International Journal of Police Science
ISSN 2771-3377 (online); ISSN 2771-3385 (print)
https://IJPS-Journal.org
Volume 2, Issue No. 1 (2023)

International Police Science Association (IPSA)

Research Article

Police Chief Perceptions of Officer Physical Fitness and Barriers to Better Fitness

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https://doi.org/10.56331/487529/IJPS4

Submitted: 06 September 2022
Accepted: 15 December 2022
Published: 05 April 2023

Citation: Wagner, Matthew, Michael Harper, Alexis R. Rockwell, and William Wells. "Police Chief Perceptions of Officer Physical Fitness and Barriers to Better Fitness." *International Journal of Police Science* 2, no. 1 (2023). https://doi.org/10.56331/487529/IJPS4.

Abstract: Maintaining fitness and a healthy bodyweight can enhance police officer safety, de-escalation, and subsequently survivability in addition to overall health and wellness. Within a law enforcement agency, it can be difficult to implement a health and wellness program without the support of the police chief and command staff. However, support for health and wellness programs and the perceived impact on the job by law enforcement police chiefs is not well known. This article analyzes police chiefs' perspectives on police officer physical fitness and bodyweight, and their impact on multiple aspects of the job, as well as barriers to implementing health and wellness programs. A survey of 425 Texas police chiefs indicated 99.5% of respondents believed it was important or somewhat important for officers to be at a healthy bodyweight. The top potential barriers to officers' physical fitness represented by police chiefs were individual unwillingness and laziness. A more thorough understanding of perceptions and beliefs by law enforcement leadership can help enhance the alignment of programs, impact habits, and ultimately influence daily choices that officers make. These perceptions can also assist in the development of programs to further support officer readiness, safety, and survivability, as well as overall health.

Keywords: police; perceptions; fitness; barriers; Texas

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Introduction

As stated in the President's Task Force on 21st Century Policing (2015), the wellness and safety of law enforcement officers are critical not only for themselves, their colleagues, and their agencies, but also for public safety.[1] Maintaining fitness and a healthy bodyweight can enhance police officer safety, de-escalation, and subsequently survivability in addition to overall health and wellness.[2] The purpose of the current project is to understand police chiefs' perspectives on multiple aspects of police officers' physical fitness and bodyweight. This study focused on two topics: perceptions regarding the impact of excess bodyweight and lack of fitness on police officer performance; and perceptions regarding potential barriers to physical fitness and maintaining healthy weight and fitness levels. Perceptions of police leaders were measured because these individuals are responsible for policy development and the overall focus and direction of their respective departments. Therefore, their perceptions on this topic are important to understand. Their perceptions provide reinforcement for areas in need of program development and insights into potential barriers to health and fitness initiatives.

Literature Review on Physical Health Benefits and Barriers

Previous research has demonstrated numerous health benefits that are derived from physical activity and the maintenance of a healthy bodyweight. This is especially important for law enforcement officers because the occupational fatality rate for law enforcement is three to five times that of the national average for the working population.[3] According to research from the Buffalo Police Department, the average life expectancy of law enforcement personnel is 22 years less than their civilian counterparts.[4] Heart disease, the number one killer of both males and females in the United States, is also heavily prevalent in law enforcement.[5] Research examining law enforcement in the United States over a 22-year period (1997–2018) concluded that nearly 82 percent of circulatory-related deaths were from a heart attack, with an average age for a duty-related death due to heart attack at 46.5 years.[6] Two of the eight risk factors for heart attacks include lack of physical activity and unhealthy bodyweight. However, workers in protective services were almost 2.5 times as likely to be obese as workers in health diagnosing occupations, showing that there is an increased risk of obesity in certain occupations, including law enforcement.[7]

A large proportion of officer injuries and deaths are not the results of interaction with criminal offenders but the outcome of poor physical health due to poor nutrition, lack of exercise, sleep deprivation, and substance abuse.[8] Tasks within law enforcement require physical fitness, yet maintenance of fitness is not always prioritized by incumbent staff and leadership. In a 2012 study by Bissett, Bissett, and Snell, the researchers found that more than 25 percent of incumbent police officers admitted that they would not be able to pass a common physical agility test.[9] Even though most of the daily work within law enforcement is sedentary, situations may still arise when officers must possess an appropriate level of fitness and a healthy bodyweight. Daily, officers may be expected to lift, carry, push, pull, run, or engage in a variety of physical tasks. However, affecting the arrest of a struggling suspect is one of the most strenuous physical tasks that an officer might encounter.[10] These encounters may even turn into life-threatening situations.

Officer safety, use of force, and de-escalation can all be impacted by an unhealthy bodyweight and lack of physical fitness.[11] Community perceptions of officers and public perceptions of personal safety decrease when the public sees an officer who is obese or extremely overweight.[12] De-escalation is often described as verbal judo; however, other components of de-escalation have been well documented. Based on interviews with those who have attacked law enforcement agents, the FBI Bulletin documented that during instances where suspects believe that they can overcome an officer, they are more likely to attempt an assault or murder.[13] The image that an officer projects due to fitness level, bodyweight, and the verbal and nonverbal messages that the officer communicates on the job can potentially yield as much protection as a weapon and body armor. Research shows that obese individuals are often perceived as lazy, sloppy, lacking in self-discipline and self-confidence, unhappy, and unintelligent.[14] Additionally, discrimination toward these individuals seems to be increasing in society.[15] Other research has shown that overweight and obese individuals experience significant psychosocial impairment and reduced self-esteem.[16]

The officer's demeanor should convey that, if necessary, he or she is prepared to be a formidable opponent. The officer's mannerisms, traits, and behaviors must reveal readiness or preparedness. Such behaviors are observed and interpreted by subjects on the street. Officers cannot control certain elements of potentially deadly confrontations. However, recognizing controllable factors, such as exercise and maintaining a healthy bodyweight, may help reduce potential issues. It has also been shown that mean body mass index (BMI) significantly increased as psychological distress increased among female law enforcement officers, indicating a need for stress reduction programs to assist with bodyweight issues.[17]

The backup officer can also impact officer safety. When a backup officer arrives, the primary focus is on officer safety. However, if the backup officer is suffering from a lack of fitness and excess adipose tissue, they may not be as prepared for potential tasks ahead. Unfortunately, this can potentially hurt officer safety. Hazards may be due to increased difficulties in assisting when arriving on the scene, from simple tasks such as getting in and out of vehicles and performing daily tasks, to physical confrontation or an altercation on the side of the road.

