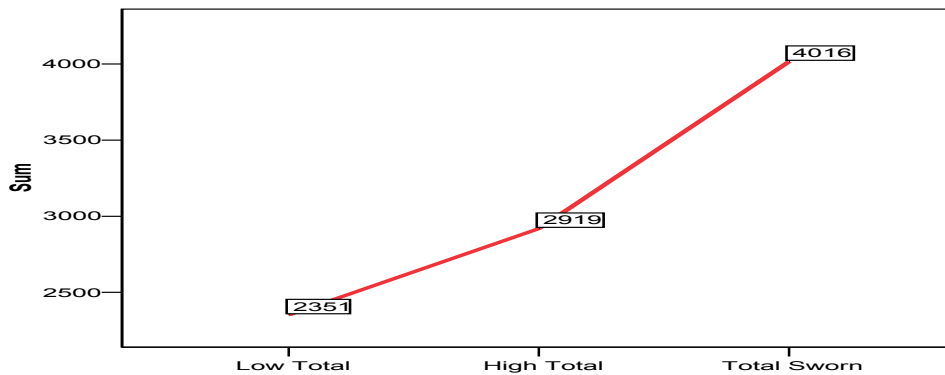
**Figure 5: Perception of Officer Fitness, Percent Passing Correlation**

		<b>Percent Passing</b>
<b>Officer Fitness</b>	Pearson Correlation	.559(**)
	Sig. (2-tailed)	.000
	N	152

\*\* Correlation is significant ( $\alpha= 0.01$ ) (2-tailed).

A sensitivity analysis of total sworn officers in a department and the department head's response to officer percentage rates indicates between 2351 and 2919 of the total officers in the study could pass the physical agility test (Figure 3). This is a range of 58.5 percent - 72.7 percent of the total officers.

**Graph 3: Range of Total Passing Officers Based on Responses**



The range was obtained by multiplying the low percentage from the each individual survey response by the total number of that individual agency's total officers to compute the least number of officers that could pass the agility test in that agency. Then, the high end percentage was multiplied by the agency's total number of that agency's officers to produce the highest number of officers that could pass the test. If this procedure produced anything more than a whole number, the decimal was rounded down to the nearest whole integer. This is because the test is considered pass or fail. It is important to remember this cumulative percentage may seem low (58.5-

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72.7), but the study could be premature. HB 455 was enacted almost seven years ago and did not require the current officers to pass the test. Also, this number is based on a subjective response from agency heads.

### Gym Time Allocation

It was expected provided paid gym time would lend increase to the percentage of officers that could pass the physical agility test and, as the number of hours the officer was paid for increased, the percentage would increase even higher. After inputting these variables into a linear regression model, this hypothesis was rejected. It produced unfavorable levels of statistical significance; gym time provided (.248), total gym time (.139).

**Figure 6: Gym Time Allocation/Total Gym Hrs Relationship to Officer Passing**

	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	4.534	.152		29.925	.000
Gym Time	.466	.402	.093	1.159	.248
(Constant)	3.114	1.240		2.512	.023
Total Gym Hrs	.749	.481	.363	1.556	.139

Dependent Variable (Constant): Percent of Officers Passing

Unexpected written explanations that appeared on many of the returned surveys produced qualitative responses which may suggest why the hypothesis was rejected. Eight departments provide three hours of paid gym time each week, but six of those stated these hours cannot be used as overtime. One department head explained if the work week required the officer to work 40 hours in the week, the three hours spent in the gym could not be claimed, thus eliminating the financial incentive to attend the gym. Another response indicated the department did not provide a paid amount of time each week, but did provide free gym membership and

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encouraged gym use. One department previously had a program to provide gym time and membership, but because there was little officer participation in this program, it was discontinued.

### Presence of Departmental Policy

Twenty-two of the reporting agencies have instituted a recurring physical agility test. The presence of a policy requiring physical agility testing within police departments was found to have statistical significance (.092), but with low adjusted R Square (.012) and low coefficient (.136).

