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Alec W. Kowalski  
*Hope College*

Sophia K. Rosiek  
*Hope College*

Adam H. Ibrahim  
*University of Tennessee, Knoxville*

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# Temporal Analysis of Former High School Athletes' Perceptions of Fitness Upon Entering College

Alec W. Kowalski<sup>1</sup>, Sophia K. Rosiek<sup>1</sup>, Adam H. Ibrahim<sup>2</sup>, Paula-Marie M. Ferrara, Ph.D.<sup>1</sup>

<sup>1</sup>Hope College, Holland, MI

<sup>2</sup>The University of Tennessee, Knoxville, Knoxville, TN



## Abstract

Researchers suggest that physical activity promotion may be necessary to preserve former athletes' long-term health and transition out of sport in retirement. Exploratory research has revealed that the fitness perceptions (a known contributor to exercise behavior) of former high school athletes (FHSA) who do not continue sports in college fluctuate over the course of their freshman year. To inform potential intervention efforts in this population, the purpose of this study was to explore why FHSA's perceptions of fitness vary over their freshman year of college. **Methods:** Participants completed eight online surveys over their first year of college, within which they explained their present perceptions of their fitness via an open-ended response. These responses were thematically analyzed by survey and a frequency analysis was conducted to determine how often each theme appeared over time. **Results:** Thirty-five participants completed the surveys (28 women, 18±0 years). Sixteen themes were constructed that occurred anywhere from 1-7 times (M±SD: 3±2) across the eight surveys. Themes incorporated, but were not limited to, factors including perceptions of body image, maintaining a consistent routine and effort toward exercise, comparison to past athleticism, and varying degrees of acceptance of fitness given barriers associated with their college and sports transition. **Conclusion:** Common themes mentioned by participants fluctuated over time. Certain themes (i.e., "body image considerations," "putting in effort to maintain exercise," "seeks to improve fitness") were constructed across multiple surveys, indicating these factors were more constant in contributing to participants' perceptions of fitness over time than others that occurred less frequently (i.e., "desires previous high school fitness," "physical ailments," "no change/continuing usual routine"). Understanding how these factors fluctuate and affect fitness perceptions over the course of FHSA's transition provides key information that will aid in creating more specific and effective behavioral interventions in the future for this population.

## Intro

Athletes' shift from high school athletics to collegiate life has abrupt impacts on an individual's physical and mental health (Helms & Moiseichik, 2018; Lubker & Etzel, 2007; Lyons et al., 2018). With physical health becoming a greater concern in the United States (Centers for Disease Control and Prevention, 2023), and the noticeable decline in the mental health of athletes (Lindberg 2021), greater attention is needed toward maintaining former athletes' mental and physical health post-sport.

Although long-term physical and mental health outcomes of retired athletes are largely understudied, it remains a necessity for researchers to address the immediate difficulties athletes face as they transition out of athletics. In particular, continued physical activity is suggested to improve the overall health of retiring athletes (Lubker & Etzel, 2007).

To maximize the effectiveness of future interventions, documenting temporal variations to target health behaviors is strongly recommended by behavioral psychologists (Dunton, 2017; Dunton & Atienza, 2009). Specifically, former athletes indicate that their perceptions of healthy physical activity thresholds change over time as they retired from sport and navigated the various transitions of post-sport life (Ferrara et al., 2021). Such perception shifts resulted from, among other factors, changes to their fitness. As such, investigating how former athletes perceive their fitness after retiring from sport, and how these perceptions change over time, may provide an indication of their exercise behavior and plans to remain healthy long-term. By extension, this knowledge could also influence the implementation of programs or strategies to facilitate healthy transitions for athletes out of sport.

## Purpose

The purpose of this study was to qualitatively identify the perceived fitness of former high school athletes (FHSA) as they retire from sport and transition to collegiate life.

## Methods

### Data Collection:

Participants were freshmen college students recruited at The University of Tennessee, Knoxville, who were at least 18 years old, devoted a minimum of 20 hours/week to athletics in high school, and were not playing at the varsity or club level in college at the time of the study. During the 2020-2021 school year (their first year of college), they completed eight online surveys disseminated via QuestionPro, within which they explained their present fitness perceptions in an open-ended response.

### Data Analysis:

Qualitative responses were thematically analyzed (Braun & Clark, 2008) by survey and a frequency analysis was conducted to determine how often each resulting theme appeared over time (i.e., by survey). Thematic structures underwent interobserver agreement (IOA; Initial = 93.6%), with additional discussions conducted to reach 100% consensus.