Reducing injury potential enhances officer safety in addition to reducing burdens on limited financial resources within an agency. Costs related to officer injuries include medical care, overtime to cover assignments of injured officers, sick time, and other factors. A 2018 study from the International Association of Chiefs of Police (IACP) concluded there was a clear connection between officer fitness and several measures of injury. Officers who reported healthy weights missed almost half as many days of work following an injury as those officers who reported being overweight. Officers who reported being engaged in fitness training were less likely to suffer a more severe injury.[18]

The President's Task Force on 21st Century Policing, the IACP, and numerous studies have emphasized the importance of prioritizing health and fitness within law enforcement agencies. Recommendation 6.2 from the President's Task Force on 21st Century Policing states, "Law enforcement agencies should promote safety and wellness at every level of the organization."[19] This recommendation is important as it does emphasize the importance of health and wellness in this stressful and dangerous occupation.

However, encouraging safety and wellness through physical fitness and maintenance of a healthy bodyweight can be difficult within an agency. Choices and daily actions are often impacted by beliefs, values, and mindset. Buy-in from the leaders of police agencies, as well as the rank-and-file members, is essential to the success of any physical fitness program.[20] Thus, to effectively promote safety and wellness, it is important to first understand the beliefs, values, and mindset of police agency leaders to identify potential barriers to implementing and continuing physical fitness programs for officers.

A 2019 study of 36 police chiefs in Florida and South Carolina addressed this issue.[21] The police chief respondents indicated barriers included a lack of education and training, as well as a lack of sufficient funds to assist in curbing the weight problems of officers. The most common responses to open-ended questions regarding the impact of obesity and being overweight on performance included: impaired movement and inability to defend oneself; slower response rate and burden on joints; negative impact on overall job performance; more prone to injury; appearance; lack of stamina resulting in the use of excessive force; and inability to deal with demands of the job. MacKenzie-Shalders and colleagues found that two major barriers for the law enforcement occupation to engage in healthy eating habits included being busy and irregular working hours.[22] This is compounded by the fact that law enforcement officers have a greater incidence of hypercholesterolemia, being overweight, and tobacco use than the general population.[23]

Methods

An original survey consisting of 12 questions was developed by the research team. The original survey questions were created based on responses regarding the impact of obesity and being overweight on performance in the study by Martin and Martin.[24] These questions were pilot tested on members of a Law Enforcement Management of Institute of Texas (LEMIT) training group. This contingent was made up of law enforcement administrators from around the state of Texas. Results and feedback from members of this group allowed the researchers to refine the survey, and a second survey was piloted on a different group of LEMIT participants approximately one month later. From additional feedback from this group, a final revised survey consisting of 22 questions was distributed to 1,179 police chiefs in Texas via email (see Appendix A). Respondents completed the survey using Qualtrics, an online survey platform. The survey questions measured perceptions about how officer weight and physical fitness impact job performance and chiefs' perceptions about barriers to greater degrees of physical fitness.

The research team distributed the survey to a list of police chiefs throughout Texas who participated in state-mandated professional development with the Bill Blackwood LEMIT at Sam Houston State University (SHSU). Surveys were distributed via email within Qualtrics's internal distribution channel. As part of the first wave of survey distribution, 1,179 surveys were sent via email on 23 March 2021. Two reminder emails were sent to those respondents who either had not started the survey or started the survey but had yet to finish it. The reminder emails were sent out in two-week intervals, on 6 April and 23 April. Data collection closed on 7 May 2021, two weeks after the second reminder email. After the data collection period ended, 511 police chiefs and executive leadership personnel started the survey with 446 completing the survey. In some instances, respondents did not respond to all questions on the survey, so there is some missing information for some survey items. The survey completion rate was 91% (511 surveys started/446 completed) with an overall response rate of 39% (1,179 total surveys distributed/446 surveys completed).

Sample

The characteristics of the respondents and their agencies can be found in Tables 1 and 2. Respondents were primarily police chiefs (95%). For this analysis, the non-police chief leadership positions were removed from the final sample to ensure consistency throughout the findings. When compared with the findings that included non-police chief personnel, the overall responses and factors individuals reported did not change. Police chiefs in the sample had an average of 27 years of law enforcement experience, the average age of agency leadership personnel was 53, and almost 94% of respondents were male.

Table 1: Demographics N=441

Variable	N	%	Mean	SD.
Position	441			
Chief	425	95.3		
Assistant Chief	5	1.1		
Major	1	0.2		
Captain	3	0.7		
Other	7	1.6		
Number of Years in LE	423		27.4	8.8
Age	422		53	8.0
Gender	421			
Male	398	93.6		
Female	22	5.2		
Other	1	0.2		
Current Fitness Level	411			
Very Poor	3	0.7		
Poor	60	14.1		
Average	210	49.4		
Above Average	127	29.9		
Excellent	11	2.6		
Strength Training per Week	411			
None	135	32.8		
1 Day	51	12.0		
2 Days	96	22.6		
3 Days	72	16.9		
4 Days	35	8.2		
5+ Day	22	5.2		

Respondents were asked to self-report information regarding their fitness, with 49.4% reporting their current fitness level as average. Above average current fitness level was reported by 29.9% of the respondents and 14.1% indicated a poor current fitness level. Respondents were also asked to self-report the frequency they completed strength training, with 32.8% reporting none and 12% indicating one day per week. The Physical Activity Guidelines for Americans recommend performing muscle-strengthening activities on two or more days a week for health benefits.[25]

Responses consistent with meeting strength training recommendations for health benefits were indicated by 52.9% of respondents.

