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A Content Analysis to Investigate the Evidence of National and State Health and Physical
Education Curriculum Standards in Illinois High Schools

by

Amber Lyn Stewart

A Dissertation submitted to the Education Faculty of Lindenwood University

In partial fulfillment of the requirements for the

Degree of

Doctor of Education

School of Education

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Education Curriculum Standards in Illinois High Schools

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This dissertation has been approved in partial fulfillment of the requirements for the

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at Lindenwood University by the School of Education

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work here at Lindenwood University and that I have not submitted it for any other college or university course or degree here or elsewhere.

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Abstract

Does curriculum in Illinois high schools have evidence of National and State Health and Physical Education Standards? This study consisted of a quantitative descriptive content analysis to examine the extent to which Illinois high school curriculum material included National and State physical education and health standards. The researcher utilized a rubric that was aligned to the three sets of standards: SHAPE America's National Physical Education Standards; the National Health Education Standards; and the Illinois Learning Standards for Physical Development and Health. The primary aim was to thoroughly examine how the standards are currently integrated. Research Question 1 (RQ1) asked, "What is the extent of alignment between national and state physical education standards in Illinois high schools, and how does it affect curriculum delivery?" This question is central to identifying inconsistencies and areas for improvement in our schools' approaches. Research Question 2 (RQ2) focused on integration: "How are health standards integrated into the physical education framework in Illinois high schools, and what challenges do educators face in this integration process?" This question aims to uncover the practical hurdles educators encounter daily. And Research Question 3 (RQ3) addresses the broader impact: "What implications do the findings have for future policy development and curriculum design, especially regarding the enhancement of physical education and health program effectiveness?" This will help pave the way for more effective educational policies. RQ1 findings are not statistically significant, because this study used descriptive - not inferential - methods. However, they are educationally significant, revealing meaningful differences in curriculum alignment that directly impact student learning and district-level decision-making. In RQ2, descriptive scores showed

large and consistent variance among districts. Some districts scored relatively high on the rubric – indicating strong alignment with the standards – while others scored much lower. Again, no inferential statistics were conducted, so no statistical significance, but the magnitude of the variance is what matters here and due to the differences being large enough, suggesting important inequalities in how health standards are implemented across districts. In RQ3 descriptive scores again show moderate levels of integration – with most curriculum documents landing in the middle of the rubric scale and very little evidence of full integration for all standards. This lack of alignment is educationally significant, because curriculum inconsistency affects program quality, instructional focus, and student access to high-quality physical education. Analysis has uncovered critical gaps between existing literature and the current implementation of standards in Illinois high schools. The misalignment underscores a pressing need to enhance integration of these standards, particularly in physical education and health curricula.

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Chapter One: Introduction

Introduction

Physical activity and health awareness have been a part of American education for over 150 years (Means, 1975; Walton-Fisette & Sutherland 2020, p. 275). However, teachers often haphazardly taught the curriculum with little direction (Chen, 2006, p. 120). Teachers and recreational instructors often based their instruction on teaching examples of previous teachers and instructors who had no fundamental quality framework (Means, 1975). While teaching the instructional basics of games and hygiene, lessons lacked key components of an integrated curriculum (Meredith, 1920).

The researcher's background included numerous experiences in various capacities – as a learner, teacher, parent, and graduate student. The researcher believed that health and physical education did not follow any prescribed guidelines and wanted to examine the recommended eight national health standards, five national K-12 physical education standards, and six state goals for health and physical education. Furthermore, the researcher observed and studied lessons taught in different schools in which she worked. The observations led the researcher to complete a study of Illinois school district practices to determine whether school districts in Illinois used standards to guide curriculum development and instruction.

Statement of the Problem

National and state standards guided instruction on what students should know and be able to do at each grade level (Society of Health and Physical Educators [SHAPE], 2014). School districts, administrators, and teachers knew standards existed; however, administrators did not require teachers to include standard-based guidelines in their

lessons. In addition, accountability measures did not exist; therefore, teachers did not have accountability measures or disciplinary repercussions when they did not adhere to national or state standard guidelines. Although the United States did not require that health and physical education curricula include specific standards, countless books, articles, and multiple researched-based references stressed the importance of the standards (Brener et al., 2013a; Centers for Disease Control and Prevention [CDCP], 2015; Kann et al., 2001, 2007; Nobiling & Lyde, 2015).

Rationale of the Study

Research regarding the incorporation of standards was very little at most. Most research conducted on the standards determined “why” standards existed and “why” instructors should use the recommended standards (Walton-Fisette & Sutherland, 2020). However, research regarding the “existence of” integrated and verifiable standards did not exist. Therefore, the researcher addressed existing gaps in the literature by examining the existence of national and state standards in the physical education and health curriculum taught in Illinois high schools. In addition, the study added to the gap in the existing body of knowledge regarding physical education and health curriculum in Illinois high schools by determining whether Illinois high school educators used national and state standards.

Illinois adopted standards “. . . developed using National Standards for Physical Education, National Health Education Standards, the 1985 State Goals for Physical Development and Health and other states’ standards and local outcomes from Illinois school districts” (Illinois State Board of Education [ISBE], 2016, para. 3). Illinois further developed the standards pursuant to Illinois Public Act 97-1102, wherein the Illinois

Enhance Physical Education (P.E., 2013) task force recommended expanding Physical Education programs across Illinois by combining a broader wellness plan and Health Curriculum (Illinois Enhance P.E. Task Force, 2013). In addition, the Illinois Enhance P.E. Task Force persistently suggested that schools include research-based suggestions, and they explained the importance of physical education and health curriculum standards (Illinois Enhance P.E. Task Force, 2013).

Previous researchers, Kann et al., 2001, denoted health education as an essential part of today's high school curriculum. Other researchers claimed, ". . . [S]chool is the most important place to educate children about health and to develop lifelong health promoting skills" (Kelder et al., 2014, p. 440). Additionally, Hobbs et al. (2015) posited that schools also provided a "wide reaching, cost-effective setting for promoting physical activity" (p. 150). Furthermore, Mersh and Fairclough (2010) reported that "schools have been identified as key settings for direct and indirect promotion of physical activity" (p. 30).

The current literature reported that national and state standards provided a framework for high school physical education and health education curriculum (Brener et al., 2013; CDC, 2015; Kann et al., 2001, 2007; Nobile & Lyde, 2015). According to the National Association of State Boards of Education (NASBE), "Revised Statute 160.514 requires the State Board of Education to develop academic standards and voluntary curriculum requires all schools to adopt or develop written curriculum that meets the standards" (NASBE, 2014, para. 2). Kann et al. (2007) reported seventy-two percent of all states are "required or encouraged to follow health education standards or guidelines based specifically on the National Health Education Standards" (p. 413). These national

standards provided a framework requiring every high school health student to comprehend and demonstrate proficiently upon graduation. Likewise, the physical education standards “should be considered a guideline for expectations of students in relation to student learning in physical education” (Dyson et al., 2011, p. 102).

Several entities, including the American Cancer Society, the American Diabetes Association, and the American Heart Association, endorsed schools' needs to align with the standards. These associations “encourage quality school health education within all schools in the United States through . . . utilizing school health education programs that adhere to the recommendations from the National Health Education Standards” (Mayer et al., 2011, p. 356).

Several studies confirmed that national and state standards are the recommended framework for high school physical education and health curriculums (Nobiling & Lyde, 2015; Kann et al., 2007). According to Nobiling and Lyde (2015), the landmark School Health Education Study (SHES) “reflected concern by professionals in the field that a gap existed between the goals of health education and actual practice in public schools” (p. 309). The suggested answer to closing the gap included “all school health education professionals should plan their teaching and learning experiences utilizing the National Health Education Standards (NHES)” (Nobiling & Lyde, 2015, p. 316). “It is the health educator’s responsibility . . . to adapt curriculum into an engaging and relatable set of learning opportunities that accommodate all students” (Nobiling & Lyde, 2015, p. 316).

The School Health Policies and Procedures Study (SHPPS) specifically “assessed use of school health education standards, guidelines, and objectives” (Kann et al., 2007, p. 411). The study discovered that “most districts (79.3%) had adopted a policy stating

that schools will follow national, state or district health education standards or guidelines [while] among all districts, 66.0% required or encouraged schools to follow health education standards or guidelines based specifically on the National Health Education Standards” (Kann et al., 2007, p. 413). The National Health Education Standards (NHES) also provided a solid foundation and framework for health educators to design appropriate curricula (Kann et al., 2007). However, little research linked National and Illinois State physical education and health education curriculum standards to curriculum design and instruction, specifically in Illinois high schools.

The researcher’s dissertation study added to the existing knowledge gap regarding whether physical education and health curriculum standards existed by providing research that cross-examined schools’ curricula with the national and state curriculum standards. The study’s researcher aimed to investigate whether evidence of national and state curriculum standards existed in various Illinois high schools’ physical education and health classroom curricula. The researcher believed studying physical education and health curriculum and examining the existence of National and State standards provided comprehensive research and tools others could replicate in future studies of national and state physical education and health education curriculum standards.

Purpose of the Dissertation

The researcher developed this dissertation study based on her experience as a health and physical education educator in a high school setting, recognizing that the health and physical education curriculum was an area of concern. The purpose of the quantitative study was to investigate evidence of national and state health and physical education standards in Illinois high schools. The researcher utilized a rubric for each

research question to compare the Illinois High School Association (IHSA) 7 state divisions (see Appendix A). The purpose of the study analysis is to allow Illinois education decision-makers to compare their included National Physical Education and Health curriculum standards with other schools in the State.

Research Questions

The researcher included three research questions, looking for evidence of National and State Physical Education and Health Standards within Illinois high schools. Each research question examines specific frameworks and whether there is evidence of the particular framework in the Illinois schools' curriculum and to what degree based on a rubric. The research questions for this content analysis study are as follows:

Research Question 1

What is the evidence of National Physical Education Standards within the Illinois high school physical education curriculum as measured by a numerically-scaled comparison to characteristics and standards represented by SHAPE America's National Standards and Grade-Level Outcomes framework?

Research Question 2

What is the evidence of National Health Education Standards within the Illinois high school health curriculum as measured by a numerically-scaled comparison to characteristics and standards represented by the Joint Committee on National Health Education Standards framework?

Research Question 3

What is the evidence of Illinois Learning Standards for Physical Development and Health within Illinois high school physical education curriculum as measured by a

numerically-scaled comparison to characteristics and standards represented by the Illinois Learning Standards for Physical Development and Health framework?

Methodology

The research study design analyzed rank and percentile quartiles, central tendency, measures of variability (or spread), and frequency using descriptive statistics. The researcher chose descriptive statistics to compare, summarize, and describe the characteristics and standards represented by the Illinois Learning Standards for Physical Development and Health framework. The researcher created three research questions that addressed specific frameworks for evidence of National Health and Physical Education Standards.

The researcher compared each characteristic and standard within each framework, looking for evidence of National Physical and Health Education Standards from research participants within Illinois high schools. (Loeb et al., 2017).

Study Design

The researcher included measures of central tendency, measures of variability (or spread), and frequency distribution for each standard. The central tendency measures included a description of the center of the data set, such as mean, median, and mode for each standard. The researcher also included variability measures to describe the dispersion of the data set which included the variance and standard deviation of the represented standards that were included compared to the non-represented standards that were not included in the Illinois Learning Standards for Physical Development and Health framework. Finally, the frequency measures of distribution were included to

describe the occurrence of data within the data set (count) for each standard that existed within the framework.

IRB Approval

The researcher obtained Institutional Research Board (IRB) approval obtained through the Lindenwood IRB.

Participant Sampling

The researcher pulled curriculum from a random sample of 30 schools from each of the Illinois High School Association (IHSA) 7 state divisions.

Methodology Procedures

The researcher examined various Illinois school districts' curriculum materials to determine if the national and local physical and health education curriculum content standards existed and to what extent. The researcher utilized the national physical education standards created by the Society of Health and Physical Educators (SHAPE) as a tool to inspect the schools' instruction materials. The Joint Committee on National Health Education Standards created the standards within the curriculum the Illinois State Board of Education (ISBE) set forth. Therefore, the researcher reviewed randomly selected school materials and examined the embedded standards in the school's physical education and health curriculum. Additionally, the researcher developed a Curriculum Review document and used it during data collection (see Appendix F-H).

Data Collection

The researcher obtained the curriculum from the websites of each school.

Instrument

The researcher created a numerically-scaled instrument as a rubric by assigning quantitative values for descriptive analysis. *Numerically-scaled* instruments use numerical values (2, 4, 6, 8), assigning quantitative values ranging from “none” to “full integration.” The numerically-scaled instrument used was created by the model previously approved by doctoral educators at Lindenwood University (Ruetters, 2013).

The researcher created an instrument utilizing the following scale:

2 points - None: No evidence of the standard in the curriculum.

4 points - Emerging: Evidence of standard; lacks description of outcome.

6 points - Implementation: Evidence of standard and outcome lacks a description of how the standard and outcome are applied.

8 points - Full Integration: Evidence of standard and outcome and includes a description of the application.

Reliability and Validity of the Instrument

The researcher ensured the reliability and validity of the frequency table tools by collecting accurate data from each participating Illinois high school. To ensure an accurate collection was gathered, the researcher created an instrument used for data collection, including a numerical interval scale (Ruetters, 2013) that rated evidence of whether the curriculums included specific standards. The Numerical Scale included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration

Evidence” of standard and outcome that included a description of the application earning eight points.

Data Analysis

The researcher created an Excel table that statically measured the frequency of each standard within each portion of the interval scale, allowing the researcher to provide a descriptive analysis of frequency within each of the four numerically scaled intervals denoting each standard. First, the researcher determined the frequency of each individual standard for each participating school. Next, the researcher determined the relative frequency for all participating schools combined for each standard. Finally, the researcher determined the Cumulative Relative Frequency for all the cumulative findings for all standards of all participating Illinois schools.

Definition of Terms

The Centers for Disease Control and Prevention (CDCP) is one of the major operating components of the Department of Health and Human Services which protects America from health, safety, and security threats (CDCP, 2015).

Coordinated School Health Program (CSHP) is a "framework for managing new and existing health-related programs and services in schools and the surrounding community" (Allensworth & Kolbe, as cited in Fetro & Carlson, 2010, p. 20).

Health Curriculum Analysis Tool (HECAT) is a tool that helps school districts, schools, and others conduct a clear, complete, and consistent analysis of health education curricula based on the National Health Education Standards and CDC’s Characteristics of an Effective Health Education Curriculum (CDCP, 2015).

Illinois High School Association (IHSA) is the organization that governs the equitable participation in interscholastic athletes and activities that enrich the educational experience (ihsa.org, 2013).

Illinois State Board of Education (ISBE) is a state organization that develops and supports schools, administrators, and teachers through professional development, standards, assessment, and certification (isbe.net, 2016).

National Health Education Standards (NHES) are standards developed to establish, promote, and support health-enhancing behaviors for students in all grade levels – from pre-Kindergarten through grade 12; it provides a framework for teachers, administrators, and policymakers in designing or selecting curricula, allocating instructional resources, and assessing student achievement and progress; and the standards provide students, families, and communities with concrete expectations for health education (CDCP, 2015).

National Association of State Boards of Education (NASBE) is a nonprofit 501(c) three association that represents state and territorial boards of education (nasbe.org, 2015).

School Health Education Study (SHES) is “a nation-wide study survey...conducted of health instructional practices in a random sample of public-school systems in the United States” (School Health Education Study, 1967, p. xiii).

School Health Index (SHI) is a school-level self-assessment and planning guide that enables schools to identify the strengths and weaknesses of school policies and programs for promoting health and safety, including school health education; develop an action plan for improving overall health education; and involve faculty, staff, parents,

students, and the community in improving school policies, programs, and services (CDCP, 2015).

Society of Health and Physical Educators (SHAPE America) advances professional practice and promotes research related to health and physical education, physical activity, dance, and sport (shapeamerica.org, 2016).

Limitations

This scoping examination provided a comprehensive review. However, some limitations existed in the study. One example included grade-level limitations. The researcher limited the curriculum to high school grades 9 through 12. Therefore, Illinois grade school and middle school research comparisons did not exist. As such, the findings may not be generalizable to schools in other states or educational contexts. The second limitation included a randomly selected sample size of 30 schools from each IHSA District, leaving nearly 650 districts needing review and a small sample size, thereby limiting generalizations of the research outcomes. The third limitation included curriculum choice. The study reviewed the physical education and health curriculum, leaving many other educational content areas without review. Finally, the analysis applied to Illinois school districts, leaving the other 49 states without research-based data to examine.

Summary

The intent of this study was to investigate the national and state health and physical education curriculum standards in Illinois high schools to find evidence of national and physical education curriculum standards. The researcher utilized a rubric for each research question to compare the Illinois High School Association (IHSA) 7 state

divisions (see Appendix A). The purpose of the study was to complete an analysis to allow Illinois education decision-makers to compare their included National Physical Education and Health curriculum standards with other schools in the State. Chapter One introduced the background, problem, rationale, and purpose of this study, highlighting the importance of national and state standards in shaping physical education and health curriculum. Despite decades of recognition that schools are a critical setting for developing lifelong health skills, evidence suggests that standards are inconsistently adopted and applied in Illinois high schools. This gap in practice provided the foundation for the present study, which sought to investigate the extent to which state and national standards are reflected in school curricula across the seven Illinois High School Association divisions. By outlining the research questions, methodology, and limitations, this chapter establishes the framework for the study and sets the stage for the detailed description of research methods presented in Chapter Three.

Chapter Two is a review of the historical framing literature on how health and physical education has developed in the United States leading to the development of national and state standards. Chapter Three provides details regarding research approval, research questions, methodology, including the population, as well as the method used to select the sample, instrument rubric used. The researcher identifies the national and state standards that was used to determine whether the standards were embedded in the selected schools' health and physical education curriculum. Chapter Four contains the results of the study, and a discussion of the results with implications and recommendations are in Chapter Five.

Chapter Two: The Literature Review

Chapter Two provides an extensive literature review, including a brief synopsis of the historical background of health and physical education in the United States. To complete the synopsis, the researcher located sources dating back as early as 1939 to explain the historical aspect fully. In addition to health and physical education in the 21st century and beyond, the authors cover content standards, their implications on curriculum development, teacher competency in teaching to the content standards, the necessity for health and physical education, and organizational influences.

The Early History of Health Education

Schools are the perfect setting for teaching kids about health and giving pupils a chance to practice new health-related behaviors and abilities (Kelder et al., 2014). The development of health education in public schools sustained many changes over the past two centuries. Veselak (1959, 2001) noted that “the health education phase of the school health program, which consists primarily of health and safety instruction, had its conception during the second half of the Nineteenth Century” (p. 370). Additionally, in 1842, one of the most well-known fathers of education, Horace Mann, was credited with indicating the need for health education in public schools (Turner, 1939, p. 9). During this time, physicians also advocated teaching basic physiology within public schools (Veselak, 1959, 2001). Between 1850 and 1880, textbooks created and discussed this basic physiology to students and labeled it *hygiene* education (Veselak, 1959, 2001). It was hygiene education that would later become a modern health education curriculum.

During the decade of 1880-1890, the actions of the Women's Christian Temperance Union (WCTU) served as the focal point of the first national drive for health

education in public schools (Means, 1975). The organization pushed for laws in 38 states that required teaching physiology and hygiene to all pupils and served as educators about the harmful effects of alcohol, tobacco, and narcotics (Means, 1975). Even today, the Women's Christian Temperance Union's (WCTU) Education Department's mission is to inform the public about the negative effects of alcohol and/or drug use and provide children with crucial knowledge on the risks of drug use (WCTU, 2022). In addition, WCTU unions around the nation have continued to sponsor education through coloring, poster, and essay contests (WCTU, 2022).

Later, in 1885, The Association for the Advancement of Physical Education (AAPE) was founded (SHAPE America, 2015) and “played a vital role in advancing the development of both physical education and health education programs in public schools throughout the country” (Grout, 1953, p. 14). The AAPE once believed that physical education was a field that included everything related to a person's physical well-being, such as physical activity, exercise, dance, sports, athletics, health education, health services, recreation, outdoor education, and safety (SHAPE America, 2022). In 1937, the National Education Association suggested that the AAPE merge into three divisions: health education, physical education, and recreation, which made health education an entity of the alliance (SHAPE America, 2022). The AAPE undertook many name changes throughout the early 1900s and formally became SHAPE America in 2014 (SHAPE America, 2015).