**Figure 7: Relationship of Presence of Policy and Officer Passing Rates**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.136	.018	.012	1.739

Predictors: (Constant), Policy

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.504	.151		29.873	.000
Policy	.678	.400	.136	1.694	.092

Dependent Variable (Constant): Percent to Pass

As stated earlier in the study, 81.3 percent of the departments responding had a total number of sworn officers less than 25, yet 40.9 percent of the departments with a policy had a greater number of total officers than this. Thirty-one percent of the departments with total officers over 25 had instituted a recurring physical agility test. This compares to 10.3 percent of departments with less than 25 total officers instituting a policy, i.e. 89.7 percent of departments with less than 25 officers did not institute a policy. In order to test the relationship between agency size and presence of policy Because the distribution of agency size was skewed right, the data were transformed with the function  $\log_{10}(x_n)$ . This produced a curve that was similar to normal distribution.

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**Figure 8: Agency Size as a Predictor of Presence of Policy**

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.258	0.067	0.060	0.339

Predictors: (Constant), log (Agency Size)

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-0.031	0.059		-0.528	0.598
log (Agency Size)	0.174	0.053	0.258	3.303	0.001

Dependent Variable (Constant): Departmental Policy

Positive correlation was found between agency size and the presence of a policy requiring a recurring physical agility test (Figure 8); which means larger agencies were more likely to have a physical agility policy.

### Departmental Testing and Leadership

The frequency of these tests showed little statistical significance to officer passing rates (Figure 9). It was thought as the frequency of test administration increased, so would the passing rates. Actually, the departments with the most frequent testing (those with monthly tests) were no more likely to produce a greater percentage of passing officers than those departments testing less often.

**Figure 9: Frequency of Testing on Percent of Officer Passing**

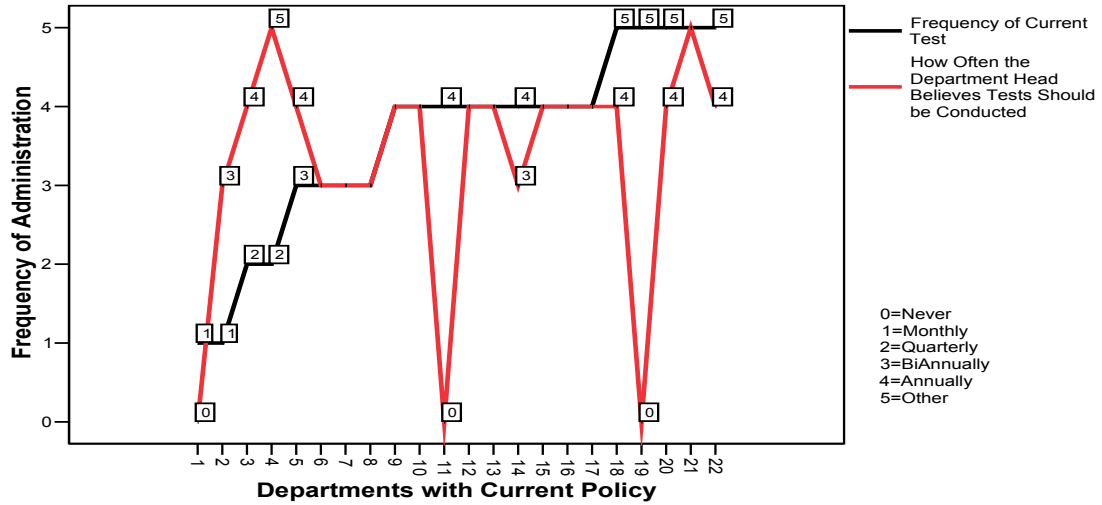
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.077	.859		4.744	.000
Frequency of Test	.308	.227	.290	1.355	.191

Dependent Variable (Constant): Percent of Officers Passing

The frequency of the current testing was then compared to the responses of the same department head's feeling on how often agility tests should be conducted (Graph 4).

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**Graph 4: Current Test Frequency vs. Perception of Test Frequency**



Eleven of the 22 departments with a policy have responded differently to how often tests should be conducted and how often tests are conducted. Three departments, one currently with monthly tests, one with annual tests, and one with “other” test frequency felt tests should never be conducted. Four of the departments with monthly or quarterly tests indicated a less frequent test should be conducted. No department head with a current policy felt monthly or quarterly tests should be conducted. Twelve of the department heads currently felt tests should be conducted annually. Five of the departments wanted to set different guideline to their tests and indicated “other”. These were often the responses that suggested qualifiers such as annual physical exams from physicians, random physical agility tests, testing up to a certain age, or “determined by department head” on who gets tested and when. Fifty percent of the departments that had a recurring physical agility test provided policy that allowed for paid gym time.