Table 2: Department Characteristics N=425

Variable	N	%
Number of Officers	425	
0–1	30	7.1
2–4	64	15.1
5–9	70	16.5
10–24	126	29.6
25–49	71	16.7
50–99	36	8.5
100–249	23	5.4
250–499	4	0.9
500–999	1	0.2
1000+	0	0.0
Agency Type	425	
Federal	0	0.0
State	17	4.0
County	3	0.7
City/Municipal	269	63.3
Special Jurisdiction	136	32.0
Fitness Requirements for Incumbent Officers	425	
Mandatory with Incentives	27	6.4
Mandatory without Incentives	29	6.8
Voluntary with Incentives	34	8.0
Voluntary without Incentives	61	14.4
No Requirement	256	60.2
Other	18	4.2

The research team utilized the Bureau of Justice Statistics' agency size categories to group the respondents' departments. While the agency sizes saw a wide, evenly distributed variety, the most common agency size was 10 to 24 officers. Results are most representative of agencies with fewer than 100 officers. The agency types mainly consisted of city/municipal (63.3%) and special jurisdiction (32%) agencies. Figure 1 shows that nearly all respondents (99.5%) indicated that it is important or somewhat important for officers to be at a healthy bodyweight. Only 2 of 385 respondents indicated that it was somewhat unimportant that officers be at a healthy bodyweight. All respondents (100%) indicated it is either important or somewhat important for officers to be physically fit (Figure 2). Of those, 80.7% stated it was important for officers to be physically fit and 19.3% stated it was somewhat important.

Figure 1. Importance of Officers being at a Healthy Bodyweight (n=385)

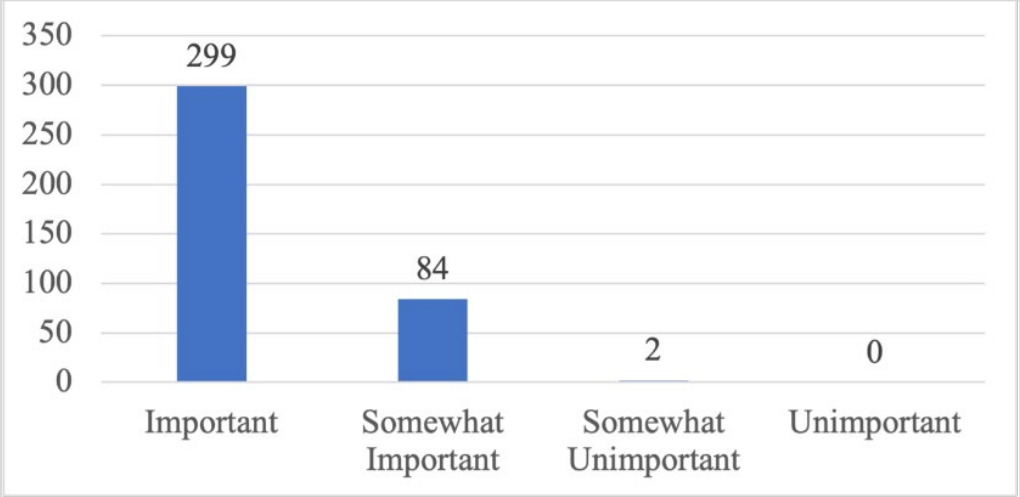
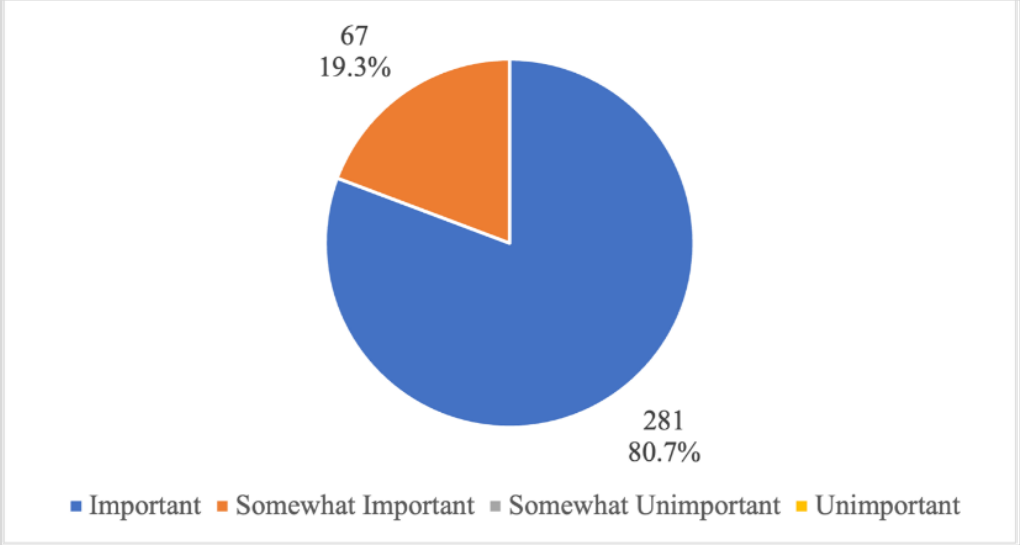


Figure 2. Importance of Officers being Physically Fit (n=348)



Results

Table 3 describes police chiefs' perceptions of the impact that being overweight has on aspects of job performance. Respondents reported that 14 of the 15 work-related issues were impacted by being overweight to a degree greater than a mean of 3 on a scale of 1 to 5, where 5 represented a strong negative impact. Police chiefs believed that the increased burden on joints (Mean: 4.0, SD: 1.0) was most impacted by a police officer carrying excess weight. Stamina (Mean: 3.8, SD: 1.1) was the second most impacted factor, followed by the ability to defend and protect oneself (Mean: 3.6, SD: 1.1), and confidence from the public (Mean: 3.6, SD: 1.2). Promotion or advancement in a career (Mean: 23.6, SD: 1.1) was perceived to be least impacted by being overweight.

Table 3: Weight Impact N=425

Variable	N	Mean	SD
Indicate the degree to which you feel each of the following are impacted by a police officer being overweight or obese on a scale of 1 (no impact) to 5 (strongest negative impact).			
Burden on joints	383	4.0	1.0
Stamina	384	3.8	1.0
Defend and protect oneself	385	3.6	1.1
Confidence from the public	382	3.6	1.2
Assist other officers when requesting backup	385	3.6	1.1
Command presence	383	3.6	1.2
Movement ability	384	3.6	1.0
Susceptibility to injury	384	3.5	1.0
Confidence from colleagues	383	3.4	1.1
Arrest control tactics	382	3.3	1.1
Response time	384	3.2	1.1
Perform all required job components	383	3.1	1.0
Protect the general public	383	3.1	1.1
Sick leave	385	3.0	1.2
Promote/advance in career	383	2.6	1.1
Other	19		

Considering officer safety and the potential impact of officers not maintaining a healthy bodyweight and adequate level of physical fitness, one respondent stated the following in the survey comments:

> The ability of an officer to chase, catch, fight, and take a criminal into custody without the application of deadly force options, unless warranted, should be a cornerstone of every law enforcement agency. The maintenance of physical preparedness through fitness improves morals, attitude, decreases stress, and provides a positive representation of our profession.