School Health Education in the Early 1900s

As the Twentieth Century approached, health education in the United States underwent many changes. Zeigler (2005) noted that during this time, the importance of a

universally necessary medical examination increased as the scope of school hygiene expanded. Zeigler (2005) said, “Leaders were urged to conceive of school health education as including three major divisions: health services, health instruction, and healthful school living” (p. 42). Means (1975) noted that changes in health education occurred due to changes in teaching philosophy, advances in medicine, historical wars, and political issues, as well as increased knowledge of how children develop, expert leadership, initiatives by governmental, nonprofit and volunteer organizations, colleges and universities, and financial assistance from philanthropic organizations and private and commercial entities are all factors. One such positive improvement was the formation of the American Association for the Study and Prevention of Infant Mortality in 1913. According to Grout(1953), the association “made significant contributions to the advancement of health education in schools through the educational programs it conducted for the better care of children” (p. 15).

While in 1904, the National Association for the Study and Prevention of Tuberculosis was founded and would later become the American Lung Association (American Lung Association, 2015, para. 3). In 1915, the organization was credited with initiating the “Modern Health Crusade,” sought initially to involve children in the Easter Seal Campaign and involved children following a list of health rules (Rector and Visitors of University of Virginia, 2007) that were “sought to arouse children’s interest in health by introducing elements of play, chivalry, and competition into the study and practice of hygiene” (Rector and Visitors of University of Virginia, 2007, para. 7). By 1919, “there were over 3 million “crusaders” in the United States [and] two years later, the National Education Association recommended the adoption of crusade-like health education

system in every elementary school in the country” (Rector and Visitors of University of Virginia, 2007, para. 9).

All the while, the Nation was involved in World War I (WWI). During this time, John Hopkins University announced a grant that established the John Hopkins School of Hygiene and Public Health (John Hopkins School of Public Health, n.d., para. 16). The school establishment was a revolution in the health education field, making it the “first institution of its kind worldwide” (John Hopkins School of Hygiene and Public Health, n.d., para. 13). The school had an “emphasis on bio-medical and laboratory sciences and on administrative and organizational methods for public health services” (Evans, 2009, p. 447). The school had a long history of directly influencing health education in the United States.

Soon after WWI, Dr. Florence Meredith noted that agencies needed many changes in health education. She stated, “The school is a place for education, and we cannot much longer disregard the fact that health is something toward which most people must be educated” (Meredith, 1920, p. 686). Therefore Meredith (1920) noted that agencies needed many changes in health education. Every agency, including schools and educational institutions that belonged to the public, would need to be considered of prime importance (Meredith, 1920). Lucas suggested that soon after the war ended, the American Child Health Organization created and coined the phrase “health education,” a new name for the previous term classified as “hygiene” education (as cited in Veselak, 1958, 2001). From 1922 through 1923, health education developed plans, objectives, curriculum content, materials, teacher training requirements and other essentials for an adequate program of school health education (Conrad, 1935, p. 81). Not until 1943 did

the American Public Health Association (APHA) set “qualification standards for health educators” (American Public Health Association, 2015). According to Veselak (1958, 2001), the “qualifications helped to elevate the quality of health instruction that was being conducted in public schools as well as communities” (p. 370).

During the first quarter of the 20th century, health education grew due to draft statistics of World War I (Zeigler, 2005, p. 40). Furthermore, as World War II loomed upon the Nation in 1939, the physical findings of these draftees were negative. The need to improve the health of these draftees and future draftees led to “a stimulating effect on the development of school health education programs” (Veselak, 1958, 2001, p. 370). In 1942, the publication, *Health in Schools*, a report by the American Association of Secondary School Administrators, created widespread attention to school health (Mahoney & Olson, 1994). As WWII ended, the government needed to educate and offer educational opportunities to those veterans returning home. In 1944 the U.S. Congress enacted the GI Bill to enact different educational policies in the United States (U.S. Department of Veterans Affairs, 2013). The Bill offered veterans the opportunity to attend “colleges and universities, a privilege then reserved for the rich” (U.S. Department of Veterans Affairs, 2013). Another powerful educational opportunity arose in the United States with the passing of the Fulbright Act of 1946.

Senator J. William Fulbright introduced a bill in the United States Congress that called for the use of surplus war property to fund the promotion of international goodwill through the exchange of students in the fields of education, culture, and science. (Fulbright Association, n.d.)

A National Conference on Undergraduate Professional Preparation in Health Education, Physical Education, and Recreation was held in 1948 to develop “recommended programs of professional preparation for general education teachers, teachers, and leaders in health education, physical education and recreation” (Kilander, 1949, para. 3). The suggested standards would serve as “guides for institutions engaged in the professional preparation of personnel in areas such as staff, faculties and equipment, source materials, selective recruitment and guidance, curricula, including student teaching and teaching load” (Kilander 1949, para. 3). Three years later in 1951, Kilander discovered:

thirty-three states required health education in the secondary level [and] of these thirty-three states, twenty-seven required health education as a result of a state law and six required it as a result of a regulation by the State Department of Education. (as cited in Veselak, 1959, 2001, p. 371.)

Kilander went on to explain “of the fifteen states without laws or regulations regarding health education, only four reported that health instruction was available in no school either as a required or an elective subject” (as cited in Veselak, 1959, 2001, p. 371). As the country continued to grow, President Eisenhower brought together professionals from education and medicine to draft goals specific to school health during the White House Conference in 1955 (Means, 1975). However, the health curriculum continued to be the primary focus with a statement from the Education Policies Commission and the States, who endorsed health, safety, and physical education as essential elements of school health (Mahoney & Olson, 1994; Means, 1975).

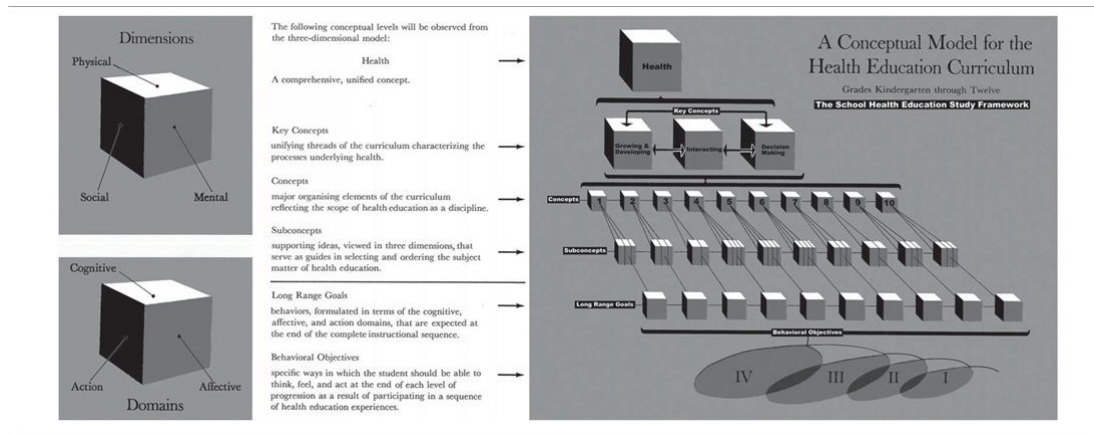
School Health Education of the 1960s

The 1960s were known for significant breakthroughs in health education research. The Bronfman School Health Education Study (SHES) headed by Dr. Elena M. Sliepcevich began in 1961 at the National Education Association headquarters in Washington D.C. (Southern Illinois University, 2016; Johns, 1962). Southern Illinois University (2016) claimed SHES as “the most comprehensive and largest curriculum development project in the history of the profession” (para. 1). The study examined “. . . 135 public school systems, in 38 states, and over 1100 elementary schools and 350 secondary schools” (McDermott et al., 2011, p. 330), and sought “. . . to determine what U.S. children in grades 6, 9 and 12 knew about their health and health habits and to assess the status of health education in schools” (Mayer et al., 2011, p. 351.) The two-year investigation of public-school health education occurred with substantial grants from the Samuel F. Bronfman Foundation and conducted by the American Association for Health, Physical Education, and Recreation (Johns, 1962). The primary purpose behind this monumental study was to “improve the teaching of health education U.S. public schools” (Johns, 1962, p. 495). Results of the study “led to a one-word description of the state of health education in public schools – “appalling” (McDermott et al., 2011, p. 330). SHES proved that schools across the Nation were not following any designated health curriculum and determined that a structured public school health curriculum needed to be designed (Mayer et al., 2011). McDermott et al. (2011) noted, “the SHES was the first time that research was undertaken to gain a “national picture” of the status of health education in schools” (p. 334). In 1964, Dr. Sliepcevich and a team of developers designed specific health curricula to set the stage for a formal framework of health

education (Mayer et al., 2011; Nobiling & Lyde, 2015). “The framework was the first formalized model for school health education for grades k-12, with specific recommendations at each grade level” (Mayer et al., 2011, p. 351). This framework, later published in 1967, *Health Education: A Conceptual Approach to Curriculum Design* and contains the Conceptual Model for Health Education Curriculum (CMHEC). MHEC “utilized a conceptual structure to delineate a scope and sequence for K-12 health education” (Nobiling & Lyde, 2015, p. 310). Figure 1 displays a visual of the SHES Conceptual Model for Health Education Curriculum.

Figure 1. SHES Conceptual Model for the Health Education Curriculum

SHES Conceptual Model for the Health Education Curriculum



Note. SHES Conceptual Model for the Health Education Curriculum. Reproduced with permission from “From the School Health Education Study to the National Health Education Standards: Concepts Endure,” by B. D. Nobiling & A. R. Lyde (2015), *Journal of School Health*, 85, p. 311. Copyright 2015 by American School Health Association.

Leaders recognized the *Health Education: A Conceptual Approach to Curriculum Design* as an achievement to influence all academic disciplines and their efforts in curriculum planning (Nobiling & Lyde, 2015, p. 310). According to Nobiling

and Lyde (2015), “. . . the SHES provide[d] perspective on modern school health instruction because of theoretical and practical implications evident in current curriculum framework” (p. 310).

School Health Education of the 1970s

On February 15, 1971, President Richard Nixon issued a Health Message to Congress stating, “Most of our current efforts in this area [health education] are fragmented and haphazard . . . There is no national instrument, no central force to stimulate and coordinate a comprehensive health education program” (President’s Committee on Health Education, 1973, p. 2). Later in September 1971, President Nixon “approved the appointment of the first presidential commission ever tasked with examining the situation of health education in the United States, by signing an executive order.” (Guinta & Allegrante, 1992). The committee reported the findings to President Nixon in September 1973, wherein individuals on the committee recommended the government play a direct role to “stimulate, coordinate, and evaluate health education programs” (President’s Committee on Health Education, 1973, p. 28). The committee legitimized a national focus on health education and an enhanced role for the government in creating model programs and allocating funding for their implementation (Johnson & Breckon, 2007). Most notably, the report “recommended . . . [the] creation of a National Center for Health Education, which occurred in 1975” (Johnson & Breckon, 2007, p. 3). “The Center successfully pushed for . . . comprehensive school health education programs” (Johnson & Breckon, 2007, p. 3). In 1978, the National Center for Health Education entered a 14-month contract with the Bureau of Health Education of the Center for Disease Control to “gain . . . attention, commitment, and support for school health

education throughout the United States” (Association for the Advancement of Health Education, 1978, p. 48). Guinta and Allegrante (1992) analyzed the President’s Committee on Health Education and found that the report greatly assisted in establishing the scene and providing the required historical context for . . . policies and initiatives in health promotion and disease prevention. A direct outcome of SHES was the labored efforts of the National Center for Health Education (McDermott et al., 2011).

In 1978, the U.S. government established the Office of Comprehensive School Health Curriculum as a part of the U.S. Department of Education. The department designed the curriculum to improve the initiatives and adopt the curricula discussed in the SHES and The Report of the President’s Committee on Health Education (Kronenfeld, 2000; Mayer et al., 2011). However, the Reagan Administration dissolved the office (Cortese, 1993).

In 1979, the Surgeon General, Julius Richmond, issued the report entitled, “Healthy People: The Surgeon General’s Report on Health Promotion and Disease Prevention,” wherein “it represented an emerging consensus in the health community that the Nation’s health policy had to be dramatically recast . . . [and] . . . established for the first time ambitious, quantifiable objectives for improving the Nation’s health, to be achieved by 1990” (U.S. Department of Health and Human Services, 2025, para. 1-2). The report stated, “more than 40 million children and youth spend most of their day at school . . . [and] . . . no group is more able than school teachers to provide information and instruction that can help young people make decisions that promote good health” (United States Surgeon General, 1979, p. 11-5). According to the Surgeon General (1979) report:

Comprehensive school health education activities can: enhance a child's skills and personal decision-making; promote understanding of the concepts of health and the causes of disease; and foster one's knowledge about how one's health is affected by personal decisions related to smoking, alcohol and drug use, diet, exercise, and sexual activity. (pp. 11-5)

School Health Education of the 1980s

In the early 1980s, the Center for Disease Control, in collaboration with the Office of Disease Prevention and Health Promotion (ODPHP), conducted The School Health Education Study (SHES; (Mayer et al., 2011). SHES occurred at the request of Development and Evaluation Associates, Inc. (DEA) to review the formally conducted School Health Curriculum Project (SHCP; Gunn et al., 1985, p. 301). "DEA recommended a comprehensive evaluation plan...to obtain a full understanding of SHCP . . . and to compare SHCP with other health education approaches" (Gunn et al., 1985, p. 301). "The SHES provided clear evidence that health education programs in the school setting . . . result in improved knowledge, attitudes and behaviors" (Mayer et al., 2011, p. 352).

In the late 1980s, the Center for Disease Control conducted The National Adolescent Student Health Survey (NASHS) to give an overview of the health-related knowledge, attitudes, and practices among adolescents in the country (Centers for Disease Control and Prevention [CDCP; 2017, 2001). Since the SHES of the 1960s, this was the first national survey of its kind. (Mayer et al., 2011). As a result, the CDC reported, "U.S. schools may be able to contribute substantially to reducing morbidity and mortality from . . . preventable causes by assisting children and adolescents in developing

knowledge, beliefs, and skills necessary to avoid risk behaviors” (CDCP [cdc.gov], 2001, para. 19).

In 1981, the Secretary of Education determined the quality of education in the United States (PBS 9 Network, 2002). The National Commission on Excellence in Education (NCEE) produced a report in 1983 as a result of the Secretary of Education’s research, titled "A Nation at Risk" (PBS 9 Network, 2002). The NCEE examined the standards of instruction and learning in public and private institutions of higher learning, compared them to those of other developed countries, looked at the correlation between high school performance and college admission standards, identified educational initiatives that were particularly successful in helping students succeed in college, and evaluated the extent to which significant social and educational changes over the past century have affected these institutions (Ronald Reagan Presidential Foundation and Library, 2023). The report stated that competitors worldwide were catching up to us in terms of commerce, industry, science, and technical innovation, which were previously undisputed. (National Commission on Excellence in Education National Commission on Excellence in Education, 1983). With the NCEE news, the nation needed education reform which arrived by way of a “national movement for educational standards” (PBS 9 Network, 2002, para. 3). President George H.W. Bush answered the call for action in 1989 when he “convened the nation’s governors in Charlottesville, Virginia, for the first-ever National Education Summit with the intention of formulating national educational goals" (PBS 9 Network, 2002, para. 9). But having the federal government oversee the development of core curriculum requirements was an absurd idea (PBS 9 Network, 2002).

School Health Education of the 1990s

Cortese (1993) noted that educators expressed fervent support for all-encompassing school health. Mayer et al. (2011) added, “the 1990s were . . . defined by strong support for school health education, with major studies confirming the benefits of providing comprehensive health education to youth” (p. 352). In addition, the Joint Committee on National Health Education Standards (2007) claimed: “in the early 1990s, education leaders across the country agreed that schools needed new strategies, tools, and resources to support the highest levels of achievement by students in the United States” (p. 3).

According to Marx et al. (2007), “School health education, an important curricular component of . . . school health . . . [was] designed specifically to help students develop the knowledge, skills, motivation, and support they need to respond to situations and pressures [and] engage in behaviors . . . that [would] compromise their well-being” (p. 158). In the early 1990s, the CDC determined the need to collect data concerning risk youth behaviors that “contribute[d] substantially to the leading causes of morbidity and mortality among U.S. youth and young adults” (CDCP, 2013, p. 2). To answer the call, the Youth Risk Behavior Surveillance System (YRBSS), created by the CDC, tracked six types of high-risk health behaviors (CDCP, 2013). The six health topics covered were prevention of alcohol and other drug use, family and interpersonal connections, consumer and personal health, public and environmental health, nutrition and physical health, and prevention of accidental and intentional injuries (Reusser & Robinson, 1996). According to the CDC (2013), “as the YRBSS was being developed, [the] CDC decided that the system should focus almost exclusively on health-risk

behaviors rather than on the determinants of these behaviors (e.g., knowledge, attitudes, beliefs, and skills)” (p. 2). The idea behind the YRBSS was to allow “States and local education agencies . . . to use the . . . data, the risk behaviors identified by CDC and assessment outcomes to develop curricula that [would] serve the youth of their communities” (Reusser & Robinson, 1996, p. 532).

In 1992, the State Collaborative on Assessment and Student Standards (SCASS) developed the Health Education Assessment Project wherein thirty states combined efforts to pool their resources, finances, and experts (Marx et al., 2007; Reusser & Robinson, 1996) to ensure numerous ready-to-use evaluation components for a complete K–12 program (Marx et al., 2007). The assessment techniques would be identified as powerful tools for coordinating health curriculum, instruction, and assessment (Reusser & Robinson, 1996). SCASS declared the project's main goal was to create and test a range of assessment tools that might be used in extensive evaluations of health education. to establish a student's standing in relation to the standards (Reusser & Robinson, 1996). A secondary effort of the project was to increase teachers' ability to coordinate curriculum, instruction, and evaluation to increase student health literacy through better health education (Marx et al., 2007). The initiative produced a large number of item banks, portfolio guides, professional development resources, and web-based evaluation systems (Marx et al., 2007).

In 1994, the CDC conducted the first School Health Policies and Program Study (SHPPS) (Kann et al., 2001). The School Health Program Policy and Program Study (SHPPS) was the first nationwide study to evaluate health policies and programs at the state, district, school, and classroom levels (Kolbe, L. J., 2001). Health education,

physical education, health services, food services, and health policies prohibiting the use of cigarettes, alcohol, other drugs, and violence were all evaluated by SHPPS in 1994. (Kolby, 2001). In addition, SHPPS 1994 assessed policies and programs for kindergarten through high school at the state and district level and evaluated policies and programs for middle/junior through high school at the school and classroom level (Kann et al., 2001; Kolbe, 2001). Kolbe (2001) noted that six years later, the CDC conducted SHPPS 2000 with more extensive breadth and content than the 1994 study. “SHPPS 2000 assessed health education at the state district school and classroom levels...[with] data collected from all 50 states plus the District of Columbia” (Kann et al., 2001, p. 267). Results of SHPSS 2000 showed that “more than 90% of states either require or recommend that schools and districts follow health education standards or guidelines” (Marx et al., 2007, p. 161).

The National Center for Chronic Disease Prevention and Health Promotion's Division of Adolescent and School Health (DASH) implemented SHPSS 2006 under contracted terms with Macro International, Inc. (Kyle et al., 2007). SHPPS 2006 was updated to use “...questionnaire modules at the district and school levels...computer-assisted telephone interviewing (CATI) technology at the state and district levels, and the inclusion of new questions on crisis preparedness and response, physical school environment, and school climate” (Kyle et al., 2007, p. 399). Results of SHPPS 2006 proved “Nationwide, 78.4% of states had adopted goals, objectives, or expected outcomes for high school health education...[and] similarly, among districts nationwide that provide[d] high school instruction, 82.9% had adopted goals, objectives, or expected outcomes for high school health education” (Kann et al., 2007, p. 416). Additionally,

Kann et al. (2007) noted “more than two-thirds of states and more than three fourths of districts had adopted goals and objectives for high school health education that addressed the knowledge and skills articulated in the National Health Education Standards” (p. 416). Kann et al. (2007) claimed, “SHPPS 2006 elicited both hope and concern about the state of school health education nationwide” (p. 432). According to Kann et al. (2007), “SHPPS 2006 [was] a new and important resource for school and public health practitioners, scientists, advocates, policymakers, and all those who care about the health and safety of youth and their ability to succeed academically and socially” (p. 397). Kann et al. (2007) also noted, “it [was] critical for public health and education officials to work in partnership with schools and communities to enable schools to implement effective school health programs and help youth develop and maintain healthy lifestyles” (p. 397). According to research, the SHPPS survey's name was changed from the School Health Policies and Program Study to the School Health Policies and Practices Study with the 2012 survey (healthypeople.gov, 2016). Usage of the SHPPS Study in 2012 was only at the state and district levels and the school and classroom levels in 2014 (CDCP, 2015).