Seventeen of the 20 departments that indicated which officers were tested responded all patrol officers, management and supervisors, and the chief or department head. Two departments currently test management and supervisors and

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patrol officers. One department tested only management and supervisors. Little statistical significance was found between passing rates and those officers required to be tested.

Seven departments responded to officers receiving special benefits (salary bonuses, tuition payments, etc.) upon passing a physical agility test. There was no statistical significance that providing special benefits increased the percentage of officers that could pass a physical agility test.

### Overall Effects of Independent Variables

As a whole, little statistical significance was found between the independent variables and the dependent variable when run as an aggregate in a regression model (Figure 10). The chief or department heads' belief of the use of physical agility in an officer's daily routine was the only variable with a high level of significance, but had a low B coefficient.

**Figure 10: Independent Variable Effect on Officer Passing Rates**

R	R Square	Adjusted R Square	Std. Error of the Estimate		
.249	.062	.030	1.727		
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.858	.762		3.749	.000
Daily Agility	.223	.086	.212	2.576	.011
Log (Agency)	-.045	.282	-.013	-.158	.875
Policy	.453	.452	.091	1.002	.318
Gym Time	.172	.439	.034	.391	.696
Chief Freq.	-.055	.093	-.048	-.585	.559

Dependent Variable: Percent officer passing



**CONCLUSIONS**

**Future Research**

If this study were to be conducted in the future, changes should be considered. The most important change is discussed in the limitations section. A more useful study would physically sample officers from various departments across the state. This study relied on the agency heads' best guesses. If the officers were directly measured, a greater idea of pass and fail would be known.

Other data should also be obtained when analyzing departmental policy. This research discussed; frequency, which officers take the tests, and incentives for passing the tests. It would be useful to include qualitative responses to punishments for not passing the tests. If there is no punishment, the policy could be deemed useless. It may be also important to find the exact benefits officers receive for passing the tests. Some benefits may show to be more useful than others and lead to greater passing rates.

Future research may also want to consider the change in officers within the departments. This number would reflect the total number of officers employed by departments that were not employed prior to 1998. This would help to track those officers that have or have not maintained the physical agility level he or she had to possess in order to become the officer. This may help to determine the direct effect of HB 455.

The independent variable that discusses gym time should also ask departments if the time is being utilized. A department may allot its officers a certain number of

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hours, but if it is not stated whether or not officers are taking advantage of the hours the results could be misleading.

### **Limitations of the Study**

Due to the format of this study, the results are limited. This study relies on the chief or department head to make his or her best guess on the range of officers that could or could not pass the physical agility test. This is less difficult for those departments with few officers, but as the total number of officers in the department grows, so does the department head's ability to determine which officers can pass. This also affects the interpretation of the responses. For example, if a department head states he or she has 20 officers under his or her command and circles the 91-100 percent passing range, between 19 and 20 officers can pass the test. If another department head has 100 officers and circles the same range, between 91 and 100 officers can pass the test. Of course as the size of the department grows, so does the interpretation of the range of passing officers.

Another limitation of the study is it does not allow the researcher to know the background information of the officers that are not considered those that could pass. For example, if an officer has been recently injured on the job, the chief or department head would have to consider that officer as one who would not pass the test. No exemptions have been made to allow the department head to distinguish between officers that are "out of shape" or "temporarily unable to perform."

This study would have been much more effective if officers from police departments across the state were randomly sampled and asked to physically

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complete the POPS agility test. However, due to financial limitations and time constraints, the study had to be conducted as it was.

The study was also limited due to the unexpectedly small number of police departments with physical agility test requirements (n=22). The original belief of the author was that there would be a low number of police departments with physical agility tests, but the number would have at least been high enough to generalize results to the sample. This low number does provide descriptive results concerning the prevalence of these tests, but due to the small sample, the frequency of these tests, those who participate in these tests and the benefits for completing these tests yield less useful results.

### **Recommendations**

Due to the limitations of this study, few recommendations can be interpreted from the data. The most important recommendation is for further research and a more in depth study to receive more useful numbers.

A department that wishes to create policy may want to consider the suggestions from the policy presence section of the study. Of the departments that have a policy, annual or bi-annual testing were the most frequent responses to how often tests should be conducted. Departments may also want to think about including age parameters.

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