The survey measured perceived barriers that limit officers' ability to maintain a healthy weight and physical fitness, along with perceived barriers to implementing fitness requirements for incumbent officers. Police chiefs believe there are several barriers that limit officers' ability to maintain a healthy weight, the most significant perceived barrier (Table 4) was unwillingness or laziness (Mean: 3.7, SD:1.1). This was followed by shift worked (Mean: 3.4, SD: 1.2) and time (Mean: 3.3, SD: 1.2), whereas the least impactful barrier was cost (Mean: 2.6, SD: 1.2). One open-ended comment highlighted the impact of the barrier of shift worked and time as the police chief stated:

> It is quite easy for a law enforcement CEO to expect a top-notch level of fitness for his or her officers. It is an entirely different thing to provide them with the incentive, time, and resources to work toward meeting those expectations.

Table 4: Weight Barriers N=425

Variable	N	Mean	SD
Importance of possible barriers to commissioned law enforcement personnel's abilities to maintain a healthy weight on a scale of 1 (not a significant barrier) to 5 (an extremely significant barrier).			
Unwillingness/Laziness	382	3.7	1.1
Shift Worked	382	3.4	1.2
Time	381	3.3	1.2
Options/Equipment Available	382	2.9	1.3
Lack of Resources	382	2.8	1.2
Lack of Knowledge	380	2.7	1.1
Cost	380	2.6	1.2
Other	29		

Table 5: Fitness Levels N=425

Variable	N	Mean	SD
Indicate the degree to which you feel each of the following are impacted by a police officer being unfit or physically inactive on a scale of 1 (no impact) to 5 (strongest negative impact).			
Stamina	344	3.8	1.0
Burden on joints	345	3.8	1.0
Defend and protect oneself	349	3.6	1.1
Movement ability	346	3.6	1.0
Susceptibility to injury	344	3.6	1.0
Assist other officers when requesting backup	349	3.6	1.1
Command presence	346	3.6	1.1
Confidence from the public	346	3.5	1.1
Arrest control tactics	347	3.5	1.0
Confidence from colleagues	346	3.5	1.1
Protect the general public	348	3.4	1.1
Perform all required job components	348	3.3	1.0
Sick leave	343	3.2	1.1
Response time	344	3.2	1.1
Promote/advance in career	347	2.8	1.1
Other	24		

Table 5 describes the degree to which police chiefs feel various tasks are impacted by officers being unfit or physically inactive. Police chiefs reported that 14 of the 15 work-related issues were impacted by being unfit to a degree greater than a mean of 3 on a scale of 1 to 5, where 5 represented a strong negative impact. Police chiefs felt stamina (Mean: 3.8, SD: 1.0) was most impacted by officers being unfit or physically inactive. Increased burden on joints (Mean: 3.8, SD: 1.0) was the second most impacted factor, followed by the ability to defend and protect oneself (Mean: 3.7, SD: 1.1) and the ability to move (Mean: 3.6, SD: 1.0). The three areas most impacted by an officer being unfit or physically inactive were also among the top three areas most impacted

by an officer being overweight. Considering command presence, one respondent stated in the survey comments:

> I found that my command presence alone many times was enough to keep me out of a fight or any resistance. I know this because in my years several individuals [suspects] told me so. I looked good and felt ready to respond. I often speak to younger officers about the importance of being physically fit to help them survive an aggressive encounter, a resisting offender, or a fight, and for their general well-being and health. As police officers, we are going to deal with individuals which will attempt to harm us if given the chance. We should make every attempt to be ready and prepared to survive any such encounter.

The survey also measured perceived potential barriers to officers' physical fitness and departments' physical fitness requirements (Table 6). Police chiefs identified multiple barriers that limit officers' ability to maintain physical fitness: unwillingness or laziness (Mean: 3.7, SD: 1.2) was the top barrier. Comparable to barriers regarding weight, this was followed by shift worked (Mean: 3.2, SD: 1.3) and time (Mean: 3.1, SD: 1.2). The least impactful variables were cost (Mean: 2.6, SD: 1.2) and lack of knowledge (Mean: 2.6, SD: 1.1). Multiple respondents indicated "other" as a response to perceived barriers that limit officers' ability to maintain the minimum fitness levels to perform the requirements of their jobs (n=27). Responses under "other" regarding barriers to maintaining fitness included poor time management skills, the potential for injuries, job environment of working in a car all day, age, and stress.

One respondent entertained the idea that the top barrier to officers' physical fitness of individual unwillingness or laziness may not be solely due to the individual, yet a result of the leadership around them. In the survey comments, the respondent stated: "I believe the largest problem with police officers maintaining fitness levels is apathy at all ranks. When the leaders are lazy and do not care, the people under them take the same attitude." Similarly, another individual stated "that in some agencies the command staff members are older and out of shape. Thus, they would never implement a program that they could not pass themselves."

Table 6 also identified possible perceived barriers to implementing incumbent fitness requirements. Police chiefs indicated cost (Mean: 3.0, SD: 1.3) as the biggest perceived barrier followed by legal concerns (Mean: 2.8, SD: 1.3) and legal precedence for implementation (Mean: 2.8, SD: 1.2). Within the open-ended comments for "other" (n=27), police chiefs indicated poor applicant pool as well as the inability to attract and retain fit officers, marginal support, culture, the potential for injury, and agency size and funding. One respondent stated, "as an administrator, the barriers that most significantly challenge the implementation of a fitness program include legal concerns and attrition that may occur if a fitness standard is pursued." Another comment regarding this topic included a chief who stated:

> I believe in maintaining a standard of being physically fit. It is a win-win for the officer and agency to maintain this standard. But given our current culture and social standing, too many roadblocks and obstacles are cast upon law enforcement administrators to set policies with regard to a PT [physical training] regiment.