The CDC had identified several areas of concern through the SHPPS 2014 study (2015), including that the nation was behind in meeting the health education goals denoted in Healthy People 2020 (CDCP, 2015). In fact, since the 2006 baseline study, schools have not increased or changed significantly in meeting the health education objectives (CDCP, 2015). The percentage of schools with Individualized Education Programs or 504 Plans that include health education has significantly decreased since 2006, according to SHPPS 2014 (CDCP, 2015). According to the SHPPS 2016 study (2017), the number of schools that had adopted the use of National Health Standards was

only 63% while the use of any national, state, or district health education standards was 81.7% (CDCP, 2017). The 2016 study was the last SHPPS study conducted by the CDC.

On January 25, 1994, Congress enacted the Goals 2000: Educate America Act to provide a comprehensive framework for education reform that would enhance instruction and learning (One Hundred Third Congress of the United States of America, 1994).

Under the new act, the “U.S. Department of Education funded the creation of model standards in the arts, civics and government, economics, English, foreign languages, geography, history and science” (Joint Committee on National Health Education Standards, 2007, p. 3). The National Education Goals, Section 102(3)(b)(iv) claimed: “all students will have access to physical education and health education to ensure they are healthy and fit” (One Hundred Third Congress of the United States of America, 1994, p. 1804-7). Congress also suggested that educators teach drug and alcohol education as a fundamental component of a sequenced, all-encompassing health education program (One Hundred-Third Congress of the United States of America, 1994). Reusser and Robinson (1996) pointed out, “Educational excellence in the traditional content areas...may not be sufficient to ensure the competitiveness of the country... [based on] a myriad of health concerns that threaten our nation” (p. 529). “If a child is to master other subjects in school, that child must be healthy [and] there is a sufficient body of evidence which suggests that the absence of good health reduces academic performance” (p. 529).

In 1993, the Joint Committee on National Health Education, composed of the American Association for Health Education, American School Health Association, American Public Health Association, and the American Cancer Society, answered the call and convened “in response to several model standards being developed for other

areas of education by educational leaders across the United States in the early 1900's" (CDCP, 2016, para. 2). The Joint Committee on National Health Education Standards would not publish the first National Health Education Standards (NHES) until 1995. The standards were to "serve as a foundation for health curriculum development, health instruction, and assessment of student performance" (Reusser & Robinson, 1996, p. 529). NHES created a "framework for teachers, administrators, and policymakers in designing or selecting curricula, allocating instructional resources, and assessing student achievement and progress" (Office of Disease Prevention and Health Promotion, 2016, para. 1). Furthermore, ". . . the NHES were designed to support schools in meeting the essential goal of helping students acquire the knowledge and skills to promote personal, family, and community health (Joint Committee on National Health Education, 2007, p. 3).

School Health Education of the 2000s

On January 8, 2002, President George W. Bush signed into law the No Child Left Behind Act, which amended the Elementary and Secondary Education Act of 1965. Districts were required to follow strong standards for what every child should know and had learned in reading and math in grades 3 through 8 and would be measured for every child, every year (The White House, 2002). According to Auld et al. (2020), as public-school principals and administrators struggled to satisfy the adequate yearly progress standards for core topics, which were necessary to keep federal funding, academic subjects that were not considered core were at risk of being removed. If a school did not meet adequate yearly progress for a fourth consecutive year, the school faced governmental takeover; however, those schools that passed adequate yearly progress

were rewarded (The White House, 2002). No Child Left Behind legislation was focused on testing the essential topics of reading, science, and arithmetic, which led to the exclusion of other disciplines, like health education (Auld et al., 2020).

The original Whole School, Whole Community, Whole Child (WSCC) Model was published in 2013. The WSCC Model was based on the 1987 Comprehensive School Health Program, which linked seven elements of the school health program with the health education program, giving students the chance to learn and display ever-more sophisticated health-related knowledge, attitudes, abilities, and behaviors (Allensworth & Kolbe, 1987).

The Early History of Physical Education

Zeigler (2005) noted, “the years from 1880 to 1890 undoubtedly form one of the most important decades in the history of physical education in the United States” (p. 38). According to Hoffman (2013), “By the 1880s, a climate of intense interest in exercise and sport developed in the United States” (p. 177). The increased interest in sports and exercise led to physical education becoming a profession (Hoffman, 2013). “Some of the most famous [teacher training programs] were the “Sanatory Gymnasium (opened near Harvard University in 1881 by Dudley Sargent and renamed the Normal School of Physical Training in 1894), the Harvard Summer School of Physical Education, and the Boston Normal School of Gymnastics” (Hoffman, 2013, p. 177). “In 1885, white leaders founded the American Association for the Advancement of Physical Education (AAAPE) as a platform for discussion and reform; the organization, known today as the American Alliance for Health, Physical Education, Recreation and Dance” (Verbrugge, 2012, p. 15). The organization began with only “60 people who wanted to have an organization

that would promote the new profession” (Hoffman, 2013, p. 177). Later, in 1895, physical education gained official recognition as a branch of the National Education Association, which was the largest organization in the nation for white teachers. (Verbrugge, 2012). Dixon et al. (1957) pointed out in American physical education during the 1800s, the focus was mostly on health and the physical benefits of physical activity. In one way or another, calisthenics played a significant role in the programs.

Zeigler (2005) stated that during the first quarter of the 20th century the connection between physical education, health, and the educational system as a whole was reinforced . . . additionally, many states enacted laws mandating physical education in the curriculum. There were only three states that mandated physical education for school-age children prior to 1915; that number rose to 28 shortly after World War I; by 1929, there were 46 states (Verbrugge, 2012). Verbrugge (2012) noted concerns over the nation's lack of vitality were sparked by the physical deficiencies of many military draftees, which led to the establishment of the National Physical Education Service (NPES) and several conferences on health and fitness.. The NPES was successful in getting federal and state laws requiring physical education in public schools passed in the 1920s. (Verbrugge, 2012). The 1930s Great Depression, World War II, the Korean and Vietnam Wars, as well as the ensuing Cold War and several international conflicts, have all had a significant social impact on physical education, health education, and sports. (Zeigler, 2005).

Physical Education of the 1950s and 60s

The NAACP, or National Association for the Advancement of Colored People, actively opposed laws that separated public schools, based on race in the early 1950s

(National Archives, 2021). Following the historic 1954 decision in *Brown v. Board of Education of Topeka*, the Supreme Court ordered school districts to integrate all of their dual programs, including physical education and athletics (Verbrugge, 2012).

In 1956, President Dwight D. Eisenhower called for a national conference on the fitness of the nation's youth (American Alliance for Health, Physical Education, and Recreation [AAHPER], 1976). During the national conference, "President Eisenhower was alerted to the poor physical record of our young people through the research studies of Hans Kraus" (AAHPER, 1976, p. 9). According to AAHPER (1976), the conference determined "specific steps which the physical education profession might take to improve the level of physical fitness of the nation's youth" (p. 9). Later in 1957, an establishment of national norms, which included a seven-item test battery, was created (AAHPER, 1976). The seven tests included pull-up or flexed arm hang, sit-up, shuttle run, standing long jump, 50-yard dash, 600-yard run, and softball toss, which was later eliminated (AAHPER, 1976). "In 1965 the national norms were updated with another national study under a grant from the United States Office of Education, and while the results showed improvement, the level of physical performance was not encouragingly high" (AAHPER, 1976, p. 7). In 1976, the revision of the AAHPER Youth Fitness Test Manual directed physical educators to "determine the performance levels of those who participate in their programs and, where appropriate, to work toward higher levels of achievement" (AAHPER, 1976, p. 7). "The AAHPER Youth Fitness Test [was] the first ever to be developed by the physical education profession for which national norms were determined" (AAHPER, 1976, p. 7). AAHPER urged students to do well on the fitness testing and offered incentives for achievement awards (AAHPER, 1976). "There [were]

achievement award certificates for boys and girls who attain[ed] the 50th percentile on all items on the test” and “an embossed gold seal . . . for those boys and girls who attain[ed] the 80th percentile on all test items” (AAHPER, 1976, p. 11). “The Presidential Physical Fitness Award, established by President Lyndon B. Johnson in 1966, honor[ed] students who demonstrate[d] exceptional physical achievement [and] all boys and girls who score[d] at or above the 85th percentile on all six items of the Youth Fitness Test [were] eligible” (AAHPER, 1976, p. 12). Dixon et al. (1957) described physical education as:

emerged, its chief characteristic being its wide variety in content, standard and method. In its origins, it learned from Europe, now Europe, and most of the rest of the world, learns from America; America continues to absorb and innovate, with both typical enthusiasm and energy. (p. 173)

Federal funding for physical education and health programs was available for the first time through the passing of the Elementary and Secondary Education (ESEA of 1965; AAHPER, 1994, p. 87).

Physical Education of the 1970s

Title IX of the Educational Amendments Act of 1972 required gender equity. Therefore, many schools replaced the standard boys-only and girls-only classes with coed gym classes (Verbrugge, 2012). Section 504 of the Rehabilitation Act of 1973 mandated that schools receiving federal assistance provide individuals with disabilities equal opportunities for comparable participation in physical education and athletics (Verbrugge, 2012, p. 4). According to AAHPER (1976), there had been no significant overall improvement in the fitness of youth in the past decade, and the organization called upon “physical educators throughout the country [to] dedicate themselves to

reemphasis of the physical fitness component as an integral and significant part of their physical education programs” (p. 7).

Physical Education of the 1980s and Beyond

On February 9, 2010, “First Lady Michelle Obama unveiled her “Let’s Move” campaign against childhood obesity . . .” (Wojcicki & Heyman, 2010, p. 1457). “The program’s main . . . strategies [were] to empower . . . parents . . . by revamping the nutritional labeling of products by the U.S. Department of Agriculture, improving the . . . standards of the National School Lunch Program, increasing children’s opportunities for physical activity, and improving access to high-quality foods,” (Wojcicki & Heyman, 2010, p. 1457). The physical activity section of the campaign aimed at students getting 60 minutes of physical activity each day (Corbin, Welk, Richardson, Vowell, Lambdin & Wikgren, 2014; SHAPEamerica.org, 2018). Wojcicki and Heyman (2010) noted, “The Let’s Move campaign may well help to improve the health of Americans through its multi-level and comprehensive approach” (p. 1459). However, in January 2017, the campaign was dismissed after the conclusion of the Obama Administration.

Organizational Influence – AAHPERD – now known as SHAPE America

“The Association for the Advancement of Physical Education (now AAHPERD) was founded in 1885, with the word ‘American’ being added the next year” (Zeigler, 2002, p. 38). The American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) was the first organization to advocate and progress teacher education in the physical education field (Zeigler, p. 38). “Since being founded in 1885, the organization has defined excellence in physical education, and . . . National Standards for K-12 Physical Education serve as the foundation for well-designed physical education

programs across the country” (SHAPE America, 2017, para. 1). SHAPE “provides programs and resources to support health and physical educators at every level, and work[s] to make a positive impact on school health and physical education through . . . state and national advocacy efforts” (SHAPE America, 2017, para. 2).

Organizational Influence – NASPE

National Association for Sport and Physical Education. (2004). *Moving into the future:*

National standards for physical education (2nd ed.). Reston, VA: Author.

Standards

The United States Department of Education defined standards as “. . . what all students should know and be able to do” (1994, p. 3). “With the passage of Goals 2000: Educate America Act in March 1994, education standards were written into federal law” (NASPE, 2004, p. 1). Goals 2000, Title I of Public Law 103-227, Section 3 declared, “All students will have access to physical education and health education to ensure they are healthy and fit” (Office of the Secretary of Education, 1994, p. 4).

National Physical Education Standards (set by SHAPE)

In the 1995 development of the NASPE 7 standards and 2004 NASPE 2nd ed., six standards took place. “In 2011, the board of directors of the National Association for Sport and Physical Education (NASPE) – one of AAHPERD’s five national associations appointed a Curriculum Framework Task Force and charged it with revising the National Standards for K-12 Physical Education” (SHAPE America, 2014, p. v). The Curriculum Framework Task Force also was responsible for “producing a curriculum framework that serve[d] beginning teachers and inform[ed] outside constituencies (administrators, parents, policymakers, etc.) about physical education” (SHAPE America, 2014, p. v). In

2013, SHAPE America revised the content standards to narrow them to a distinct five (see Table 1).

Table 1.

National Standards for Physical Education

| Standard | Characteristic |
|----------|--|
| 1 | The physically literate individual demonstrates competency in a variety of motor skills and movement patterns |
| 2 | The physically literate individual applies knowledge of concepts, principles, strategies, and tactics related to movement and performance |
| 3 | The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness |
| 4 | The physically literate individual exhibits responsible personal and social behavior that respects self and others |
| 5 | The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression, and/or social interaction |

Note. Adapted from SHAPE America, 2014, p. 12

National Health Standards (set by the Joint Committee on National Health Standards)

In 2007, the Joint Committee on National Health Education Standards revised the previous 1995 standards to a distinct eight that included recommendations for grade levels, assessment by performance indicators, and access for students (see Table 2).

Table 2*National Standards for Health Education*

| Standard | Characteristic |
|----------|--|
| 1 | Students will comprehend concepts related to health promotion and disease prevention to enhance health |
| 2 | Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors |
| 3 | Students will demonstrate the ability to access valid information and products, and services to enhance health |
| 4 | Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks |
| 5 | Students will demonstrate the ability to use decision-making skills to enhance health |
| 6 | Students will demonstrate the ability to use goal-setting skills to enhance health |
| 7 | Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks |
| 8 | Students will demonstrate the ability to advocate for personal, family, and community health |

Note. Adapted from SHAPE America, 2018, para. 1

Table 3*State Physical Education and Health Standards for Illinois*

| Standard | Characteristic |
|----------|---|
| 19 | Acquire movement and motor skills and understand concepts necessary to engage in moderate to vigorous physical activity |
| 20 | Achieve and maintain a health-enhancing level of physical fitness based upon continual self-assessment |
| 21 | Develop skills necessary to become a successful member of a team by working with others during physical activity |
| 22 | Understand principles of health promotion and the prevention and treatment of illness and injury |
| 23 | Understand human body systems and factors that influence growth and development |
| 24 | Promote and enhance health and well-being through the use of effective communication and decision-making skills |

Note. Adapted from ISBE.net, 2018, para. 2

Importance of Health and Physical Education

According to the Wojcicki and Heyman (2010) in the *New England Journal of Medicine*, (2010), “Overweight is defined as a body mass index (BMI, the weight in kilograms divided by the square of the height in meters) at the 85th to less than the 95th percentile for age” (p. 1458). “Obesity is defined as a BMI at or above the 95th percentile” (*New England Journal of Medicine*, 2010, para. 1). The prevalence of obesity

among adolescents steadily increased from 1999 to the present (CDCP, 2017). Nearly “17% of youth in the United States are obese” (Ogden et al., 2014, p. 806). More specifically, in Illinois, 15.3% of two to five-year-olds are considered overweight, and 14.7% are labeled obese according to the *New England Journal of Medicine* (Wojcicki & Heyman, , 2010, p. 1458). Ogden et al. (2014) concurred, “Obesity prevalence remains high and thus it is important to continue surveillance” (p. 813). Wojcicki and Heyman (2010) stated, “. . . early interventions can potentially prevent the development of obesity in school-age children, along with associated health conditions” (p. 1457). The World Health Organization (2017) defined physical activity as “any bodily movement produced by skeletal muscles that requires energy expenditure” (para. 1). “Physical inactivity has been identified as the fourth leading risk factor for global mortality causing an estimated 3.2 million deaths globally” (World Health Organization, 2017, para. 1). “There is an increasing need not only to treat diseases associated with obesity, but also to determine what strategies might combat its development during childhood” (Baghurst, Bishop, & Langley, 2015, p. 325). Researchers have directly linked less physical activity and physical education to increased levels of obesity. (Baghurst et al, 2015; Kern & Calleja, 2008; Salmon et al., 2008; Whitt-Glover et al., 2009). “Recommendations specify that children spend no more than two hours per day in screen-based behaviours, such as television viewing, computer use and playing electronic games” (Salmon et al., 2008, p. 67). Salmon et al. continued, “. . . with high proportions of children exceeding sedentary recommendations, it is of critical importance to understand what factors influence sedentary time use, and how best to intervene” (2008, p. 67). Whitt-Glover et al. (2009) stated, “data showed that encouragement by parents to be active, reported enjoyment of

physical education classes, self-efficacy, perceived behavioral control, and participation in sports teams were positively associated with physical activity participation” (p. 319-320). Other key components connected to the enjoyment of physical activity included access, location, and quality (Whitt-Glover et al., 2009).

According to Verbrugge (2012), “Although most states currently mandate activity classes to some extent, fewer than 10 percent of the country’s schools provide daily instruction for pupils in all grades throughout the academic year” (p. 4). “Only one-half of pupils in grades K-12 have physical education every day, including just one-third of high school students” (Verbrugge, 2012, pp. 4-5). Whitt-Glover et al. (2009) noted, “Despite the existence of physical education requirements in California and 47 other states, these mandates are rarely enforced or sufficiently funded because government priorities for student performance on standardized tests compete for students’ time” (p. 326). “Even if additional physical education minutes were legislatively mandated immediately, this mandate would not likely result in substantial increases in moderate-to-vigorous physical activity...without attention to physical education quality improvements and accountability for adherence to the mandate” (Whitt-Glover et al., p. 326). “. . . because of competing time requirements, many states do not meet the NASPE guidelines for physical education time” (Kern & Calleja, 2008, p. 31).

PE and Health in the 21st Century and Beyond

“The obesity epidemic in America has contributed to an increased focus on nutrition habits and the promotion of a physically active lifestyle” (Mercier, Phillips, & Silverman, 2016, p. 179). According to Mercier et al. (2016), “Physical education classes

have been touted by state and national government officials as a place to address this epidemic” (p. 179).

Chapter Three: Methodology

Introduction

Research regarding the incorporation of standards was very little at most. Most research conducted on the standards determined “why” standards existed and “why” instructors should use the recommended standards (Walton-Fisette & Sutherland, 2020). However, research regarding the “existence of” integrated and verifiable standards did not exist. Therefore, the researcher addressed existing gaps in the literature by examining the existence of national and state standards in the physical education and health curriculum taught in Illinois high schools. In addition, the proposed study added to the gap in the existing body of knowledge regarding physical education and health curriculum in Illinois high schools by determining whether Illinois high school educators used national and state standards.

Research Questions

The researcher included three research questions, looking for evidence of National and State Physical Education and Health Standards within Illinois high schools. Each research question examines specific frameworks and whether there is evidence of the particular framework in the Illinois schools’ curriculum and to what degree based on a rubric. The research questions for this content analysis study are as follows:

Research Question 1

What is the evidence of National Physical Education Standards within the Illinois high school physical education curriculum, as measured by a numerically-scaled comparison to characteristics and standards represented by SHAPE America’s National Standards and Grade-Level Outcomes framework?

Research Question 2

What is the evidence of National Health Education Standards within the Illinois high school health curriculum, as measured by a numerically-scaled comparison to characteristics and standards represented by the Joint Committee on National Health Education Standards framework?

Research Question 3

What is the evidence of Illinois Learning Standards for Physical Development and Health within Illinois high school physical education curriculum, as measured by a numerically-scaled comparison to characteristics and standards represented by the Illinois Learning Standards for Physical Development and Health framework?

Methodology

The researcher obtained Institutional Research Board (IRB) approval through the Lindenwood University IRB. The participant sample was pulled online curriculum from a random sample of 30 schools from each of the seven Illinois High School Association (IHSA) state divisions. The researcher collected curriculum from each school's online websites. The researcher examined various Illinois school districts' curriculum materials to determine if the national and local physical and health education curriculum content standards existed and to what extent. The researcher utilized the national physical education standards created by the Society of Health and Physical Educators (SHAPE) as a tool to inspect the schools' instruction materials. The Joint Committee on National Health Education Standards created the standards within the curriculum the Illinois State Board of Education (ISBE) set forth. Therefore, the researcher reviewed randomly selected school materials and examined the embedded standards in the schools' physical

education and health curriculum. Additionally, the researcher developed a Curriculum Review document and used it during data collection (see Appendices F-H).

Research Design

This study employed a quantitative descriptive content analysis design. Content analysis provides a systematic approach to analyzing written, visual, or digital materials to identify patterns, themes, or standards (Krippendorff, 2019). In this study, content analysis was used to examine the extent to which Illinois high school physical education and health curriculum materials aligned with national and state standards. A standardized coding instrument, the Curriculum Review Document (see Appendices F – H), was developed and used to ensure consistency during data collection.