## Results

Table 1. Participant Demographics

	Men (n=7)	Women (n=28)	Total (N=35)
	(Mean ± SD)	(Mean ± SD)	(Mean ± SD)
Age (years)	18 ± 1	18 ± 0	18 ± 0
Race	Total (%)	Total (%)	Total (%)
	White	21 (75.0)	25 (71.4)
	African-American	3 (10.8)	4 (11.4)
	Asian	2 (7.1)	2 (5.8)
	Multi-Racial	2 (7.1)	4 (11.4)
Number of Sports Played in High School			
	One	7 (25.0)	8 (22.9)
	Two	13 (46.5)	15 (42.9)
	Three	7 (25.0)	9 (25.6)
	Four	1 (3.5)	3 (8.6)

Table 2. Distribution of Themes Over Time

	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5	Survey 6	Survey 7	Survey 8
1	1	2	5	4	5	6	5	7
2		5	6	5	6	7	6	8
3		6	7	7	7	12	7	15
4		7	8	8	8	13	9	16
			9	9	11	14	15	
				10	12	15		
					13			

## Results

Table 3. Comprehensive Themes with Representative Quotes

1	<b>Theme 1: Pleased with progress but seeks improvement</b> <i>"I am happy with what I have been doing and I love being active, however, I hope to see more improvement in my fitness. I can tell I am not as athletic as I was in high school."</i> (Survey 1, FHSA_015)
2	<b>Theme 2: Content with consistent routine, motivation, or progress</b> <i>"I am satisfied that I have the motivation to exercise 6 days a week living on my own. When you play a sport, all practices and games are mandatory so you have no choice if you are not feeling it that day. However, I have been able to surpass this negative mindset in order to maintain my health during college."</i> (Survey 1, FHSA_21)
3	<b>Theme 3: Disappointed in fitness or meets themselves where they are at; seeks to improve</b> <i>"I have definitely been in much better shape, but I do not feel completely out of shape. I am not happy nor displeased with my current overall perceived fitness."</i> (Survey 1, FHSA_3)
4	<b>Theme 4: Comparison to past athleticism; Desires previous high school fitness</b> <i>"Even though I look like I am in shape, I do not feel that way. I really wanted to get back into running and be able to maintain a good, stable routine that involves running. I want to be able to get back into the way I was when Cross Country had ended and improve from there."</i> (Survey 1, FHSA_2)
5	<b>Theme 5: Barriers to exercise</b> <i>"I have been lacking in motivation to work out recently. I need to get back to a routine, however, have been super stressed out with school work."</i> (Survey 3, FHSA_9)
6	<b>Theme 6: Body image considerations</b> <i>"I am only slightly satisfied because my body used to be way more toned in areas such as my stomach and legs."</i> (Survey 2, FHSA_1)
7	<b>Theme 7: The athlete understands or addresses the changes that need to occur to improve their fitness</b> <i>"I could definitely show some improvement in getting back to a regular schedule at the gym, especially with the new hours opening back up."</i> (Survey 2, FHSA_9)
8	<b>Theme 8: Putting in significant effort to exercise and maintain a consistent routine</b> <i>"I am very satisfied with the exercise that I participate in many days of each week and the effect that it has on my mind and body."</i> (Survey 3, FHSA_21)
9	<b>Theme 9: Acknowledges the life transition or accepts themselves where they are at</b> <i>"I am not thrilled with my perceived fitness, but I am not unsatisfied with it either. I know I have not been working out that often so I do not expect my perceived fitness to be great."</i> (Survey 4, FHSA_32)
10	<b>Theme 10: Extraneous or situational circumstances</b> <i>"I have not been as active due to contracting Covid-19"</i> (Survey 4, FHSA_30)
11	<b>Theme 11: The athlete accepts where they're at and does not show a commitment to change</b> <i>"it is just obvious that i haven't been working out"</i> (Survey 5, FHSA_9)
12	<b>Theme 12: Physical ailments</b> <i>"I haven't been able to stay in as good as shape as when I was at school due to illness and injury"</i> (Survey 6, FHSA_20)
13	<b>Theme 13: Fitness affected by school break</b> <i>"I haven't been working out now that I'm back home. I've been spending all of my time with family"</i> (Survey 5, FHSA_10)
14	<b>Theme 14: The athlete does not strive to make a change</b> <i>"there's been no exercising"</i> (Survey 6, FHSA_20)
15	<b>Theme 15: Putting in effort and improving</b> <i>"I have become stronger and feel more in shape now than I have in awhile."</i> (Survey 7, FHSA_19)
16	<b>Theme 16: No change in exercise/continuing usual routine</b> <i>"I haven't really changed in any aspects of exercise."</i> (Survey 8, FHSA_2)

## Discussion

Factors affecting athletes' perceived fitness fluctuated over time. This study demonstrates the evolving nature of athletes' transition after retirement and highlights certain factors playing more influential roles in affecting their fitness perceptions than others over time. It is not unreasonable to assume that such perceptions may associate with fluctuations in their exercise behavior, and by extension, long-term health post-sport. As such, further exploration into this relationship is warranted. Additionally, future research should apply these results to focus on the development of programs retiring athletes can benefit from to prepare themselves for the PA transition that occurs post-sport life, and to minimize adverse effects that can associate with the transition.