Table 6: Fitness Barriers N=425

Variable	N	Mean	SD
Possible barriers to commissioned law enforcement personnel's abilities to maintain the minimum fitness levels to perform the requirements of their jobs on a scale of 1 (not a significant barrier) to 5 (an extremely significant barrier).			
Unwillingness/Laziness	338	3.7	1.1
Shift Worked	339	3.2	1.3
Time	336	3.1	1.2
Options/Equipment Available	338	2.8	1.2
Lack of Resources	339	2.7	1.2
Cost	340	2.6	1.2
Lack of Knowledge	339	2.6	1.1
Other	27		
Possible barriers to implementing fitness requirements for incumbent officers within your agency on a scale of 1 (not a significant barrier) to 5 (an extremely significant barrier).			
Cost	345	3.0	1.3
Legal Concerns	344	2.8	1.3
Legal Precedence for Implementation	345	2.8	1.2
Administration/City Council/ City Manager	344	2.3	1.2
Union or Association	344	2.0	1.3
Other	27		

Within the open-ended comments portion of the survey from 43 respondents, there were comments in support of fitness in addition to other potential barriers not previously represented. These included a need for staff to be ready to respond to calls; lack of pay to attract officers with dedication and personal integrity to have a high level of fitness; the time that it would take to get to a reasonable weight and fitness level; inability to obtain applicants without any fitness requirements; long hours; little recognition; low pay; lack of sleep; hatred due to being the police; and apathy displayed by different level leaders creating barriers for others to work out and eat healthy.

Discussion

Overall, police chiefs' responses indicated a belief that it is important for officers to be at a healthy bodyweight and to be physically fit (Figures 1 and 2). Responses to questions related to the impact of officers not maintaining a healthy weight or being unfit or physically active provide insight into why chiefs feel weight management and physical fitness are so important. Officer safety is heavily impacted in six of the top eight areas identified as being most affected by not maintaining fitness or a healthy weight. The other two items represented in the top eight are related to command presence, which can impact officer safety as described in FBI studies.[26]

A decrease in officer safety due to a lack of fitness can increase stress among officers who are already in a stressful job environment, leading to potential mental health concerns. In January 2018, the Law Enforcement Mental Health and Wellness Act was signed into law.[27] This act

recognizes the importance of sound mental and psychological health and the connection it has to good physical health for officers to be effective in keeping communities safe. While the focus of this survey was not on mental health, the potential barrier because of mental health concerns, as well as the potential improvement in mental health from maintaining physical health, should be noted. This affords an area for potential future research regarding the mental health of officers and their level of physical fitness.

Police chiefs also identified potential barriers to officers' physical fitness: individual unwillingness or laziness was the most significant perceived barrier. Providing encouragement, motivation, and reminders of the importance of physical fitness may be needed to mitigate this barrier. One strategy to provide feedback to individuals in an agency may be to connect the importance of fitness to the term "complacency kills." This term is well recognized in law enforcement as it relates to avoiding the mindset of a routine traffic stop. However, it may be valuable to ensure this is also connected to important items including physical fitness and maintenance of a healthy bodyweight. Whether it is non-recognition of danger, failure to physically prepare, or denial of health, these all require vigilance to avoid the potential negative impact on officer mortality and morbidity. As police chiefs connect the importance of fitness with regular communication, it may also provide benefit to garner an increased understanding of perceived barriers by front-line officers. This additional information can help to ensure alignment of perceptions by leadership with actions occurring on the ground within an agency. The data may also help provide insights into why identified perceptions from police chiefs have not been overcome through their leadership strategies. Time and shift worked were also perceived to be barriers officers encounter.

Agency leaders should consider these elements when designing programs or initiatives to enhance physical fitness. Initiatives may include time management programs, sleep environment education, and instruction on the benefit of short activity sessions. For example, research has shown that bouts of 10 minutes of activity throughout the day can provide similar benefits to performing 30 minutes of activity continuously.[28] Significant reductions in the 10-year risk of coronary heart disease were observed in the three bouts of 10 minutes of activity group as well as in the 30 minute continuous activity group. The *Journal of the American Medical Association* (JAMA) states that if Americans would add just 10 extra minutes of physical activity per day, approximately 110,000 preventable deaths could be avoided per year.[29]

The low prevalence of fitness requirements was in stark contrast to the importance the police chiefs indicated they place on the value of physical fitness and a healthy weight. While respondents indicated cost was not perceived as a relatively important barrier to maintaining fitness and a healthy weight, it was the greatest barrier to program requirements. Many fitness requirements can be met via options that have minimal to no costs. Fitness assessments can be conducted utilizing bodyweight activities or low-cost assessment tools, such as a rower. Program support can also be provided using available resources from partnering law enforcement agencies, the IACP Officer Safety and Wellness tools, Bureau of Justice Assistance (BJA) Preventing Violence Against Law Enforcement and Ensuring Officer Resilience and Survivability (VALOR) Initiative, or other reputable sources.

The second largest barrier to implementing fitness requirements for incumbent officers was tied between legal concerns and legal precedence for implementation. The ability to address legal components is not within the scope of this research yet should be highlighted as an area with significant interest in further clarification. Additional barriers were presented in the dialogue from

the open-ended comments section of the survey detailed additional potential barriers including attrition because of implementing requirements, impact on hiring, injury potential, and unions or associations. An open-ended response indicated that individuals may have difficulty coming into compliance if new requirements were added to the job that were not in place prior to hiring. This stance is in stark contrast to the considerable number of new requirements that officers must face each year. However, it does bring forth a potential concern related to how a program is implemented and what allocated resources are provided to current incumbent employees to help bring them into compliance.

Similarly, beyond the impact on retention, regarding the concerns identified in the results section pertaining to the impact on hiring, it may be appropriate for agencies to review appropriate fitness level requirements as they relate to the job and a department. This is further evidenced by a commenter who stated, "If our district wanted the highest level of fitness, they would have to increase the pay to attract officers with dedication and personal integrity to have a high level of fitness before they were employed." As agencies work toward hiring individuals with dedication and personal integrity toward fitness, it may be appropriate to implement fitness requirements based on the demographics of the agency versus starting with a potentially unattainable high requirement of fitness. There is the potential that as leaders implement something, the culture of the agency will develop and help change these types of mindsets within an agency.

Agencies with a lack of requirements of any kind may increase the need for analysis of the potential increased risks due to hiring individuals who are not maintaining healthy weight and fitness levels. This is due to the police chiefs' indication that most job duties had at least a moderate negative impact by not maintaining these items. Further concerns stemming from policy implementation related to injury potential. To mitigate injuries from physical fitness training, a continued emphasis should be placed on proper instruction and implementation of physical fitness training. This is similar to other potentially dangerous aspects of law enforcement training, including restraint techniques and firearms training.