Participants and Sampling

The unit of analysis was the high school curriculum rather than individual participants. A random sample of 30 schools from each of the seven Illinois High School Association (IHSA) divisions was selected to represent the diversity of schools across the state. School curriculum documents in physical and health education were obtained through publicly available online resources. Random sampling increases representativeness and reduces selection bias (Creswell & Creswell, 2018).

Prior to data collection, approval was obtained from the Lindenwood University Institutional Review Board (IRB). Because the study focused exclusively on publicly available curriculum materials, minimal risk to human subjects was anticipated, in line with federal guidelines for research ethics (U.S. Department of Health & Human Services [HHS], 2018).

Instrument

A Curriculum Review Document was developed by the researcher to facilitate systematic coding and analysis. This instrument operationalized each SHAPE and ISBE standard as discrete categories, enabling consistent evaluation of whether and how each standard was represented in the curriculum materials. Instrument development followed recommended practices for ensuring validity and reliability in content analysis coding tools (Neuendorf, 2017).

The researcher created a numerically-scaled instrument as a rubric by assigning quantitative values for descriptive analysis. Numerically-scaled instruments use numerical values (2, 4, 6, 8), assigning quantitative values ranging from “none” to “full integration.” The numerically-scaled instrument used was created by the model previously approved by doctoral educators at Lindenwood University (Ruetters, 2013). The researcher created an instrument utilizing the following scale:

2 points - None: No evidence of the standard in the curriculum.

4 points - Emerging: Evidence of standard; lacks description of outcome.

6 points - Implementation: Evidence of standard and outcome lacks a description of how the standard and outcome are applied.

8 points - Full Integration: Evidence of standard and outcome and includes a description of the application.

Reliability and Validity of the Instrument

The researcher ensured the reliability and validity of the frequency table tools by collecting accurate data from each participating Illinois high school. To ensure an accurate collection was gathered, the researcher created an instrument used for data

collection, including a numerical interval scale (Ruetters, 2013) that rated evidence of whether the curriculum included specific standards. The Numerical Scale included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points.

The researcher created an Excel table that statically measured the frequency of each standard within each portion of the interval scale, allowing the researcher to provide a descriptive analysis of frequency within each of the four numerically scaled intervals denoting each standard. First, the researcher determined the frequency of each individual standard for each participating school. Next, the researcher determined the relative frequency for all participating schools combined for each standard. Finally, the researcher determined the Cumulative Relative Frequency for all the cumulative findings for all standards of all participating Illinois schools.

Data Analysis

Data collected through the Curriculum Review Document were aggregated and tabulated to determine the frequency and percentage of curriculum materials that included SHAPE and ISBE standards. Findings were reported by IHSA division and across the full state sample.

The researcher chose descriptive statistics to compare, summarize, and describe the characteristics and standards represented by the Illinois Learning Standards for

Physical Development and Health framework (Loeb et al., 2017). The researcher created three research questions that addressed specific frameworks for evidence of National Health and Physical Education Standards. The researcher compared each characteristic and standard within each framework, looking for evidence of National Physical and Health Education Standards and State Health and PE standards from research participants within Illinois high schools.

Methodology Limitations

This scoping examination provided a comprehensive review. However, some limitations existed in the study. One example included grade-level limitations. The researcher limited the curriculum to high school grades 9 through 12. Therefore, Illinois grade school and middle school research comparisons did not exist. The second limitation included a randomly selected sample size of 30 schools from each IHSA District, leaving nearly 650 districts needing review and a small sample size, thereby limiting generalizations of the research outcomes. The third limitation included curriculum choice. The study reviewed the physical education and health curriculum, leaving many other educational content areas without review. Finally, the analysis applied to Illinois school districts, leaving the other 49 states without research-based data to examine.

Threat to Validity

Internal validity concerns whether the study's procedures accurately capture what they intend to measure. A potential threat to internal validity in this study was researcher bias in coding. Because the researcher developed and applied the Curriculum Review Document, there was a risk that personal judgment could influence whether standards were coded as 'present' or 'absent.'

To minimize this threat, the coding tool was operationalized in clear, discrete categories to ensure consistency, and it was pilot-tested on a small subset of documents prior to formal data collection. Another internal validity concern was instrumentation. The Curriculum Review Document was newly created for this study and, therefore, had not been previously validated. To strengthen credibility, the instrument was based directly on the published SHAPE America (2014) national standards and the Illinois Learning Standards for Physical Development and Health (Illinois State Board of Education, 2014), ensuring alignment between the coding categories and the constructs under investigation.

External validity relates to the generalizability of the findings. Because this study relied on a random sample of schools with publicly available online curriculum materials, results may not fully represent schools without online postings. Additionally, the findings reflect curriculum documents and not necessarily the actual implementation of instruction in classrooms.

These limitations constrain the degree to which results may be generalized beyond Illinois or to classroom practices. However, by selecting schools from each of the seven IHSA divisions, the study sought to capture a broad and representative sample of Illinois schools. Construct validity addresses the extent to which the study measures what it purports to measure.

A potential threat was the operationalization of standards in a binary format (present or absent), which may not capture the depth or quality of standard implementation. To reduce this threat, the coding instrument was carefully aligned with SHAPE and ISBE benchmarks, and definitions were clearly documented within the

Curriculum Review Document to promote consistent interpretation.

Reliability refers to the consistency and stability of the measurement process. A potential limitation was the use of a single coder. Although inter-rater reliability was not established, consistency was supported by applying the same structured instrument across all sampled documents. Additionally, the pilot test of the coding tool served to refine categories and ensure repeatability of results.

Summary

The researcher ensured the reliability and validity of the frequency table tools by collecting accurate data from each participating Illinois high school. To ensure an accurate collection was gathered, the researcher created an instrument used for data collection, including a numerical interval scale (Ruetters, 2013) that rated evidence of whether the curriculums included specific standards. The Numerical Scale included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points.

This chapter described the research design, sampling methods, ethical considerations, data collection procedures, instrumentation, and data analysis strategies used in this study. Issues of validity and reliability were also addressed. Together, these components provided a structured approach to analyzing Illinois high school curriculum documents for alignment with SHAPE and ISBE standards.

Chapter Four: Results

Research regarding the incorporation of standards was very little at most. Most research conducted on the standards determined “why” standards existed and “why” instructors should use the recommended standards (Walton-Fisette & Sutherland, 2020). However, research regarding the “existence of” integrated and verifiable standards did not exist. Therefore, the researcher addressed existing gaps in the literature by examining the existence of national and state standards in the physical education and health curriculum taught in Illinois high schools. In addition, the proposed study added to the gap in the existing body of knowledge regarding physical education and health curriculum in Illinois high schools by determining whether Illinois high school educators used national and state standards.

Research Questions

The researcher included three research questions, looking for evidence of National and State Physical Education and Health Standards within Illinois high schools. Each research question examines specific frameworks and whether there is evidence of the particular framework in the Illinois schools’ curriculum and to what degree based on a rubric. The research questions for this content analysis study are as follows:

Research Question 1

What is the evidence of National Physical Education Standards within the Illinois high school physical education curriculum as measured by a numerically-scaled comparison to characteristics and standards represented by SHAPE America’s National Standards and Grade-Level Outcomes framework?

Research Question 1 Results

Research Question 1 examined rank and percentile-quartiles, central tendency, variability, and frequency utilizing a numerically-scaled researcher-created rubric.

Overall rubric scores indicated the variability of National PE standards included in the seven studied regions in Illinois high school curriculum.

Rubric Scores

Table 4 provides an overall rubric score for each National PE Standard and is ranked from having the most to least rubric points for each standard organized by region.

Table 4

RQ1 National PE Education Standard Analysis Rubric Scores

| Standards | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Rubric Score |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|--------------|
| Standard 1 - NATIONAL PE | 154 | 134 | 124 | 128 | 162 | 144 | 178 | 1024 |
| Standard 3 - NATIONAL PE | 156 | 134 | 132 | 138 | 154 | 132 | 164 | 1010 |
| Standard 5 - NATIONAL PE | 160 | 142 | 138 | 134 | 142 | 116 | 144 | 976 |
| Standard 2 - NATIONAL PE | 170 | 126 | 124 | 130 | 144 | 124 | 158 | 976 |
| Standard 4 - NATIONAL PE | 168 | 138 | 140 | 134 | 122 | 106 | 128 | 936 |

Note. (N) = 213 respondents across 7 regions

Rank and Percentiles

The National PE Standards 5 and 2 both ranked as 3 and 4 due to a tie with each standard having a total rubric score of 976 points. Each standard, followed by rubric points, rank and percentiles/quartiles are exhibited in Table 5.

Table 5*RQ1 National PE Education Standards Percentiles/Quartiles*

| Standard | Rubric Points | Rank | Percentile- Quartiles |
|------------|---------------|---------|-----------------------|
| Standard 1 | 1024 | 1 | 60.1% |
| Standard 3 | 1010 | 2 | 59.3% |
| Standard 2 | 976 | 3 and 4 | 57.3% |
| Standard 5 | 976 | 3 and 4 | 57.3% |
| Standard 4 | 936 | 5 | 55.0% |

Note. (N) = 5 standards

Central Tendency

The descriptive analysis for central tendency for Research Question 1 displayed in Table 6 revealed a rubric mean score of 984.50 (SD = 30.30). The sample size included (N)=213 across seven state regions in Illinois with a total possible rubric maximum score of 8520 and minimum of 300 points for all five National PE standards.

Table 6*RQ1 National PE Education Standards Central Tendency*

| <i>RQ1 Rubric Scores</i> | |
|--------------------------|---------|
| Mean | 984.50 |
| Standard Error | 15.1343 |
| Median | 976 |
| Mode | 976 |
| Standard Deviation | 30.30 |
| Sample Variance | 1176.80 |
| Kurtosis | -0.43 |
| Skewness | -0.37 |
| Range | 88 |
| Minimum | 936 |
| Maximum | 1024 |
| Sum | 4922 |
| Count | 5 |

Confidence Level(95.0%) 42.59

Note. (N)=5 Standards

There was a Median and Mode score of 976, with a range of 88, resulting in evidence of the overall rank of scores from least for most for each of the five standards.

Variance

The variability between each rank were important when looking at differences in the standards included in the curriculum. The variance between each ranked national PE standard is exhibited in Figure 2.

Figure 2

RQ1 Ranked National PE Standard Variance

| | | Rank 1 | Rank 2 | Rank 3 & 4 | Rank 5 |
|------------|--------------|--------|--------|------------|--------|
| | Rubric Score | 1024 | 1010 | 976 | 936 |
| Rank 1 | 1024 | 0 | -14 | -48 | -88 |
| Rank 2 | 1010 | 14 | 0 | -34 | -74 |
| Rank 3 & 4 | 976 | 48 | 34 | 0 | -40 |
| Rank 5 | 936 | 88 | 74 | 40 | 0 |

Note: The least variance was 14; the most variance was 88.

National PE Standard 1 ranked 1st of five; Standard 3 ranked 2nd of five; Standard 5 and Standard 2 tied in rank for 3rd and 4th, and Standard 4 ranked 5th of the five standards. When comparing standards to one another it was important to note that the variability between ranking positions 1 and 2 varied little with a difference of 14 points on the overall rubric for National Standard PE rankings.

It was also important to note the scored ranges within the rubric had a possible minimum score of 426 and maximum score of 2130 per standard, as indicated in Table 7.

Table 7 displays the rank and percentiles for each standard compared to one another.

Table 7

RQ1 National PE Education Standards Rank and Percentiles Maximum and Minimum

| Standards/Possible Points | Point totals | Rank | Percent |
|---------------------------|--------------|---------|---------|
| Most Points Possible | 2,130 | | 100.00% |
| Standard 1 | 1024 | 1 | 60.10% |
| Standard 3 | 1010 | 2 | 59.30% |
| Standard 5 | 976 | 3 and 4 | 57.30% |
| Standard 2 | 976 | 3 and 4 | 57.30% |
| Standard 4 | 936 | 5 | 55.00% |
| Least Points Possible | 426 | | 0.00% |

Note. (N)=5 state standards across 7 state regions

The analysis showed that the maximum possible points per standard were 2,130, while the minimum possible points were 426. Among the five standards, Standard 1 earned the highest score with 1,024 points (60.1% of the maximum), followed closely by Standard 3 with 1,010 points (59.3%). Standards 2 and 5 were tied, each earning 976 points (57.3%), and Standard 4 earned the lowest total of 936 points (55.0%). Overall, the standards ranged from 55.0% to 60.1% of the maximum possible points.

Frequency

A total of 1065 ratings were collected across five standards from 213 participants within seven state regions. A Numerical Scale included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points;

“Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. Standard 1 earned ‘Emerging Evidence’ 96 times and ‘Implementation Evidence’ 94 times making them very close as the most chosen indicator for that standard which equaled 89% of the votes for the four indicators and 83.3% of the total possible points if all choices were for eight points from all 213 votes. The frequencies of each data interval are illustrated in Table 8.

Table 8

Interval Data Scaled Scores

| | No Evidence | Emerging Evidence | Implementation Evidence | Full Integration |
|------------|----------------|----------------------|----------------------------|---------------------|
| Standard | 2 Points | 4 Points | 6 Points | 8 Points |
| Standard 1 | 18 | 96 | 94 | 5 |
| Standard 2 | 27 | 108 | 67 | 11 |
| Standard 3 | 19 | 103 | 84 | 7 |
| Standard 4 | 56 | 68 | 80 | 9 |
| Standard 5 | 41 | 77 | 87 | 8 |

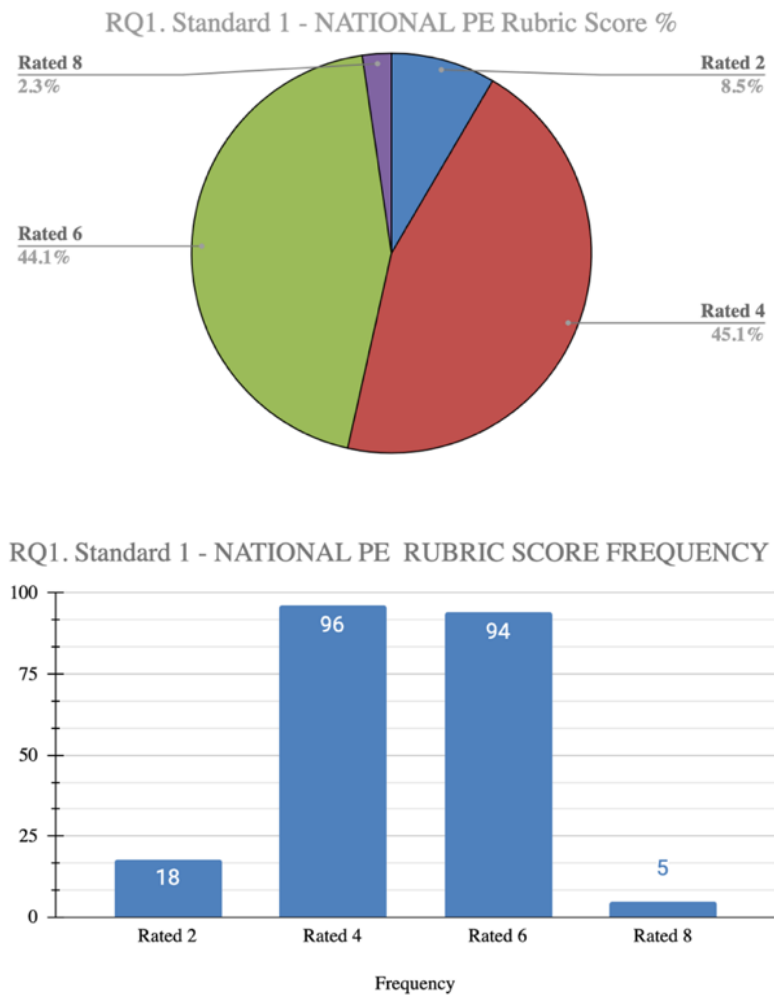
Note. (N) 1,065 interval frequency scores

Figure 3 also represents the frequency of ratings for ‘National PE Standard 1 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration

Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 3 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of four or six as the most prevalent ranking for Standard 1.

Figure 3.

RQ1 National PE Standard 1 Frequency Results

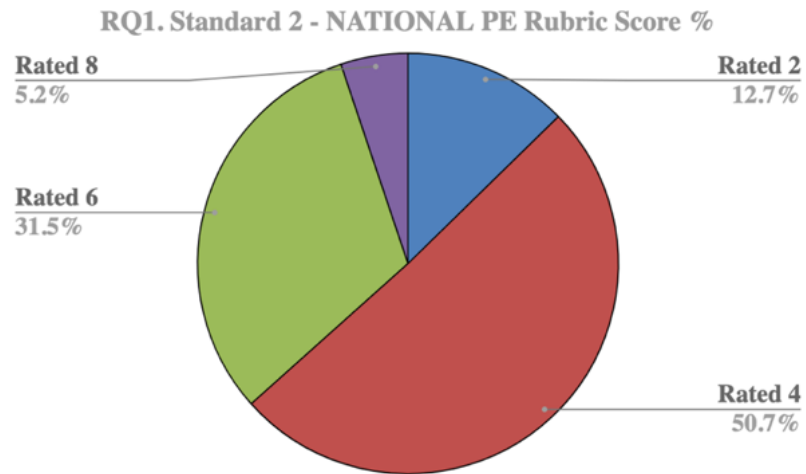


Note. National PE standard 1 is “The physically literate individual demonstrates competency in a variety of motor skills and movement patterns” (America, 2014, p. 12). (N)=213.

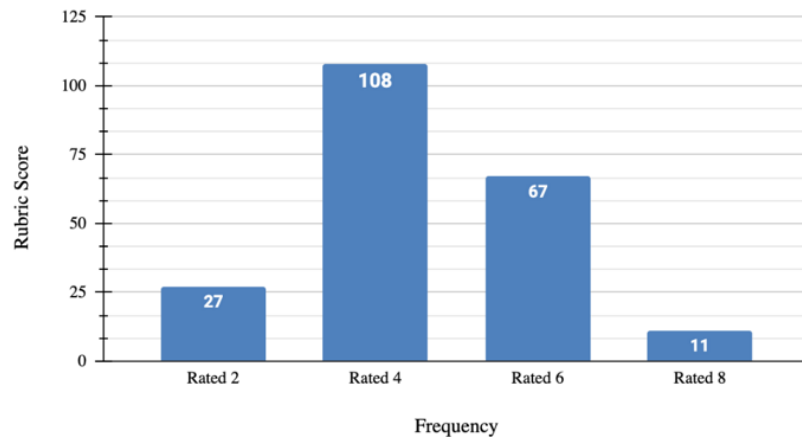
Figure 4 represents the frequency of ratings for ‘National PE Standard 2 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 4 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of four as the most prevalent ranking for Standard 2.

