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Teachers' Perceptions of Multimodal Literacies in Middle School Health Literacy Programs

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MEd, University of Toledo, 2006

BS, Ashland University, 1998

Dissertation Submitted in Partial Fulfillment

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Abstract

Health literacy, defined as the ability to understand and use health information to make informed decisions. Despite a plethora of research on health literacy, little is known about ways to improve adolescent health literacy. Adolescents' low health literacy contributes to poor academic performance, growing health disparities, and a strain on the health care system. The purpose of this study was to investigate teachers' perceptions of the effectiveness of multimodal literacies on adolescents' overall health literacy via the introduction of health literacy programs into the curriculum. Multimodal literacies help students to create meaning through viewing print-based resources and using digital technologies. The conceptual framework for this study used the socioecological model. Phenomenology was used to study the lived experiences of six middle school teachers. Purposeful selection was used to invite middle school teachers with a minimum of 8-10 years teaching experience from one urban middle school in the Midwestern United States to participate in the in-depth interview process. Following the interviews, transcripts were imported into NVivo v. 10 and analyzed for reoccurring themes and meaning. These interviews yielded 4 common themes: efficacy of multimodal literacy, health literacy, blending cultures, and responsibility. The results suggested that (a) multimodal literacies with adolescent literacy components can be used in the middle school curriculum, and that (b) these literacies can help inform policy changes. Positive social change could occur if school systems understand the utility of incorporating adolescent health literacy in the present curriculum. Doing so could help reduce future health care costs and improve the future health of students.

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Dedication

I humbly dedicate this dissertation to all my ancestors who were not allowed to read and write without severe punishment. I give all the praise to the Creator for allowing me to remain healthy throughout this adventure.

Acknowledgments

I acknowledge my parents and children for their support throughout this journey. I would like to thank my committee chair, Dr. Diane Cortner, and committee member, Dr. Jeanne L. Connors, for their suggestions and guidance.

I must thank the educators and principal who made this dissertation possible. I will be forever grateful for their willingness to give of their time and insight. I acknowledge my Aunt Hazel and Aunt Shirley for their examples of perseverance. I must also thank those individuals who supported me with daily encouragement. A special thank you must go out to those friends who fed me when I was too tired to cook.

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Chapter 1: Introduction to the Study

Health literacy, the ability and competence to understand and use health information to make informed decisions, is critical to maintaining health (Hepburn, 2012). Students with a variety of health concerns, including mental health issues, physical health issues, and emotional health issues, receive most of their treatment from the education system (Suldo, Friedrich, & Michalowski, 2010). Suldo et al. (2010) called the education system a *de facto system of care* because three quarters of children rely on health services provided by school systems. Middle school teachers can help their students to become healthy adults by incorporating adolescent health literacy into the curriculum.

Multimodal literacy refers to the use of different modalities to communicate the intended message, which in this case is adolescent health literacy. These modalities can be print (reading and writing), visual, electronic, and audio, and it is up to the education system to provide students with opportunities to use numeracy skills, listening skills, writing skills, reading skills, speaking skills, and other literacy skills as they work through the middle school curriculum. Strategies to address and improve adolescent health literacy have not been implemented in many school systems.

According to the Centers for Disease Control and Prevention (CDC, 2011), adolescents' lack of health literacy can contribute to poor academic performance and future health disparities. In the current education climate in the United States, where the focus is more on testing than teaching life skills, adolescent health literacy has not been perceived as important enough to be included as an essential component of the

curriculum (Manganello, 2008). School systems that improve adolescent health literacy and provide health intervention programs also help to support the health of the entire community (World Health Organization [WHO], 2013). Incorporating comprehensive, multimodal adolescent health modules into the curriculum can make it easier for students to choose healthy lifestyle choices that will benefit them as they progress into adulthood (Herbert & Lohrmann, 2011). Understanding teachers' perspectives about the efficacy of these multimodal literacies in health literacy programs directed toward improving the health literacy of middle school students was the focus of this study (Walsh, 2010).

The U.S. Department of Health and Human Services (HHS, 2010) identified adolescent health as a new area of concern. Of particular interest to the HHS (2010) is the inclusion of preventive health programs in the curriculum. According to Knopf, Park, and Mulye (2008), despite copious research on adolescent health literacy, little is known about ways to improve adolescent health literacy. School systems have traditionally played a role in implementing health prevention programs and classroom teachers often are the primary resource professionals who are called upon to implement various school programs (WHO, 2000). Preemptive adolescent health programs could range from HIV prevention to delinquency prevention.

Mogford, Gould, and Devought (2010) postulated that health education programs should be designed to give students information about personal and community social conditions. Mogford et al. suggested that inequalities in health care could be reduced by examining established core curriculum content and revising parts of it that do not meet adolescent health literacy needs. For example, issues that contribute to health inequalities

in some communities could be the result of the lack of incremental health education that should begin before young readers can read or write (Herbert & Lohrmann, 2011).

Robert Balfanz (2009), codirector of the Talent Development Middle and High School Program and the Everyone Graduates Center, stated that middle schools are in the best position to influence the future health of their students. One way that they can do this is by including adolescent health literacy in the curriculum to reduce or remove disparities in health status. Knopf et al. (2008), for example, asserted that the majority of mental health problems diagnosed in adulthood begin in adolescence.

Health literacy extends beyond basic reading and writing skills. According to Durlak, Weissberg, Dymnicki, Taylor, and Schellinger (2011) adolescents in the United States have difficulty managing academic, emotional, and behavioral issues, difficulties that sometimes appear simultaneously and often stay active into adulthood. Middle school teachers play an essential role in determining the ways in which students understand and react to social and emotional adjustments.