As police chiefs continue to stress the importance of physical fitness, healthy weight, and overall wellness, the attitudes and behaviors of agency employees may reflect this orientation. A continual emphasis, especially by leadership, on the importance of physical wellness may impact habits and ultimately influence the daily choices of officers. As police chiefs look to develop a culture of officer safety, reminding individuals of the influence, impact, and importance of a healthy weight and being physically fit may help to positively encourage these components at every level within organizations.

A potential limitation of the current analysis may be that not all areas impacted by officer weight and physical fitness were included in the survey. The open-ended comments revealed other areas that may be affected by these attributes. A second potential limitation is due to the location of the respondents. The survey data may include police chief responses from both rural and urban areas. As a result of location, available resources may be limited or enhanced, thus potentially impacting results.

Opportunities for Future Research

The results of this analysis provide the opportunity for a significant number of areas for future research. Multiple opportunities exist based on the demographics of this study alone. As all

respondents in this study were from Texas, a similar study within other geographic locations may provide insights into similarities or differences between geographic locations. Additional research could review perceptions of fitness and body image based on respondents' race, gender, and size of agency to determine whether differences exist among these groups.

Within this data set, opportunities also exist regarding bi-variant and multi-variant analysis based on respondents' current exercise practices and fitness levels. Subsequently, there is an opportunity to compare individual fitness levels and body image scores to perceptions of the importance of bodyweight and fitness. Further analysis of the open-ended comments regarding perceived barriers that limit officers' ability to maintain a healthy weight (n=27) and physical fitness (n=27) may enhance understanding of these different variables.

Other opportunities resulting from this analysis include a similar inquiry with front-line officers. This analysis may assist in determining inconsistencies and disconnect between front-line officer perceptions and those of police chiefs. Furthermore, this may also assist in best understanding the impact on officer safety, operational function, and barriers. Lastly, a breakdown of individual fitness components and their impact on job function may be another area for future research.

Appendix A

LEMIT Chiefs and Executive Leadership Health & Fitness Survey
Sam Houston State University Consent for Participation in Research

STUDY OF ATTITUDES AND PRACTICES REGARDING PHYSICAL FITNESS IN LAW ENFORCEMENT
You are being asked to be a participant in a research study about the attitudes and practices related to physical fitness in law enforcement agencies in the state of Texas. You have been asked to participate in the research because you lead a police agency in Texas, and you have unique knowledge about this topic.

WHAT IS THE PURPOSE, PROCEDURES, AND DURATION OF THE STUDY?
The study seeks to understand current attitudes and practices in physical fitness in law enforcement agencies by asking police leaders to report some basic information by responding to a brief survey.

WHAT ARE THE REASONS YOU MIGHT CHOOSE TO VOLUNTEER FOR THIS STUDY?
You may want to volunteer and complete this survey because you will be providing information the researchers can use to determine overall attitudes and practices regarding the importance of physical fitness in the law enforcement profession in Texas. You have specific and unique knowledge that you can share with us. Completing this survey should take approximately 7–10 minutes.

WHAT ARE THE REASONS YOU MIGHT CHOOSE NOT TO VOLUNTEER FOR THIS STUDY?
You may not want to participate because we are asking you to volunteer your time. You will not be compensated for participating in this study.

DO YOU HAVE TO TAKE PART IN THE STUDY?
You can choose whether to participate in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, OR CONCERNS?
The individuals in charge of this study are Dr. Matthew Wagner of the Department of Kinesiology and Dr. William Wells of the Law Enforcement Management Institute of Texas at Sam Houston State University. If you have questions, suggestions, or concerns regarding this study or you want to withdraw from the study, you can contact Dr. Wagner or Dr. Wells using their contact information listed below. If you have any questions, suggestions, or concerns about your rights as a volunteer in this research, contact the Office of Research and Sponsored Programs – Sharla Miles at 936-294-4875 or email ORSP at sharla_miles@shsu.edu.

WHAT ABOUT PRIVACY AND CONFIDENTIALITY?
The only people who will know that you are a research participant are members of the research team. No information about you, or provided by you during the research, will be disclosed to others without your written permission.

When the results of the research are published or discussed in conferences, no information will be included that would reveal your identity. Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law.

To help ensure your anonymity, the research team recommends that you take this survey in a private area and clear the computer cache and history upon completion of the survey.

WHAT ARE MY RIGHTS AS A RESEARCH PARTICIPANT?
If you feel you have not been treated according to the descriptions in this form, or you have any questions about your rights as a research participant, you may call the Office of Research and Sponsored Programs – Sharla Miles at 936-294-4875 or email ORSP at sharla_miles@shsu.edu. You may choose not to participate or to stop your participation in this research at any time. Your decision whether or not to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled. You will not be offered or receive any special consideration if you participate in this research.

AGREEMENT TO PARTICIPATE
By completing the survey, I acknowledge that I read and understand the above information, and I willingly consent to participate in this study. I understand that if I should have any questions about my rights as a research subject, I can contact Dr. Matthew Wagner at 936-294-1163 or mcw002@shsu.edu or Dr. William Wells at 936-294-4817 or wmw005@shsu.edu.

The below survey is being conducted to collect information regarding current health and fitness status of chiefs and executive leadership, perceptions regarding the impact of bodyweight and fitness on performance, and perceptions regarding the potential barriers to programs and maintaining healthy

weight and fitness levels. A goal will be to help bring awareness to these perceptions and help identify areas for attention within agencies. Additionally, feedback from this will help provide evidence regarding the impact of implementing or sustaining a health and fitness program within an agency. It will also assist in helping determine remedies to combat potential issues that may impact the performance of job duties.

Position (please select one):
o Chief
o Assistant Chief
o Major
o Captain
o Other (Please explain) _____

Number of years in law enforcement _____

Age _____

Gender:
o Male
o Female
o Other

Height (feet):
o 1
o 2
o 3
o 4
o 5
o 6
o 7

Height (inches):
o 1
o 2
o 3
o 4
o 5
o 6
o 7
o 8
o 9
o 10
o 11
o 12

Weight in pounds (lbs.) _____

Number of commissioned officers in agency: (Please select one.)
o 0–1
o 2–4
o 5–9
o 10–24
o 25–49
o 50–99
o 100–249
o 500–999
o 1000+

Type of agency represented: (Please select one.)
o Federal
o State
o County
o City/Municipal
o Special Jurisdiction Agency
(School District, Transportation Authority, Hospital District, etc.)