Figure 4

RQ1 National PE Standard 2 Frequency Results



RQ1. Standard 2 - NATIONAL PE RUBRIC SCORE FREQUENCY

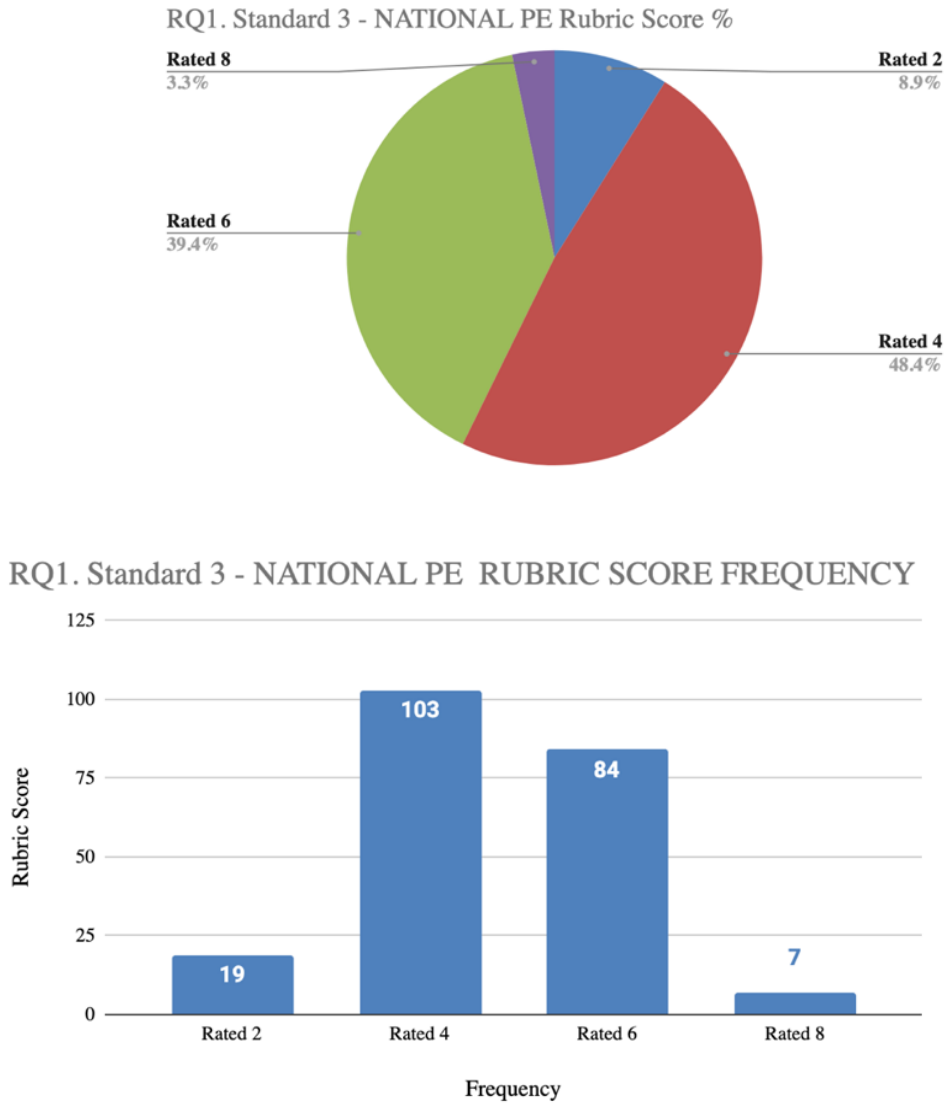


Note. National PE standard 2 is “The physically literate individual applies knowledge of concepts, principles, strategies, and tactics related to movement and performance” (America, 2014, p. 12). (N) = 213; respondents across 7 regions.

Figure 5 represents the frequency of ratings for ‘National PE Standard 3 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 5 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 4 or 6 as the most prevalent ranking for Standard 3.

Figure 5

RQ1 National PE Standard 3 Frequency Results



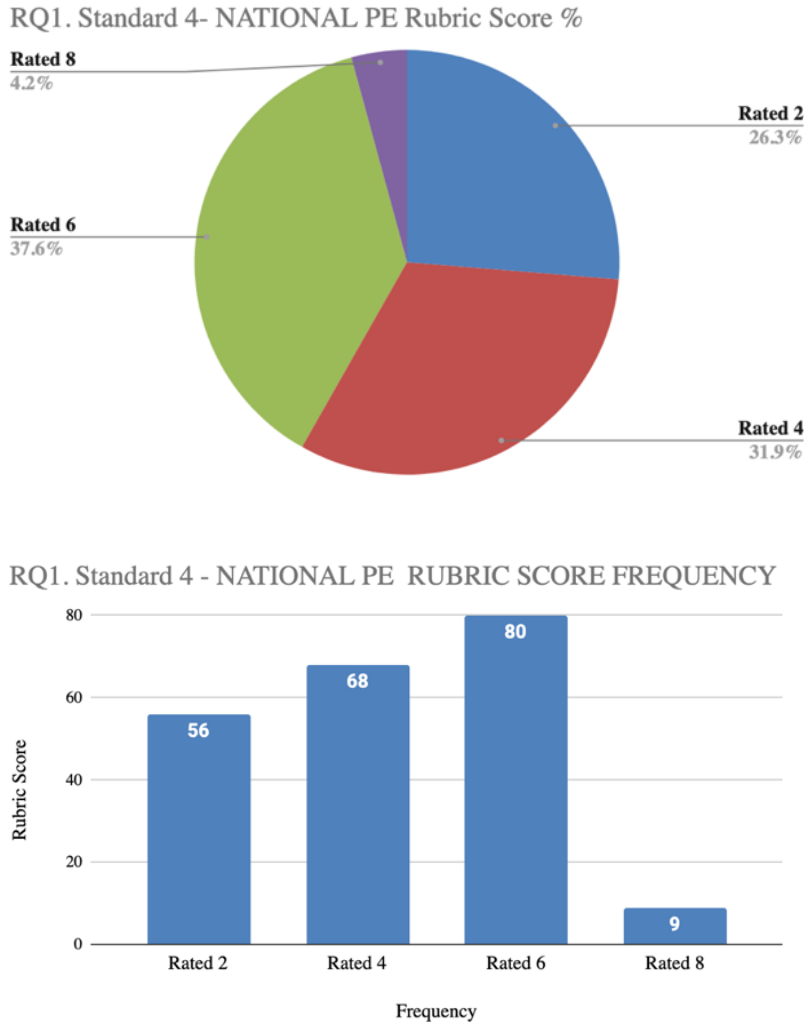
Note. National PE standard 3 is “The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness” (America, 2014, p. 12). (N) = 213 respondents across 7 regions

Figure 6 represents the frequency of ratings for ‘National PE Standard 4 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points;

“Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 6 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 6 as the most prevalent ranking for Standard 4.

Figure 6

RQ1 National PE Standard 4 Frequency Results



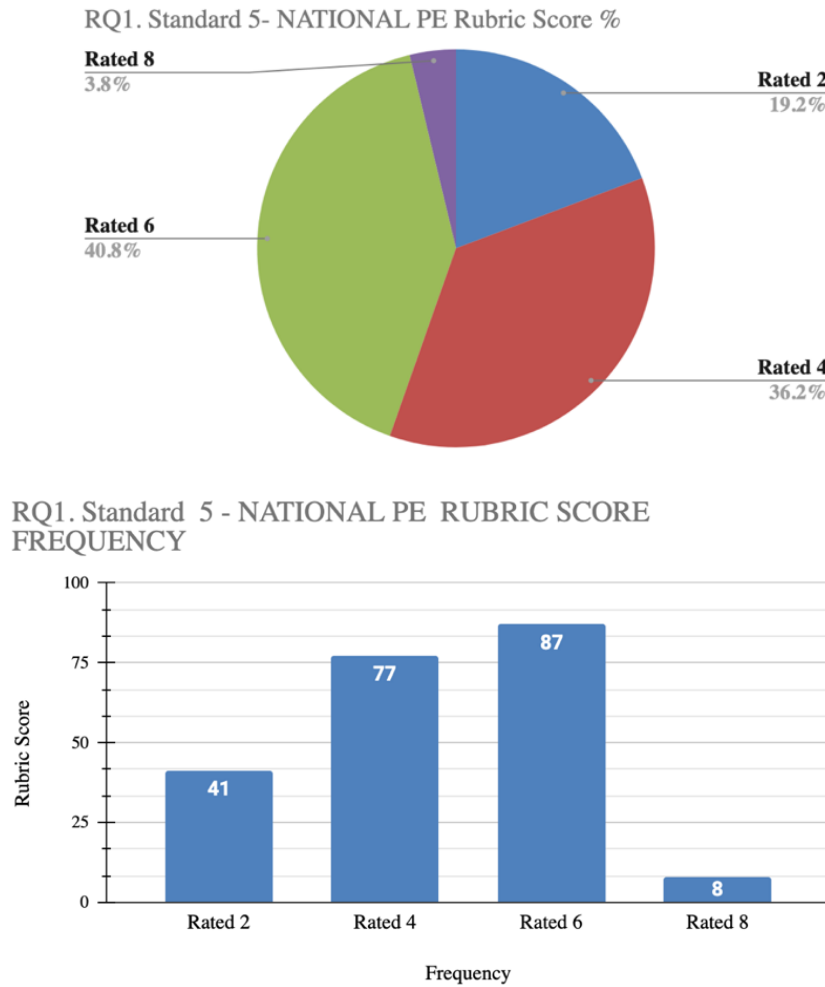
Note. National PE standard 4 “The physically literate individual exhibits responsible personal and social behavior that respects self and others” (America, 2014, p. 12). (N) = 213 respondents across 7 regions.

Figure 7 represents the frequency of ratings for ‘National PE Standard 5 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning

four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 7 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 4 or 6 as the most prevalent ranking for Standard 5.

Figure 7

RQ1 National PE Standard 5 Frequency Results



Note. National PE standard 5 is “The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression, and/or social interaction” (America, 2014, p. 12). (N) = 213 respondents across 7 regions

Research Question 2

Research Question 2 examined rank and percentile-quartiles, central tendency, variability, and frequency utilizing a numerically-scaled researcher-created rubric. Overall rubric scores indicated the variability of National Health Education Standards included in the seven studied regions in Illinois school curriculum.

What is the evidence of National Health Education Standards within the Illinois high school health curriculum as measured by a numerically-scaled comparison to characteristics and standards represented by the Joint Committee on National Health Education Standards framework?

Research Question 2 Results

Research Question 2 examined central tendency, variability, and frequency utilizing a numerically-scaled researcher-created rubric. Overall rubric scores indicated the variability of National Health standards included in the seven studied regions in Illinois school curriculum.

Table 9 provides an overall rubric score for each National Health Standard, which is ranked from having most to least standards included within each region’s curriculum.

Rubric Scores

Table 9 provides an overall rubric score for each National Health Standard and is ranked from having the most to least rubric points for each standard organized by region.

Table 9*RQ2 National Health Education Standards Rubric Scores*

| National Health Standard | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Rubric Score |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|--------------|
| Standard 1 | 240 | 142 | 124 | 140 | 158 | 154 | 164 | 1028 |
| Standard 2 | 162 | 142 | 134 | 138 | 116 | 116 | 116 | 1024 |
| Standard 3 | 160 | 136 | 134 | 146 | 104 | 114 | 105 | 1122 |
| Standard 4 | 156 | 142 | 126 | 144 | 120 | 122 | 116 | 1000 |
| Standard 5 | 168 | 132 | 122 | 160 | 136 | 142 | 140 | 926 |
| Standard 6 | 172 | 136 | 132 | 142 | 106 | 96 | 92 | 924 |
| Standard 7 | 182 | 136 | 126 | 146 | 150 | 144 | 140 | 899 |
| Standard 8 | 172 | 152 | 130 | 150 | 142 | 142 | 140 | 876 |

Note. (N) = 213 respondents across 7 regions

Rank and Percentiles

The National Health Education Standards ranked Standard 3 as the most and Standard 8 as the least. There was only a two-point difference between Standard 5 and 6. Standards 5 through 8 matched in rank the same as the order of the standards. Each standard followed by rubric points, rank, percentiles, and quartiles are exhibited in Table 10.

Table 10*RQ2 National Health Education Standards Rank, Percentiles, Maximum and Minimum*

| <i>Point</i> | <i>Rubric Score</i> | <i>Rank</i> | <i>Percent</i> | |
|---------------------------------------|---------------------|-------------|----------------|---------|
| Maximum possible total = 2,130 points | | | | |
| Standard 3 | | 1122 | 1 | 100.00% |
| Standard 1 | | 1028 | 2 | 85.70% |
| Standard 2 | | 1024 | 3 | 71.40% |
| Standard 4 | | 1000 | 4 | 57.10% |
| Standard 5 | | 926 | 5 | 42.80% |
| Standard 6 | | 924 | 6 | 28.50% |
| Standard 7 | | 899 | 7 | 14.20% |
| Standard 8 | | 876 | 8 | 0.00% |
| Minimum Points = 426 points | | | | |

Note. (N) = 8 standards

The maximum possible score for each standard was 2,130 points. Standard 3 earned the highest total with 1,122 points, which represented 52.7% of the maximum possible score. Standard 1 followed with 1,028 points (48.3%), and Standard 2 earned 1,024 points (48.0%). Standard 4 achieved 1,000 points (46.9%), while Standards 5 and 6 earned 926 points (43.5%) and 924 points (43.4%), respectively. Standard 7 earned 899 points (42.2%), and Standard 8 earned the lowest total with 876 points (41.1%). Overall, the eight standards ranged from 41.1% to 52.7% of the maximum possible points.

Central Tendency

The descriptive analysis for central tendency for Research Question 2 displayed in Table 11 revealed a rubric mean score of 974.88 (SD = 82.83). The sample size included

N=213 across seven state regions in Illinois with a total possible rubric maximum score of 1920 and minimum of 480 points for all eight National Health standards. There was a Median score of 963 and no Mode score, with a Range of 246, resulting in evidence of the overall rank of scores from least to most for each of the eight standards.

Table 11

RQ2 National Health Standards Central Tendency

| <i>RQ2 Rubric Scores</i> | |
|--------------------------|----------|
| Mean | 974.88 |
| Standard Error | 29.28 |
| Median | 963 |
| Mode | #N/A |
| Standard Deviation | 82.83 |
| Sample Variance | 6860.411 |
| Range | 246 |
| Minimum | 876 |
| Maximum | 1122 |
| Sum | 7799 |
| Count | 8 |
| Largest(1) | 1122 |
| Smallest(1) | 876 |
| Confidence Level(95.0%) | 69.25 |

Note. (N) = 8 standards

Variance

The variability between each rank was important when looking at differences in the standards included in the curriculum. The variance between each ranked national

health standard is exhibited in Figure 8. It was important to note the difference in variances when comparing ranks when looking at close ranges compared to ranges with a further difference.

Figure 8

RQ2 National Health Education Standards Variance

| | | Rank 1 | Rank 2 | Rank 3 | Rank 4 | Rank 5 | Rank 6 | Rank 7 | Rank 8 |
|--------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Rubric Score | 1122 | 1028 | 1024 | 1000 | 926 | 924 | 899 | 876 |
| Rank 1 | 1122 | 0 | -94 | -98 | -122 | -196 | -198 | -223 | --754 |
| Rank 2 | 1028 | 94 | 0 | -4 | -28 | -102 | -104 | -129 | -152 |
| Rank 3 | 1024 | 98 | 4 | 0 | -24 | -98 | -920 | -125 | -148 |
| Rank 4 | 1000 | 122 | 28 | 24 | 0 | -74 | -76 | -101 | -124 |
| Rank 5 | 926 | 196 | 102 | 98 | 74 | 0 | -2 | -27 | -50 |
| Rank 6 | 924 | 198 | 104 | 920 | 76 | 2 | 0 | -25 | -48 |
| Rank 7 | 899 | 223 | 129 | 125 | 101 | 27 | 25 | 0 | -23 |
| Rank 8 | 876 | 754 | 152 | 148 | 124 | 50 | 48 | 23 | 0 |

Note. The least variance is 94; the most variance is 754.

National Health Standard 3 ranked 1st of 8; Standard 1 ranked 2nd of 5; Standard 2 ranked 3rd, and Standard 4 ranked 4th of 8; Standard 5 ranked 5th of 8, Standard 6 ranked 6th of 8, Standard 7 ranked 7th of 8, and Standard 8 ranked 8th of 8. When comparing standards to one another it was important to note that the variability between ranking positions 2 and 3 varied little with a difference of four points and Standard 5 and

6 varied little with a difference of two points on the overall rubric for National Standard PE rankings.

It was also important to note the scored ranges within the rubric had a possible minimum score of 426 and maximum score of 2130 per standard, as indicated in Table 10. Table 10 displays the rank and percentiles for each standard compared to one another.

Frequency

A total of 1704 ratings were collected across eight standards from 213 participants within seven state regions. A Numerical Scale included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. Standards 2, 3, 5, and 7 demonstrated relatively balanced distributions between the *Emerging Evidence* and *Implementation Evidence* categories, indicating that performance on these indicators was closely aligned. This proximity is important to consider when making comparisons across standards. The frequency of each data interval is presented in Table 12.

Table 12

RQ2 National Health Standards Interval Frequency Scale

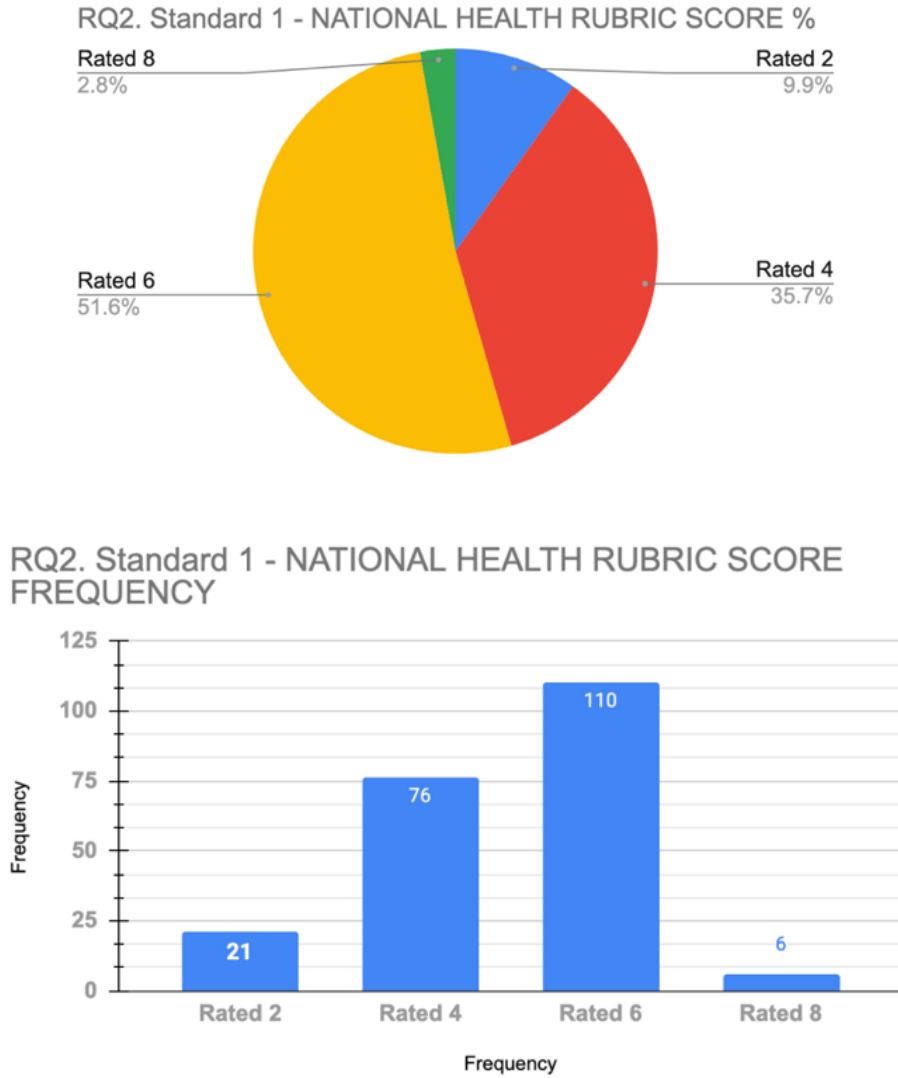
| <i>Interval Data Scaled Scores</i> | | | | |
|------------------------------------|-------------|-------------------|-------------------------|------------------|
| | No Evidence | Emerging Evidence | Implementation Evidence | Full Integration |
| Standard | 2 | 4 | 6 | 8 |
| Standard 1 | 21 | 76 | 110 | 6 |
| Standard 2 | 51 | 81 | 75 | 6 |
| Standard 3 | 60 | 75 | 73 | 5 |
| Standard 4 | 45 | 90 | 74 | 4 |
| Standard 5 | 28 | 89 | 90 | 6 |
| Standard 6 | 61 | 84 | 63 | 5 |
| Standard 7 | 26 | 84 | 94 | 9 |
| Standard 8 | 25 | 82 | 99 | 7 |
| Totals | 317 | 661 | 678 | 48 |

Note. (N) = 1,704 interval frequency scores

Figure 9 represents the frequency of ratings for ‘National Health Standard 1 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 9 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of six as the most prevalent ranking for Standard 1.