What type of fitness requirements do you have for incumbent officers within your agency? (Please select one.)

- o Mandatory requirement with incentives offered
- o Mandatory requirement with no incentives offered
- o Voluntary requirement with incentives offered
- o Voluntary requirement with no incentives offered
- o No requirement
- o Other (please explain) _____

What do you feel is your current fitness level? (Please select one.)

- o Very Poor
- o Poor
- o Average
- o Above Average
- o Excellent

What do you feel is your current bodyweight classification? (Please select one.)

- o Underweight
- o Normal Weight
- o Overweight
- o Obese
- o Morbidly Obese

On average, how often do you engage in strength training activities per week? (Please select one.)

- o None
- o 1 day a week
- o 2 days a week
- o 3 days a week
- o 4 days a week
- o 5 or more days a week

On average, how many minutes of cardiovascular training (walk, run, elliptical, stair stepper, bicycle, spin bike, rower, swim, or other similar activities) do you engage in per week? (Please select one.)

- o 0–29 minutes per week
- o 30–89 minutes per week
- o 90–149 minutes per week
- o 150–249 minutes per week
- o 250 or more minutes per week

Indicate the degree to which you feel each of the following are impacted by a police officer being overweight or obese on a scale of 1–5? (One [1] would indicate no impact and five [5] would indicate the strongest negative degree of impact.)

	No Impact - 1	2	Moderately Negative Impact - 3	4	Strongest Negative Impact - 5
Ability to assist other officers when requesting backup	o	o	o	o	o
Ability to defend and protect oneself	o	o	o	o	o

Ability to perform all required job components	o	o	o	o	o
Ability to promote/advancein career	o	o	o	o	o
Ability to protect the general public	o	o	o	o	o
Arrest control tactics	o	o	o	o	o
Burden on joints	o	o	o	o	o
Command presence	o	o	o	o	o
Confidence from the public	o	o	o	o	o
Confidence from colleagues	o	o	o	o	o
Movement ability	o	o	o	o	o
Response time	o	o	o	o	o
Sick leave	o	o	o	o	o
Stamina	o	o	o	o	o
Susceptibility to injury	o	o	o	o	o
Other (please explain)	o	o	o	o	o

If other, explain here _____

How important do you feel it is for police officers to be at a healthy bodyweight? (Please select one.)
o Important
o Somewhat important
o Somewhat unimportant
o Unimportant

Please rate the importance of the following possible barriers to commissioned law enforcement personnel's abilities to maintain a healthy weight. Please rate each potential barrier on a scale of 1 to 5.

	Not a Significant Barrier - 1	2	A Moderately Significant Barrier - 3	4	An Extremely Significant Barrier – 5
Cost	o	o	o	o	O
Lack of Knowledge	o	o	o	o	O
Lack of Resources	o	o	o	o	O
Options/Equipment Available	o	o	o	o	O
Shift Worked	o	o	o	o	O
Time	o	o	o	o	O
Unwillingness/Laziness	o	o	o	o	O
Other (please explain)	o	o	o	o	O

If other, explain here _____

Indicate the degree to which you feel each of the following are impacted by a police officer being unfit or physically inactive on a scale of 1–5? (One [1] would indicate no impact and five [5] would indicate the strongest negative degree of impact.)

	No Impact - 1	2	Moderately Negative Impact - 3	4	Strongest Negative Impact – 5
Ability to assist other officers when requesting backup	o	o	o	o	O
Ability to defend and protect oneself	o	o	o	o	O
Ability to perform all required job components	o	o	o	o	O
Ability to promote/advancein career	o	o	o	o	O

Ability to protect the general public	o	o	o	o	O
Arrest control tactics	o	o	o	o	O
Burden on joints	o	o	o	o	O
Command presence	o	o	o	o	O
Confidence from the public	o	o	o	o	O
Confidence from colleagues	o	o	o	o	O
Movement ability	o	o	o	o	o
Response time	o	o	o	o	o
Sick leave	o	o	o	o	o
Stamina	o	o	o	o	o
Susceptibility to injury	o	o	o	o	o
Other (please explain)	o	o	o	o	o

If other, explain here _____

How important do you feel it is for police officers to be physically fit? (Please select one.)
o Important
o Somewhat important
o Somewhat unimportant
o Unimportant

Please rate the importance of the following possible barriers to implementing fitness requirements for incumbent officers within your agency? Please rate each potential barrier on a scale of 1 to 5.

	Not a Significant Barrier - 1	2	A Moderately Significant Barrier - 3	4	An Extremely Significant Barrier - 5
Administration/City Council/City Manager	o	o	o	o	o
Cost	o	o	o	o	o
Legal Concerns	o	o	o	o	o
Legal Precedencefor Implementation	o	o	o	o	o
Union or Association	o	o	o	o	o
Other (please explain)	o	o	o	o	o

If other, explain here _____

Please rate the importance of the following possible barriers to commissioned law enforcement personnel's abilities to maintain the minimum fitness levels to perform the requirements of their jobs. Please rate each potential barrier on a scale of 1 to 5.

	Not a Significant Barrier - 1	2	A Moderately Significant Barrier - 3	4	An Extremely Significant Barrier - 5
Cost	o	o	o	o	o
Lack of Knowledge	o	o	o	o	o
Lack of Resources	o	o	o	o	o
Options/Equipment Available	o	o	o	o	o
Shift Worked	o	o	o	o	o
Time	o	o	o	o	o

Unwillingness/Laziness	o	o	o	o	o
Other (please explain)	o	o	o	o	o

If other, explain here _____

Additional overall comments regarding topics from the survey:
_____
_____
_____

Acknowledgments

Thank you to the Law Enforcement Management Institute of Texas (LEMIT) and all of the participating Police Chiefs for their support of this study.

Disclosures

None.