Figure 9

RQ2 National Health Standard 1 Frequency Results



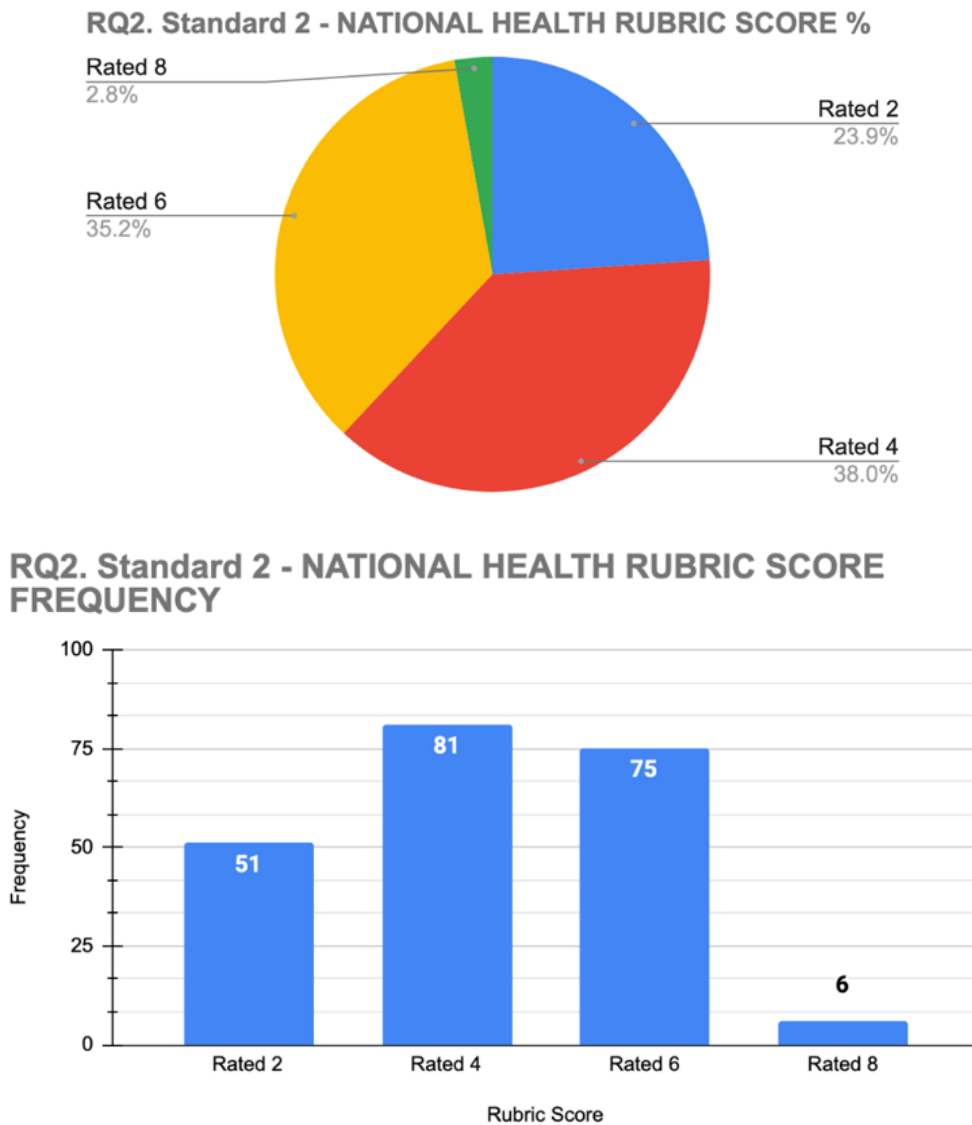
Note. (N)=213 respondents

Figure 10 represents the frequency of ratings for ‘National Health Standard 2 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how

the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 10 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 4 or 6 as the most prevalent ranking for Standard 2.

Figure 10

RQ2 National Health Standard 2 Frequency Results

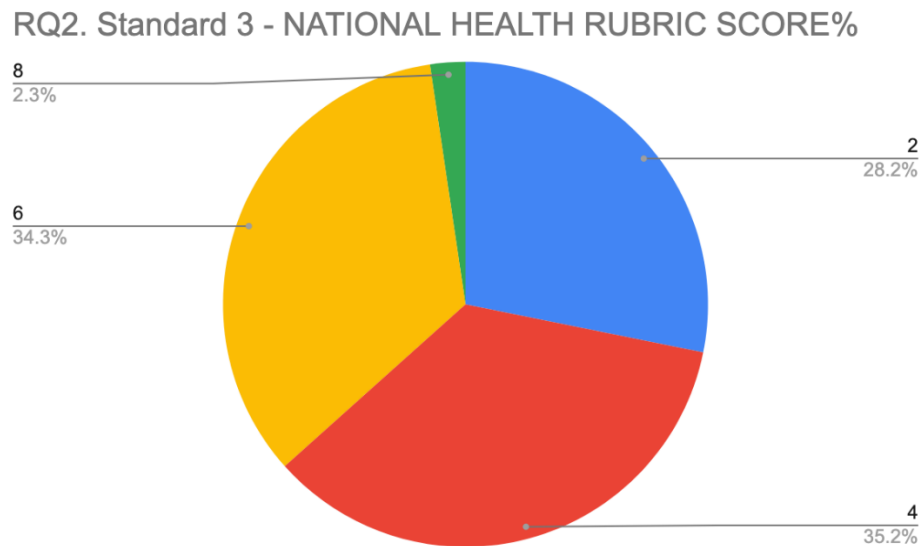


Note. (N)=213 respondents

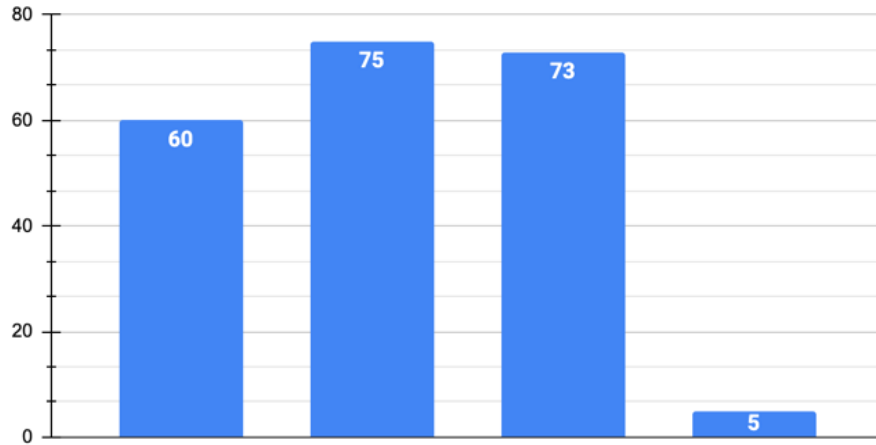
Figure 11 represents the frequency of ratings for ‘National Health Standard 3 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 11 two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 4 and 6 as the most prevalent ranking for Standard 3.

Figure 11

RQ2 National Health Standard 3 Frequency Results



RQ2. Standard 3 - NATIONAL HEALTH RUBRIC SCORE FREQUENCY

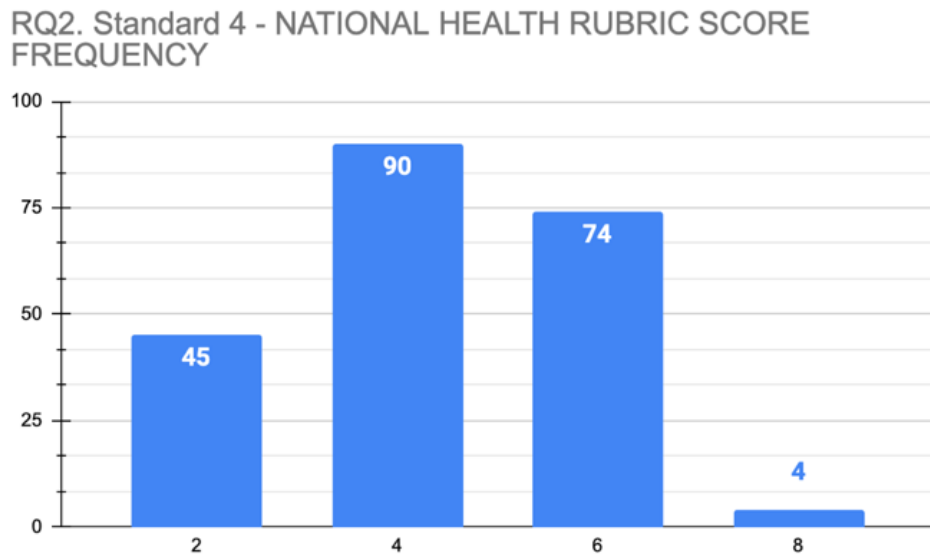
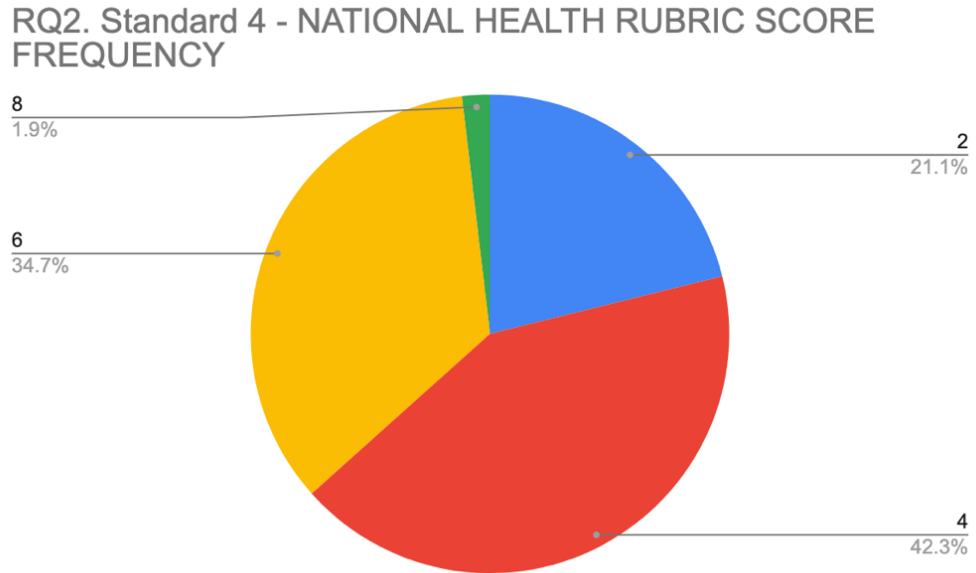


Note. (N)=213 respondents

Figure 12 represents the frequency of ratings for ‘National Health Standard 4 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 12 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 4 as the most prevalent ranking for Standard 4.

Figure 12

RQ2 National Health Standard 4 Frequency Results



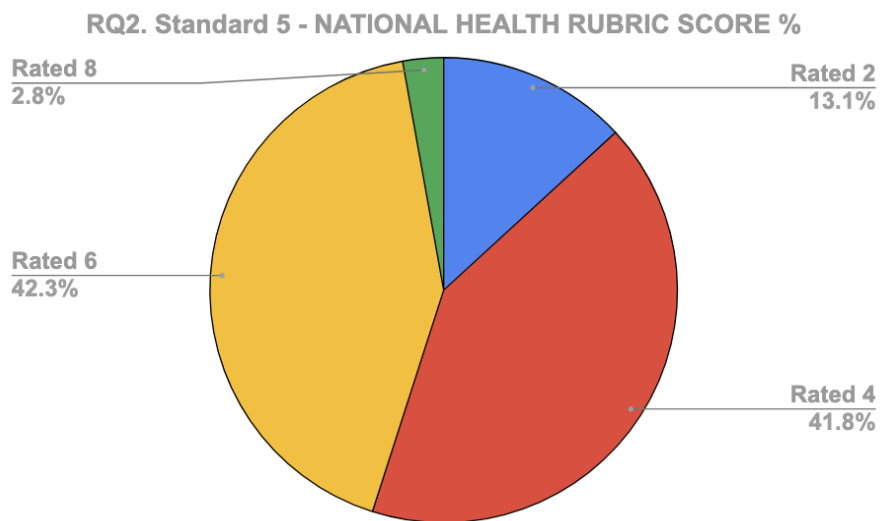
Note. (N)=213 respondents

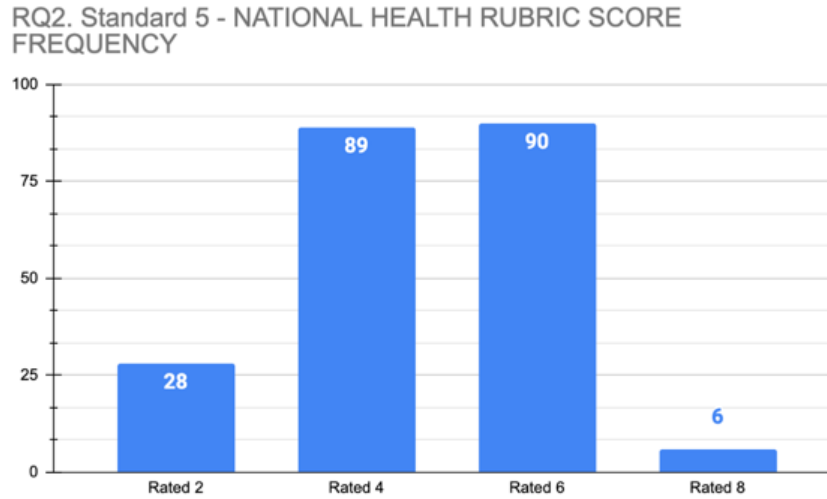
Figure 13 represents the frequency of ratings for ‘National Health Standard 5 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points;

“Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 13 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 4 or 6 as the most prevalent ranking for Standard 5.

Figure 13

RQ2 National Health Standard 5 Frequency Results



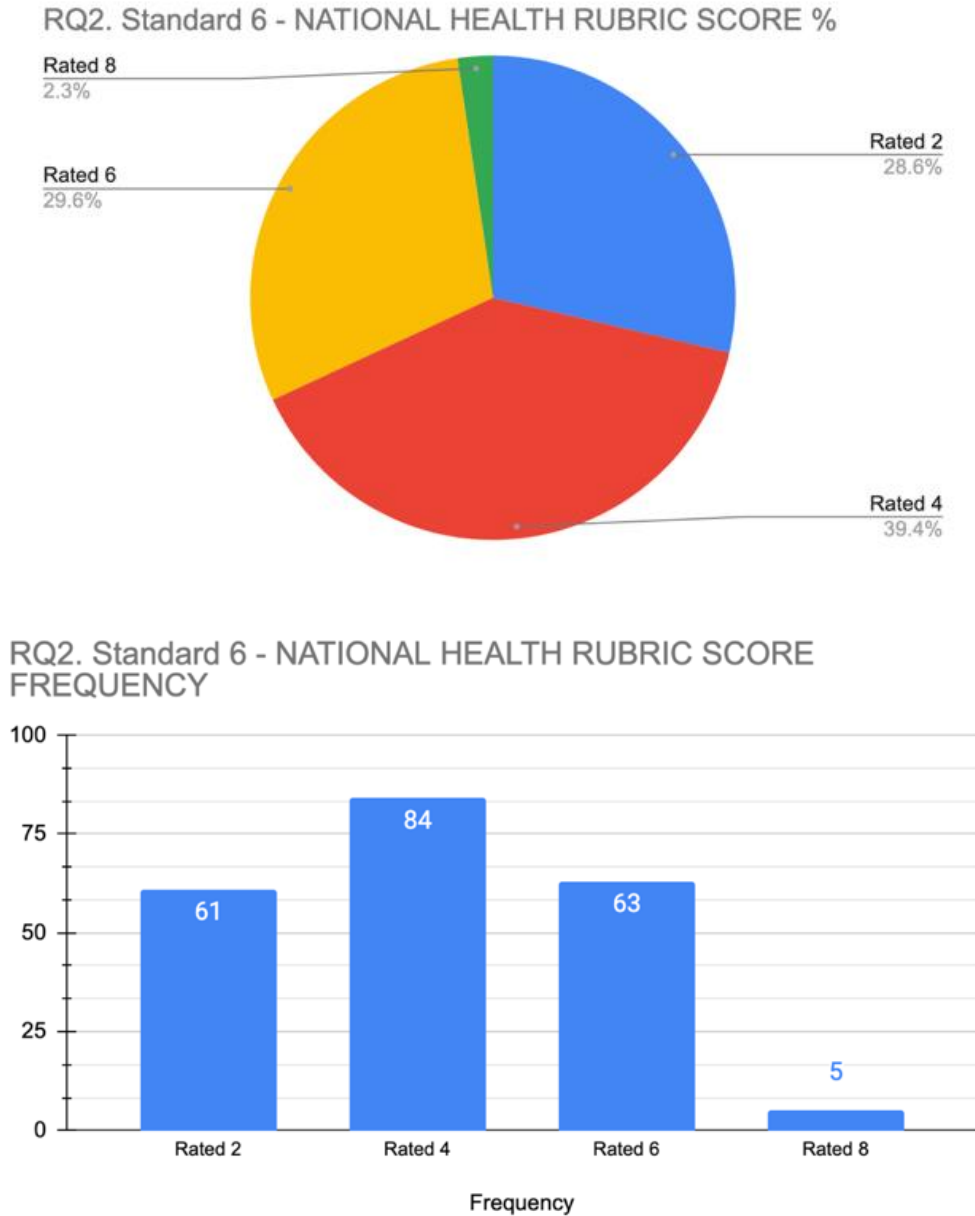


Note. (N)=213 respondents

Figure 14 represents the frequency of ratings for ‘National Health Standard 6 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 14 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 4 as the most prevalent ranking for Standard 6.

Figure 14

RQ2 National Health Standard 6 Frequency Results



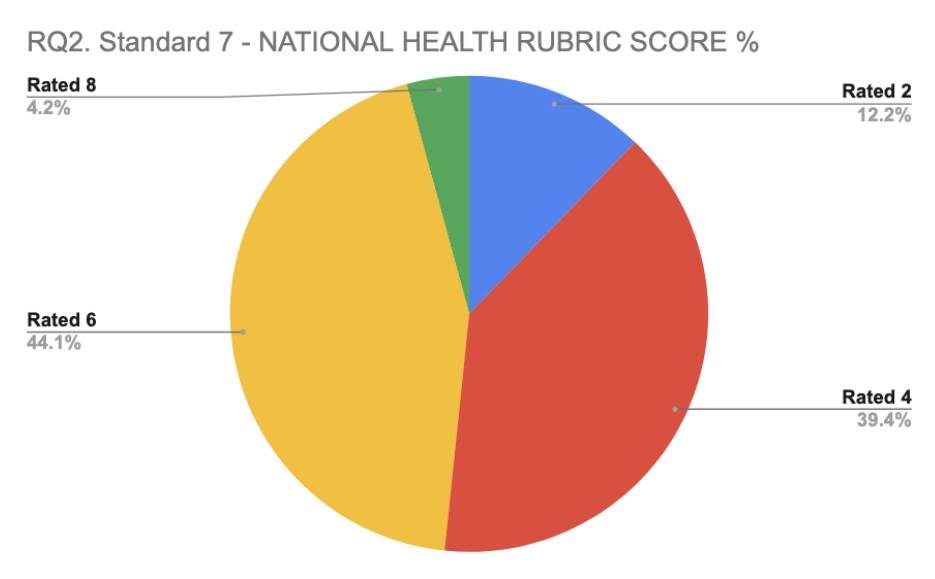
Note. (N)=213 respondents

Figure 15 represents the frequency of ratings for ‘National Health Standard 7 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points;

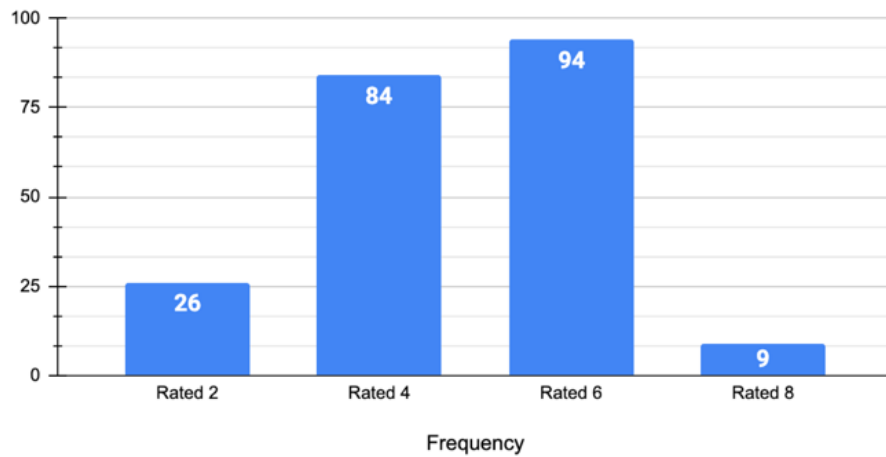
“Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 15 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 4 or 6 as the most prevalent ranking for Standard 7.

Figure 15

RQ2 National Health Standard 7 Frequency Results



RQ2. Standard 7 - NATIONAL HEALTH RUBRIC SCORE FREQUENCY



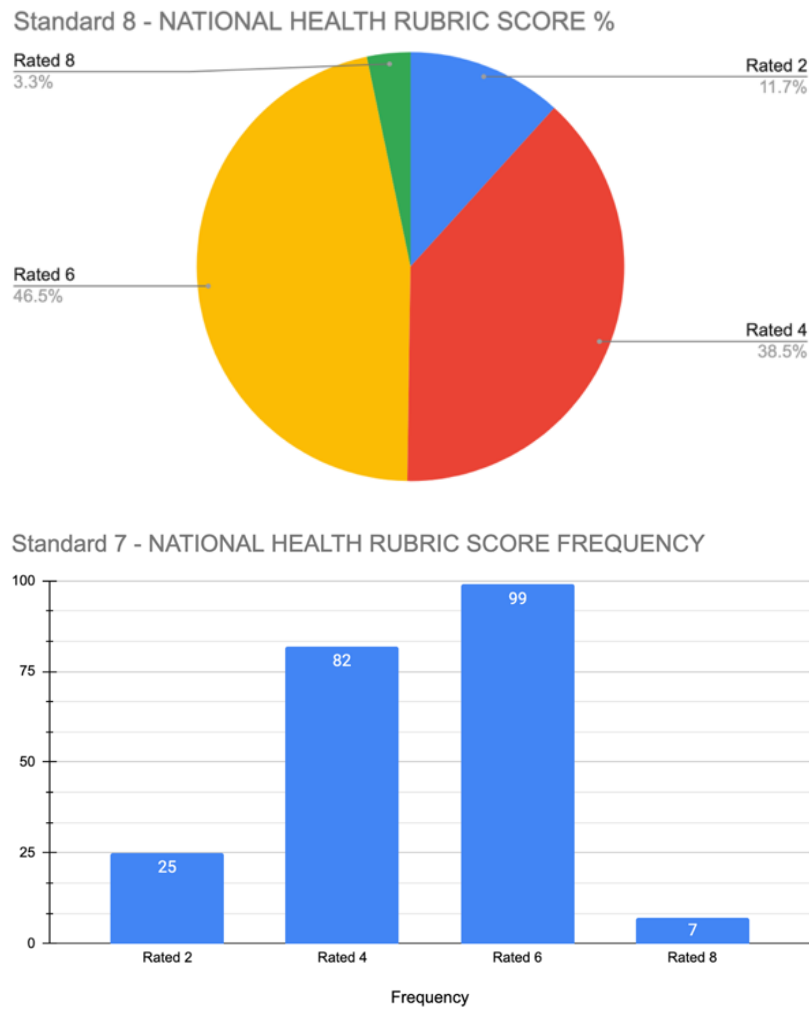
Note. (N)=213 respondents

Figure 16 represents the frequency of ratings for ‘National Health Standard 8 Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning

four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 16 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 6 as the most prevalent ranking for Standard 8.

Figure 16

RQ2 National Health Standard 8 Frequency Results



Note. (N)=213 respondents

Research Question 3

Research Question 3 examined rank and percentile-quartiles, central tendency, variability, and frequency utilizing a numerically-scaled researcher-created rubric.

Overall rubric scores indicated the variability of Illinois Learning Standards for Physical Development and Health included in the seven studied regions in Illinois school curriculum.

What is the evidence of Illinois Learning Standards for Physical Development and Health within the Illinois high school physical education and health curriculum as measured by a numerically-scaled comparison to characteristics and standards represented by the Joint Committee on National Health Education Standards framework?

Research Question 3 Results

Research Question 3 examined central tendency, variability, and frequency utilizing a numerically-scaled researcher-created rubric. Overall rubric scores indicated the variability of Illinois Learning Standards for Physical Development and Health standards included in the seven studied regions in Illinois school curriculum.

Rubric Scores

Table 13 provides an overall rubric score for each Illinois Learning Standards for Physical Development and Health Standard which are ranked from having most to least standards included within each region's curriculum.

Table 13*RQ3 Illinois Learning Standards for Physical Development and Health Rubric Scores*

| Standards | Region 1 | Region 2 | Region 3 | Region 4 | Region 5 | Region 6 | Region 7 | Rubric Score |
|-----------------------------------|----------|----------|----------|----------|----------|----------|----------|--------------|
| Standard 19 State PE and Health | 162 | 142 | 140 | 140 | 152 | 144 | 174 | 1054 |
| Standard 20 State PE and Health | 164 | 134 | 130 | 142 | 134 | 126 | 132 | 962 |
| Standard 21 State PE and Health | 176 | 148 | 148 | 150 | 156 | 132 | 162 | 1072 |
| Standard 22 State PE and Health | 170 | 140 | 126 | 144 | 146 | 132 | 152 | 1010 |
| Standard 23 State PE and Health | 170 | 136 | 140 | 144 | 134 | 126 | 142 | 992 |
| Standard 24 - State PE and Health | 152 | 142 | 140 | 140 | 124 | 114 | 116 | 928 |
| Totals | 994 | 842 | 824 | 860 | 846 | 774 | 878 | 6018 |

Note. (N) = 213 respondents across 7 regions

Rank and Percentiles

Each Illinois State Learning Standard for Physical Development and Health are displayed in Table 14 and listed by rubric points, rank, and percentiles/quartiles. Standard 21 ranked 1 and Standard 24 ranked 6.

Table 14*RQ3 Illinois Learning Standards for Physical Development and Health Rank and Percentiles*

| <i>Standard</i> | <i>Rubric Points</i> | <i>Rank</i> | <i>Percentiles</i> |
|-------------------------------|----------------------|-------------|--------------------|
| Maximum Points = 2,130 points | | | |
| Standard 21 | 1072 | 1 | 100.00% |
| Standard 19 | 1054 | 2 | 80.00% |
| Standard 22 | 1010 | 3 | 60.00% |
| Standard 23 | 992 | 4 | 40.00% |
| Standard 20 | 962 | 5 | 20.00% |
| Standard 24 | 928 | 6 | 0.00% |
| Minimum Points = 426 Points | | | |

Note. (N) = 6 standards

The maximum possible score for each Illinois Learning Standard was 2,130 points. Standard 21 earned the highest total with 1,072 points, representing 50.3% of the maximum possible score. Standard 19 followed with 1,054 points (49.5%), while Standard 22 earned 1,010 points (47.4%). Standard 23 achieved 992 points (46.6%), Standard 20 earned 962 points (45.1%), and Standard 24 received the lowest score with 928 points (43.6%). Overall, the six Illinois Learning Standards ranged from 43.6% to 50.3% of the maximum possible score.

Central Tendency

The descriptive analysis for central tendency for Research Question 3 displayed in Table 15 revealed a rubric mean score of 1003 (SD = 54.47). The sample size included n=213 across 7 state regions in Illinois with a total possible rubric maximum score of 1440 and minimum of 360 points for all six Illinois State Learning Standard for Physical

Development and Health. There was a Median score of 1001, no Mode score, with a Range of 144 resulting in evidence of the overall rank of scores from least to most for each of the standards.

Table 15

RQ3 Illinois Learning Standards for Physical Development and Health Central Tendency

| <i>RQ3 Rubric Scores</i> | |
|--------------------------|--------|
| Mean | 1003 |
| Standard Error | 22.24 |
| Median | 1001 |
| Mode | #N/A |
| Standard Deviation | 54.48 |
| Sample Variance | 2967.6 |
| Range | 144 |
| Minimum | 928 |
| Maximum | 1072 |
| Sum | 6018 |
| Count | 6 |

Note. (N) = 6 standards

Variance

The variability between each rank were important when looking at differences in the standards included in the curriculum. The variance between each ranked Illinois Learning Standards for Physical Development and Health standard is exhibited in Figure 16. It was important to note the difference in variances when comparing ranks when looking at close ranges compared to ranges with a further difference.

Table 16*RQ3 Illinois Learning Standards for Physical Development and Health Variance*

| | | Rank 1 | Rank 2 | Rank 3 | Rank 4 | Rank 5 |
|--------|--------------|--------|--------|--------|--------|--------|
| | Rubric Score | 1072 | 1054 | 1010 | 992 | 928 |
| Rank 1 | 1072 | 0 | -18 | -62 | -80 | -144 |
| Rank 2 | 1054 | 18 | 0 | -44 | -62 | -126 |
| Rank 3 | 1010 | 62 | 44 | 0 | -18 | -82 |
| Rank 4 | 992 | 80 | 62 | 18 | 0 | -64 |
| Rank 5 | 928 | 144 | 126 | 82 | 64 | 0 |

Frequency

A total of 1,274 ratings were collected across six standards from 213 participants within seven state regions. A Numerical Scale included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. The frequency of each data interval are illustrated in Table 17.

Table 17*RQ3 Illinois Learning Standards for Physical Development and Health Interval**Frequency Scale**RQ 3. Interval Scale Frequency Standard - State PE & Health Standards*

| <i>Interval Data Scaled Scores</i> | | | | |
|------------------------------------|--------------------|--------------------------|--------------------------------|-------------------------|
| <i>Scale</i> | <i>No evidence</i> | <i>Emerging Evidence</i> | <i>Implementation Evidence</i> | <i>Full Integration</i> |
| <i>Standard</i> | 2 | 4 | 6 | 8 |
| <i>Standard 19</i> | 21 | 83 | 96 | 13 |
| <i>Standard 20</i> | 37 | 95 | 70 | 11 |
| <i>Standard 21</i> | 19 | 82 | 95 | 17 |
| <i>Standard 22</i> | 33 | 75 | 95 | 8 |
| <i>Standard 23</i> | 34 | 82 | 88 | 8 |
| <i>Standard 24</i> | 44 | 92 | 71 | 5 |

Note. (N)=1274

Figure 17 represents the frequency of ratings for ‘Illinois Learning Standards for Physical Development and Health Standard 19’ Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 2 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 6 as the most prevalent ranking for Standard 19.

Figure 17

RQ3 Illinois Learning Standards for Physical Development Standard 19

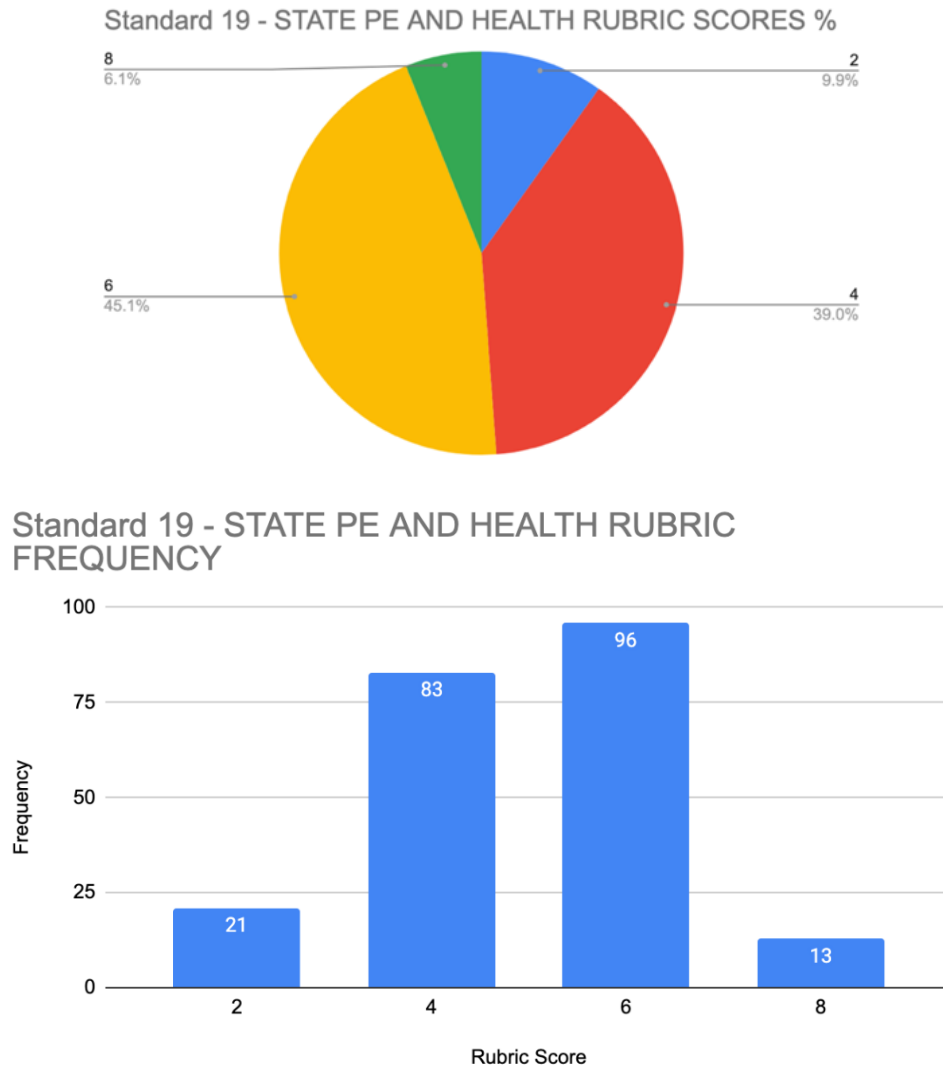


Figure 18 represents the frequency of ratings for ‘Illinois Learning Standards for Physical Development and Health Standard 20’ Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied

earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 21 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 6 as the most prevalent ranking for Standard 20.

Figure 18

RQ3 Illinois Learning Standards for Physical Development and Health Standard 20

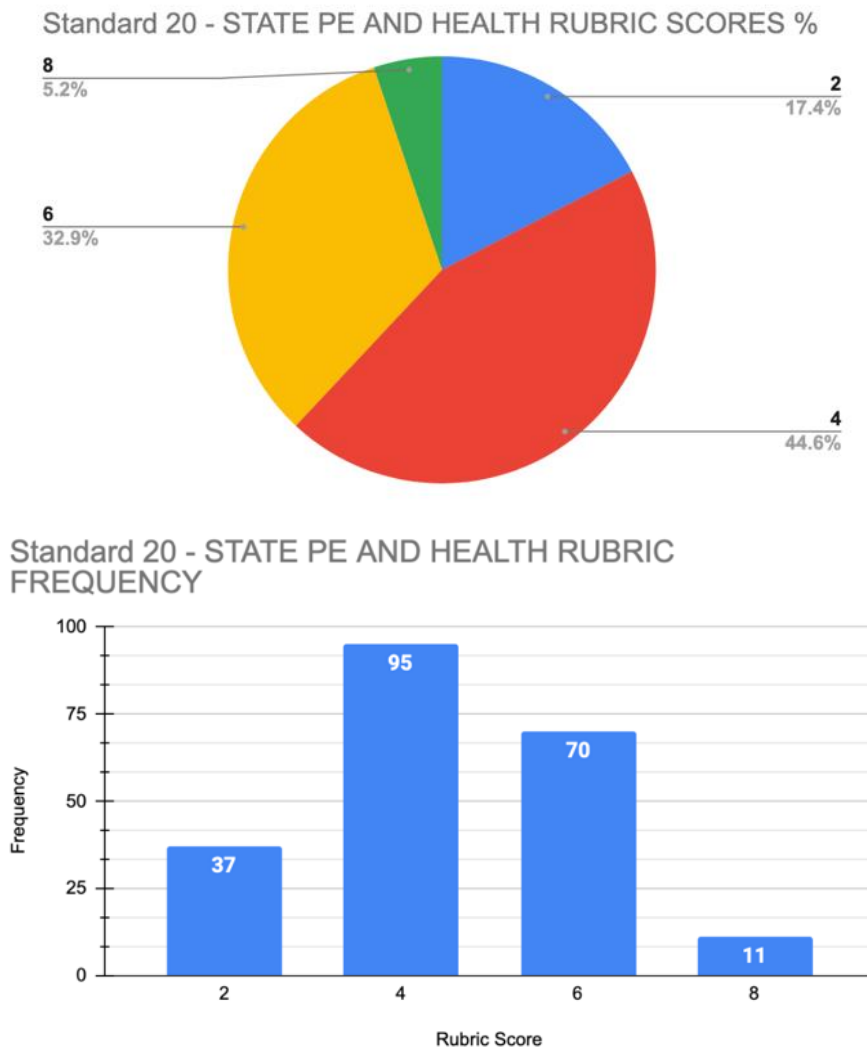
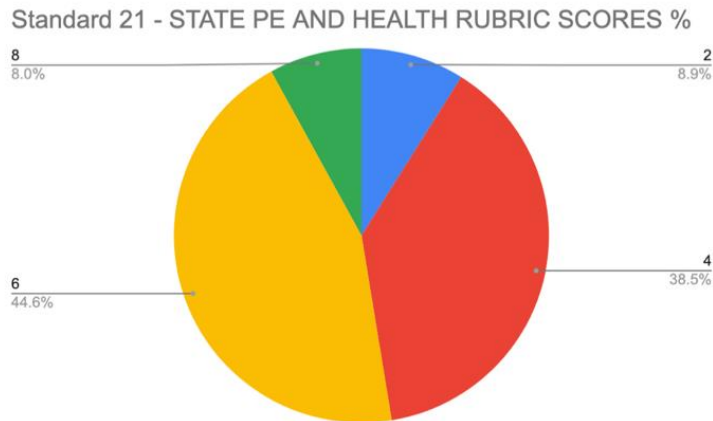


Figure 19 represents the frequency of ratings for ‘Illinois Learning Standards for Physical Development and Health Standard 21 ‘Frequency Results’ from the researcher-

created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 22 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 6 as the most prevalent ranking for Standard 21.

Figure 19

RQ3 Illinois Learning Standards for Physical Development and Health Standard 21



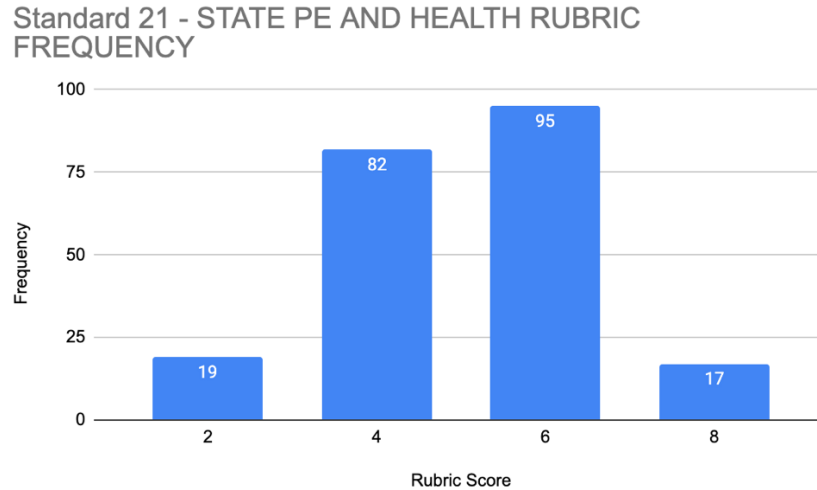


Figure 20 represents the frequency of ratings for ‘Illinois Learning Standards for Physical Development and Health Standard 22’ Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 20 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 6 as the most prevalent ranking for Standard 22.

Figure 20

RQ3 Illinois Learning Standards for Physical Development and Health Standard 22

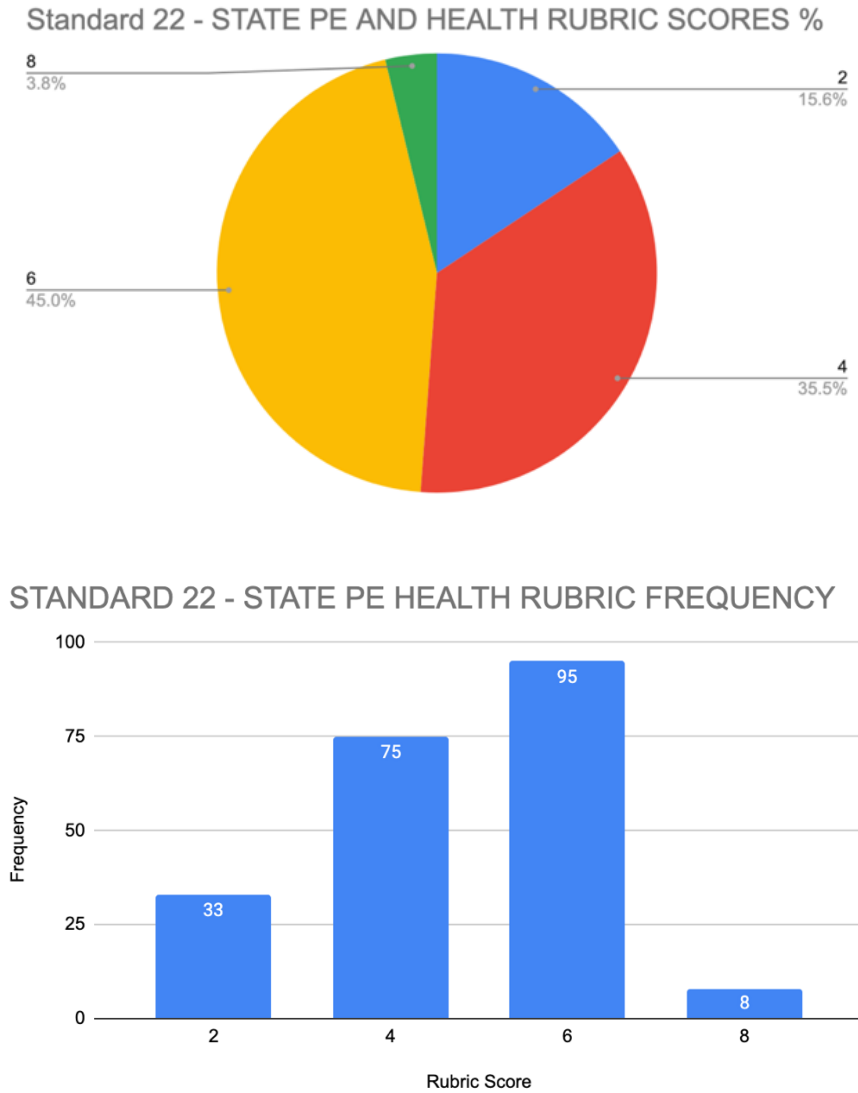


Figure 21 represents the frequency of ratings for ‘Illinois Learning Standards for Physical Development and Health Standard 23’ Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence”

of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 24 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 6 as the most prevalent ranking for Standard 23.