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Endnotes

[1] President's Task Force on 21st Century Policing, *Final Report of the President's Task Force on 21st Century Policing* (Washington, DC: Office of Community Oriented Policing Services, 2015), 63, https://cops.usdoj.gov/pdf/taskforce/taskforce_finalreport.pdf.
[2] Tristan K. Martin and Richard H. Martin, "Psychological and Physical Problems of Being Overweight or Obese in Law Enforcement and the Impact on the Job Performance and Personal Lives: Control, Perception, and Assistance," *EC Psychology and Psychiatry* 8, no. 3 (2019): 158; Anthony Pinizzotto, Edward Davis, and Charles Miller, III, "The Deadly Mix: Officers, Offenders, and the Circumstances that Bring Them Together," *FBI Law Enforcement Bulletin* 76, no. 1 (2007): 6, https://leb.fbi.gov/file-repository/archives/jan07leb.pdf.
[3] International Association of Chiefs of Police, *Officer Safety and Wellness: Practices in Modern Policing* (Alexandria, VA: International Association of Chiefs of Police, 2018), 1, https://www.theiacp.org/sites/default/files/2018-11/IACP_PMP_SafetyandWellness.pdf.
[4] John M. Violanti et al., "Life Expectancy in Police Officers: A Comparison with the US General Population," *International Journal of Emergency Mental Health* 15, no. 4 (2013): 5, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4734369/.
[5] Melonie Heron, "Deaths: Leading Causes for 2019," *National Vital Statistics Report* 70, no. 9 (2021): 1, https://doi.org/10.15620/cdc:107021.
[6] John M Violanti et al., "Hidden Danger," *Policing: An International Journal* 43, no. 2 (2020): 335, https://doi.org/10.1108/pijpsm-07-2019-0109.
[7] David Bonauto, Dayu Lu, and Joyce Fan, "Obesity Prevalence by Occupation in Washington State, Behavioral Risk Factor Surveillance System," *Prevention of Chronic Disease* 11 (2014): 2, https://doi.org/10.5888/pcd11.130219.
[8] President's Task Force, *Final Report*, 61.
[9] Daryl Bissett, Jennifer Bissett, and Clete Snell, "Physical Agility Tests and Fitness Standards: Perceptions of Law Enforcement Officers," *Police Practice and Research* 13, no. 3 (2012): 208, https://doi.org/10.1080/15614263.2011.616142.
[10] Thomas T. Dillern et al., "Arresting a Struggling Subject; Does the Forthcoming Police Officers Physical Fitness Have an Impact on the Outcome?" *The Open Sports Sciences Journal* 7, no. 1 (2014): 2, https://doi.org/10.2174/1875399x01407010002.
[11] Pinizzotto, "The Deadly Mix," 9.
[12] Martin, "Psychological and Physical Problems," 158.
[13] Pinizzotto, "The Deadly Mix," 5.

[14] Kirsten Krahnstoever Davison and Leann Lipps Birch, "Predictors of Fat Stereotypes among 9-Year-Old Girls and Their Parents." *Obesity Research* 12, no. 1 (2004): 86, https://doi.org/10.1038/oby.2004.12; Mary B. Harris, Richard J. Harris, and Stephen Bochner, "Fat, Four-Eyed, and Female: Stereotypes of Obesity, Glasses, and Gender," *Journal of Applied Social Psychology* 12, no. 6 (1982): 503, https://doi.org/10.1111/j.1559-1816.1982.tb00882.x; Michelle R. Hebl and Todd F. Heatherton, "The Stigma of Obesity in Women: The Difference Is Black and White," *Personality and Social Psychology Bulletin* 24, no. 4 (1998): 417, https://doi.org/10.1177/0146167298244008; Marika Tiggemann and Esther D. Rothblum, "Gender Differences in Social Consequences of Perceived Overweight in the United States and Australia," *Sex Roles* 18 (1988): 75, https://doi.org/10.1007/bf00288018.
[15] Lenny R. Vartanian and Keri M. Silverstein, "Obesity as a Status Cue: Perceived Social Status and the Stereotypes of Obese Individuals," *Journal of Applied Social Psychology* 43 (2013): 319, https://doi.org/10.1111/jasp.12052.
[16] Rebecca M. Puhl and Chelsea A. Heuer, "The Stigma of Obesity: A Review and Update," *Obesity* 17, no. 5 (2009): 941, https://doi.org/10.1038/oby.2008.636.
[17] Ja K. Gu et al., "Associations between Psychological Distress and Body Mass Index among Law Enforcement Officers: The National Health Interview Survey 2004–2010," *Safety and Health at Work* 4, no. 1 (2013): 56, https://doi.org/10.5491/shaw.2013.4.1.52.
[18] International Association of Chiefs of Police, *Officer Safety and Wellness*, 2.
[19] President's Task Force, *Final Report*, 65.
[20] Ibid.
[21] Martin, "Psychological and Physical Problems," 158.
[22] Kristen MacKenzie-Shalders et al., "Law Enforcement Personnel Are Willing to Change, but Report Influencing Beliefs and Barriers to Optimized Dietary Intake." *BMC Public Health* 20, no. 1638 (2020): 1, https://doi.org/10.1186/s12889-020-09716-z.
[23] Sandra L Ramey, "Cardiovascular Disease Risk Factors and the Perception of General Health among Male Law Enforcement Officers: Encouraging Behavioral Change," *AAOHN Journal* 51, no. 5 (2003): 223, https://doi.org/10.1177/216507990305100504.
[24] Martin, "Psychological and Physical Problems," 162.
[25] US Department of Health and Human Services, *Physical Activity Guidelines for Americans,* 2nd edition (Washington, DC: U.S. Department of Health and Human Services, 2018), 8, https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf.
[26] Pinizzotto, "The Deadly Mix," 8.
[27] Law Enforcement Mental Health and Wellness Act of 2017, Pub. L. No: 115–113, 131 Stat. 2276 (2018), https://www.congress.gov/115/plaws/publ113/PLAW-115publ113.pdf.
[28] Mark A. Tully et al., "Brisk Walking, Fitness, and Cardiovascular Risk: A Randomized Controlled Trial in Primary Care," *Preventive Medicine* 41, no. 2 (2005): 622, https://doi.org/10.1016/j.ypmed.2004.11.030.
[29] Pedro F. Saint-Maurice et al., "Estimated Number of Deaths Prevented through Increased Physical Activity among US Adults," *JAMA Internal Medicine* 182, no. 3 (2022): 349, https://doi.org/10.1001/jamainternmed.2021.7755.