Figure 21

RQ3 Illinois Learning Standards for Physical Development and Health Standard 23

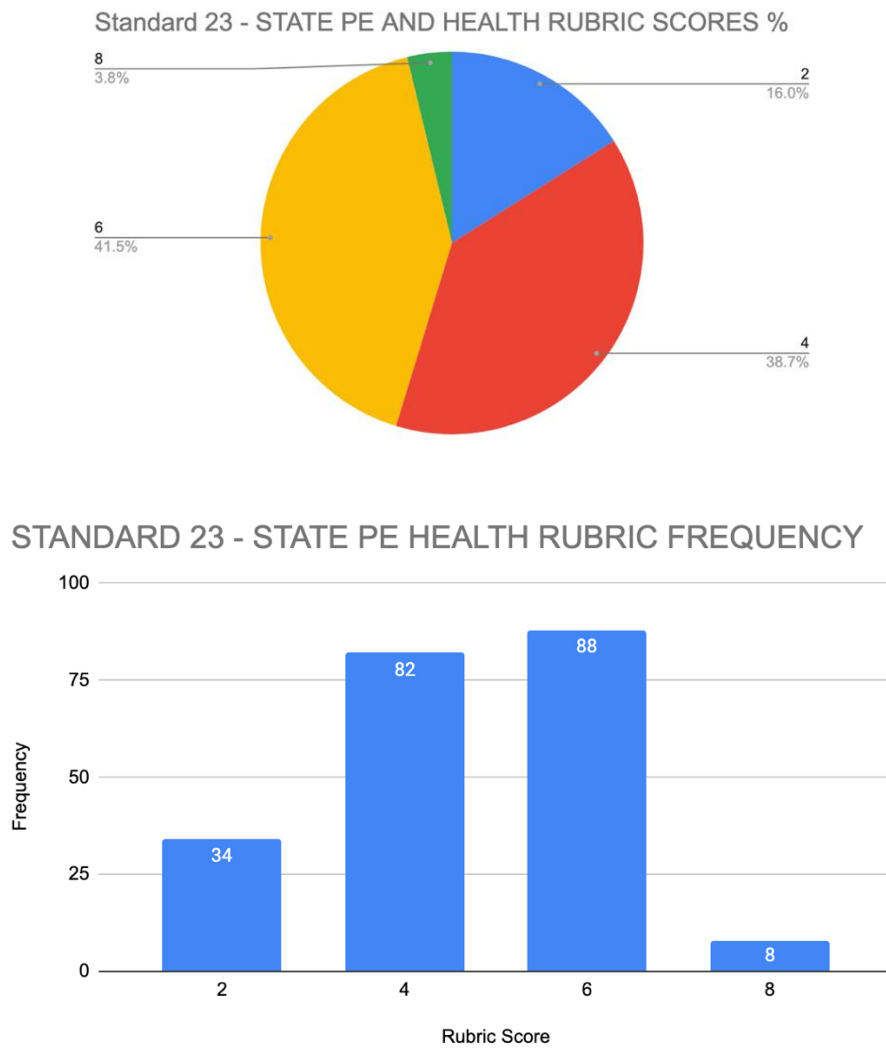
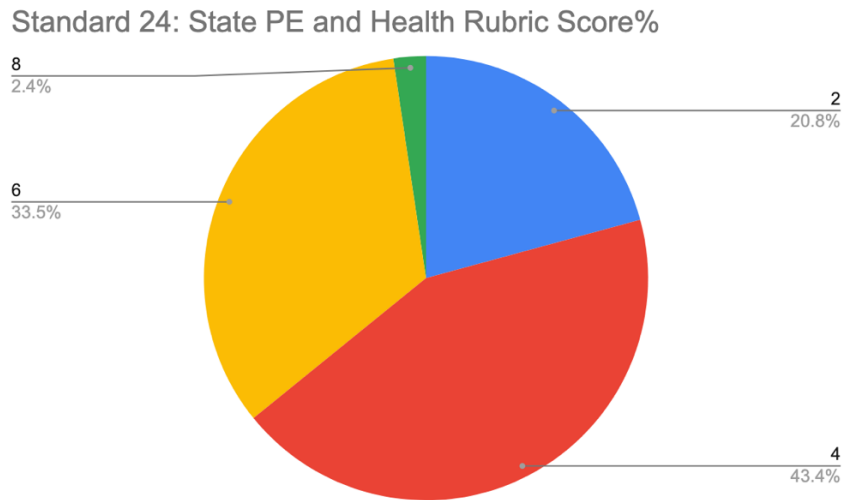


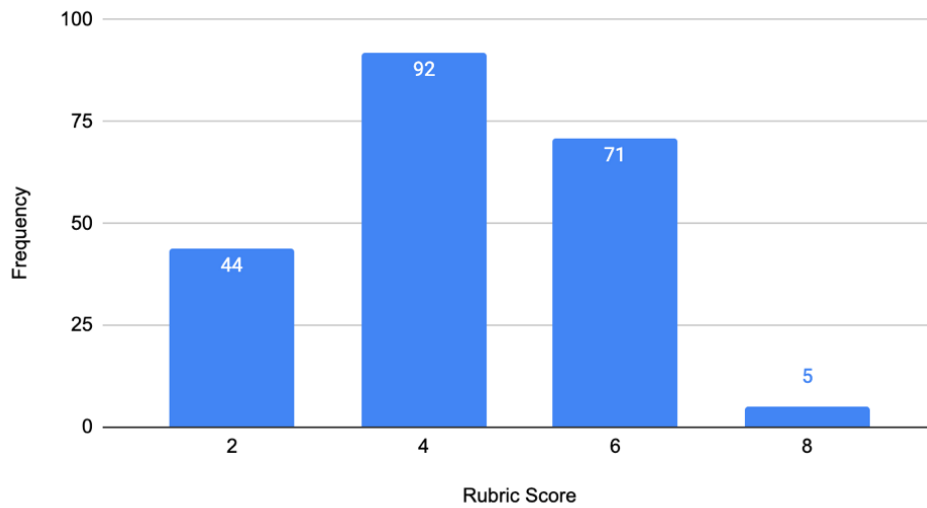
Figure 22 represents the frequency of ratings for ‘Illinois Learning Standards for Physical Development and Health Standard 24’ Frequency Results’ from the researcher-created numerical scale that included interval data denoted as “No Evidence” of the standard in the curriculum, earning two points; “Emerging Evidence” of the standard, which lacked a description of outcome, earning four points; “Implementation Evidence” of standard, which lacked a description of how the standard and outcome were applied earning six points, and “Full Integration Evidence” of standard and outcome that included a description of the application earning eight points. However, Figure 24 depicts two visual graphs denoting how closely each category ranked and where it ranked, indicating a rating of 6 as the most prevalent ranking for Standard 24.

Figure 22

RQ3 Illinois Learning Standards for Physical Development and Health Standard 24



Standard 24: State PE and Health Rubric Frequency



Summary

The purpose of the data collection and review was to show an investigation of the evidence of existence of integrated and verifiable national and state standards in physical education and health curriculum taught in Illinois high schools. Through a detailed content review, the researcher was able to conclude that national and state standards are not being fully integrated, and Illinois high schools are using the standards at a minimum level of near 50%. The researcher concluded Research Question 1 has evidence of National Physical Education Standards within Illinois high school physical education curriculum, but at a below a full-integration level. The researcher concluded Research Question 2 has evidence of National Health Standards within Illinois high school health curriculum, but at a below a full-integration level. The researcher concluded Research Question 3 has evidence of Illinois Learning Standards for Physical Development and Health within Illinois high school curriculum but at a below a full-integration level.

Chapter Five: Discussion

Purpose

The researcher developed this dissertation study based on her experience as a health and physical education educator in a high school setting, recognizing that the health and physical education curriculum was an area of concern. The purpose of the quantitative study was to investigate evidence of national and state health and physical education standards in Illinois high schools. The researcher utilized a rubric for each research question to compare the Illinois High School Association (IHSA) seven state divisions (see Appendix A). The purpose of the study analysis is to allow Illinois education decision-makers to compare their included National and State Physical Education and Health curriculum standards with other schools in the State.

Research Questions

The researcher included three research questions, looking for evidence of National and State Physical Education and Health Standards within Illinois high schools' online curriculum. Each research question examines specific frameworks and whether there is evidence of the particular framework in the Illinois schools' curriculum and to what degree, based on a rubric. The research questions for this content analysis study are as follows:

Research Question 1

What is the evidence of National Physical Education Standards within the Illinois high school physical education curriculum as measured by a numerically-scaled comparison to characteristics and standards represented by SHAPE America's National Standards and Grade-Level Outcomes framework?

Discussion

Data reflects Standard 1 had the highest total rubric score of 1024 and Standard 4 had the smallest total rubric score of 936. Although Standard 1 had the highest total rubric score, it did not meet the highest standard of full integration. In fact, frequency of a full integration was only at a score of 40 for National PE Standards. When compared to the frequency of implementation, at a score of 412 and emerging at a score of 451, the conclusion can be made that schools are falling behind when it comes to full integration of National PE Standards.

Figure 3 recognizes that 44.1% of schools are at an emerging level for Standard 1, thus showing more work needs to be done to incorporate National PE Standard 1. Figure 4 shows that 50.7% of schools are at an emerging level, thus showing more work needs to be done to incorporate National PE Standard 2. Figure 5 shows that 48.1% of schools are at the emerging level for Standard 3, thus showing more work needs to be done to incorporate National PE Standard 3. Figure 6 shows that 37.6% of schools are at an implementation level for Standard 4, thus showing more work needs to be done to incorporate National PE Standard 4. Figure 7 shows that 40.8% of schools are at an implementation level for Standard 5, thus showing more work needs to be done to incorporate National PE Standard 5. After reviewing the data, significant emerging and implementation levels are shown to be most prevalent at 50% or less. Therefore, schools throughout the State of Illinois need to improve scores beyond those lower levels and work towards a full integration of all five standards at the National PE level.

Research Question 2

What is the evidence of National Health Education Standards within the Illinois high school health curriculum as measured by a numerically-scaled comparison to characteristics and standards represented by the Joint Committee on National Health Education Standards framework?

Discussion

Data reflects Standard 3 had the highest total rubric score of 1122 and Standard 8 had the total least rubric score of 876. Standard 3, although had the highest total rubric score, yet did not meet the highest standard of full integration. In fact, frequency of a full integration was only at a score of 48 for National Health Standards. When compared to the frequency of implementation at a score of 678 and emerging at a score of 661, the conclusion can be made that schools are falling behind when it comes to full integration of National Health Standards.

Figure 10 in Chapter 3 described that 51.6% of schools are at an implementation level for Standard 1, thus showing more work needs to be done to incorporate National Health Standard 1. Figure 11 shows that 38.0% of schools are at an emerging level, thus showing more work needs to be done to incorporate National Health Standard 2. Figure 12 shows that 40.0% of schools are at the emerging level for Standard 3, thus showing more work needs to be done to incorporate National Health Standard 3. Figure 13 shows that 40.0% of schools are at an implementation level for Standard 4, thus showing more work needs to be done to incorporate National Health Standard 4. Figure 14 shows that 42.3% of schools are at an implementation level for Standard 5, thus showing more work needs to be done to incorporate National Health Standard 5. Figure 15 shows that 39.4%

of schools are at an emerging level for Standard 6, thus showing more work needs to be done to incorporate National Health Standard 6. Figure 16 shows that 39.4% of schools are at an implementation level for Standard 7, thus showing more work needs to be done to incorporate National Health Standard 7. Figure 17 shows that 46.5% of schools are at an implementation level for Standard 8, thus showing more work needs to be done to incorporate National Health Standard 8. After reviewing the data, significant emerging and implantation levels are shown to be most prevalent at 50% or less. Therefore, schools throughout the State of Illinois need to improve scores beyond those lower levels and work towards a full integration of all eight standards at the National Health level.

Research Question 3

What is the evidence of Illinois Learning Standards for Physical Development and Health within the Illinois high school physical education and health curriculum as measured by a numerically-scaled comparison to characteristics and standards represented by the Joint Committee on National Health Education Standards framework?

Discussion

Data reflects Standard 21 had the highest total rubric score of 1072 and Standard 24 had the least total rubric score of 928. Standard 21, although, had the highest total rubric score, and did not meet the highest standard of full integration. In fact, frequency of a full integration was only at a score of 62 for Illinois Learning Standards for Physical Development and Health. When compared to the frequency of implementation at a score of 515 and emerging at a score of 509, the conclusion can be made that schools are falling behind when it comes to full integration of Illinois Learning Standards for Physical Development and Health.

Figure 19 recognizes that 45.1% of schools are at an implementation level for Standard 19, thus showing more work needs to be done to incorporate Illinois Learning Standards for Physical Development and Health Standard 19. Figure 20 shows that 44.6% of schools are at an emerging level for Standard 20, thus showing more work needs to be done to incorporate Illinois Learning Standards for Physical Development and Health Standard 20. Figure 21 shows that 44.6% of schools are at the implementation level for Standard 21, thus showing more work needs to be done to incorporate Illinois Learning Standards for Physical Development and Health Standard 21. Figure 22 shows that 45.0% of schools are at an implementation level for Standard 22, thus showing more work needs to be done to incorporate Illinois Learning Standards for Physical Development and Health Standard 22. Figure 23 shows that 41.5% of schools are at an implementation level for Standard 23, thus showing more work needs to be done to incorporate Illinois Learning Standards for Physical Development and Health Standard 23. Figure 24 shows that 43.4% of schools are at an emerging level for Standard 24, thus showing more work needs to be done to incorporate Illinois Learning Standards for Physical Development and Health Standard 24. After reviewing the data, significant emerging and implantation levels are shown to be most prevalent at 50% or less. Therefore, schools throughout the State of Illinois need to improve scores beyond those lower levels and work towards a full integration of all six standards at the Illinois Learning Standards for Physical Development and Health level.

Discussion Summary

Overall, although standards are at the median level between emerging and implementation levels, data shows very little in the form of full integration of any of the

standards. Therefore, it is the researcher's recommendation that schools make standards more of a priority in the physical education and health education classrooms, provide more hands-on training to help teachers learn how to incorporate all of the standards, and for administrators to provide necessary feedback on the use of standards in the classroom, but not at the detriment of the teacher's yearly evaluation requirements.

Limitations Discussion

Although this study provided valuable insights into the alignment of Illinois high school physical and health education curriculum materials with state and national standards, several limitations must be acknowledged.

Document Availability

One limitation was the reliance on publicly available, online curriculum documents. Schools that did not provide materials on their websites were excluded, which may have introduced bias into the sample. It is possible that schools with more transparent or updated websites were overrepresented in the findings.

Curriculum Versus Implementation

Another limitation was the focus on written curriculum, rather than instructional practice. The presence of standards in curriculum documents does not guarantee that those standards are taught or emphasized in classroom instruction. Therefore, while this study identified alignment on paper, it could not capture how the curriculum was enacted by teachers.

Instrumentation

The Curriculum Review Document developed by the researcher was used as the primary data collection tool. Although the instrument was aligned to established SHAPE and ISBE standards, it had not been previously validated by other researchers. As a result, the reliability and validity of the instrument rests on its theoretical alignment and pilot testing, rather than external validation.

Researcher as Sole Coder

Because the researcher served as the sole coder, the study may have been subject to unintentional bias. Inter-rater reliability could not be established, which may limit the reliability of coding decisions. Efforts were made to minimize this limitation by applying clear coding definitions and testing the instrument on a small sample of documents before full implementation.

Generalizability

Finally, the study was limited in its generalizability. Findings apply specifically to Illinois high schools within the seven IHSA divisions and cannot necessarily be extended to other states. Furthermore, results describe the presence of standards at one point in time and may not reflect future curriculum changes.

Implications

Administrators, curriculum directors, and teachers can use the results of this study to examine the current coursework and lessons to determine whether their programs are adequately incorporating the National and State Physical Education and Health Standards in the curriculum. The data could also lead to changes in daily practice required to meet the intended standard recommendations. Teachers in these fields could attend current

professional development opportunities to further develop their understanding of incorporating the standard recommendations.

Recommendations for Future Research

The researcher recommends that teachers use these results to design and incorporate more curriculum designed to meet or exceed the standard recommendations. Administrators need to hold teachers accountable for incorporating the standards. More education should be provided so teachers learn these expectations and how to use each standard in curriculum. Furthermore, the limitations of this study highlight several opportunities for future research that could extend and strengthen the findings.

Broader Sampling Strategies

Future studies could expand beyond Illinois and include schools from multiple states to determine whether similar patterns of alignment with SHAPE and state standards exist nationally. Additionally, including schools that do not post curriculum documents online, perhaps through direct district collaboration, would reduce bias related to document availability.

Classroom Implementation Studies

Because this study focused on written curriculum documents, future research should examine classroom implementation of physical and health education standards. Observational studies, teacher interviews, or student assessments could provide a more complete picture of how written standards are translated into practice.

Instrument Validation

The Curriculum Review Document created for this study could be refined and validated through expert review and use by multiple researchers. Establishing inter-rater reliability

would improve confidence in the tool and allow it to be applied across other states and contexts.

Mixed-Methods Approaches

Future research may benefit from a mixed-methods design, combining document analysis with qualitative interviews or focus groups. Such an approach could capture both the presence of standards in curriculum materials and the perspectives of educators responsible for implementing them.

Longitudinal Studies

Finally, longitudinal research could examine how alignment with national and state standards changes over time as school districts revise curriculum and respond to shifts in educational policy. This would provide valuable insights into the sustainability and progression of standards-based instruction.

Conclusion

In agreement with United States Department of Education, the researcher agrees that defined standards are “. . . what all students should know and be able to do” (1994, p. 3). The researcher believes that for health and physical education classes to be fully successful, full integration of the National Physical Education Standards, the National Health Education Standards, and the Illinois Learning Standards for Physical Development and Health must be incorporated, supported, and required by all administrators, curriculum directors, and teachers. As noted in the data, Illinois high schools that are using the standards are at the approximate level of 50%. Moreover, minimal numbers at full integration prove more accountabilities should be demanded of school districts to improve curriculum in two subjects that lack notable

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Vitae

Amber Stewart was born and raised in Brighton, Illinois. She graduated from Southwestern High School in Piasa, Illinois in 1993. She later earned an Associate in Applied Science (Office Technology) degree from Lewis & Clark Community College in 1995 and an Associate in Science degree in 2006. Mrs. Stewart later attended Southern Illinois University Edwardsville where she graduated Summa Cum Laude with a Bachelor's of Science degree in Physical Education Teacher Education with endorsements in both Health and Driver's Education in 2009. Upon graduation, Mrs. Stewart taught junior high and high school physical education and health courses. While teaching, she earned a Master of Science in Education - Kinesiology from Southern Illinois University Edwardsville in 2013. Mrs. Stewart currently teaches physical education and health courses at Southwestern High School in Piasa, Illinois. Mrs. Stewart also coaches middle school boys' track and high school cross-country; and serves as a co-sponsor for high school student government. She resides in Brighton, Illinois, with her husband, J. Dan Stewart; daughter, Megan R. Stewart; and her Turkish Angora, Scarlet. Mrs. Stewart plans to graduate from Lindenwood University with a doctorate in Educational Leadership in December 2025.