Reddy, Rhodes, and Mulhall (2003) posited that teacher involvement in middle school includes mentoring, confidential consulting, and friendship. However, Reddy et al. also explained that middle schools often structure the curriculum to accommodate academic mandates and fail to provide any instruction relevant to adolescent health literacy. Leger (2001) asserted that teachers should become partners in shaping health education programs that can support students' lifelong practices. This study focused on the potential role of middle school teachers by identifying their perspectives about the efficacy of multimodal literacies to improve adolescent health literacy.

Teachers are responsible for providing a learning environment that gives adolescents the opportunity to improve their health literacy. Gaining information about middle school teachers' perspectives about the efficacy of multimodal literacies to improve adolescent health literacy was the focus of this study. Middle school teachers who support a school-based health curriculum, whether in the form of intervention programs or content spread across the whole curriculum, could be invaluable in promoting and teaching the health skills that students will need later in life (Durlak & DuPre, 2008).

Pleasant (2011) identified health literacy as having multiple domains. As early as 1998, Nutbeam discussed the concept of health literacy and expanded it to include social skills, that is, how students manage their social and emotional needs. Nutbeam (2008) also clarified how school systems could become partners in integrating health literacy programs into the curriculum. The first step would be to acknowledge the importance of social and emotional skills development and then find ways to incorporate these skills into the daily academic practices of their students.

Background of the Study

The primary role of schools is to help students to reach their academic potential, but because of the mandate to meet specific academic requirements, health education is not always included in the curriculum. Expanding academic requirements to include a component in health literacy could provide opportunities to develop students' social and emotional skills and subsequently improve their academic and health-promoting skills (Nutbeam, 2008). According to Peerson and Saunders (2009), teaching health literacy as

part of the curriculum could improve students' future health outcomes and relieve pressure on the health care system (Ibeziako, Bella, Omigbodun, & Belfer, 2010). Teachers have the opportunity to provide students with the knowledge and skills that they will need to become active decision makers in their own health outcomes (Walter, Gouze, & Lim, 2006). According to the WHO (2000), the correlation between poverty and poor health is very strong.

Health Literacy

The HHS (2010) stated that health literacy should be grounded in the curriculum and provided to all adolescents. Middle school teachers try to prepare students to become healthy adults, but to reach this goal, they must provide students with a curriculum that offers them a solid foundation in health literacy. The National Foundation for Infectious Diseases and Pfizer Inc. (NFID and Pfizer, 2013) reported that being proactive in regard to adolescent health issues will have positive future health benefits. Health literacy has the potential to help adolescents to deal positively with such health issues as depression, diabetes, and obesity-related heart issues (NFID and Pfizer, 2013).

Data from the NFID and Pfizer (2013) identified the need to connect adolescents to the health care system. The current disconnection is creating a plethora of health problems for adolescents; Knopf et al. (2008) confirmed that although some adolescents are receiving social and emotional help, especially in regard to mental health issues, many other students do not receive any help at all to deal with physical or social health needs. The NFID and Pfizer report is important to school systems because it identified a link between students' health literacy and academic performance. The NFID and Pfizer

presented evidence-based data of a relationship between poor physical and mental health and declining academic performance.

Multimodal Literacies

Middle school teachers are in the unique position of being able to teach adolescents about health literacy through the introduction of programs in the curriculum. They also can monitor the use of multimodal literacies in health literacy programs that address students' mental health, physical health, and emotional health issues. The skills that students can learn through the efficacy of multimodal literacies in health literacy programs can help them to achieve better health later in life (Manganello, 2008). The purpose of this study was to gain a better understanding of middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy.

Jewitt, Kress, Ogborn, and Tsatsarelis (2001) defined multimodal approaches to teaching as the interactions among linguistic, visual, and actional communication systems. Transmitting academic information effectively to students requires different types of communicative systems or modes. Multimodal literacy is one such system (Jewitt et al., 2001). The new literacy skills that students need to become proficient in reading, interpreting, responding to, and viewing multimodal digital texts require teachers to understand and be aware of the ways that multimodal literacies are structured and understood by adolescents (Walsh, 2009). Delivering adolescent health literacy to students by using multimodal literacies might require some teachers to make a paradigm shift in their teaching. Research is needed to understand middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy

and then determine how the perceptions might influence middle school teachers' motivation to use multimodal literacies in their teaching practices.

Problem Statement

Despite a plethora of research on health literacy, little is known about ways to improve adolescent health literacy (Knopf et al., 2008). Researchers such as Flecha, Garcia, and Rudd (2011) have determined that low health literacy will likely have a detrimental impact on students' personal health and put a strain on the health care system. Low health literacy refers to difficulty understanding written instructions, following instructions, using information to carry out instructions, and solving health-related problems (Doak & Doak, 2010). Low health literacy could be improved if teachers were to become more aware of the connection between low health literacy and adolescent health literacy in the middle school setting.

According to Cohen and Syme (2013), middle school teachers are in a position to improve adolescent health literacy. Leger (2001) stated that teachers must examine the contributions that they can make to ensure that students have health literacy and that incorporating health literacy into the curriculum will not supplant other educational obligations. The purpose of this study was to gain a better understanding of middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy. I interviewed six middle school teachers to gain insight into the possibility of incorporating or improving adolescent health literacy components in the curriculum by using multimodal literacies.

Purpose of the Study

The purpose of this qualitative study was to gain a better understanding of middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy. I explored relevant information related to literacy, teachers' perceptions of literacy, and the broader implications related to adolescent health. This knowledge can be used to develop curriculum and recommend policy changes to the middle school system. According to Somers and Mahadevan (2010), individuals who lack health literacy skills are at a disadvantage in terms of health care and are considered the least prepared to benefit from the Affordable Care Act (ACA).

Nature of the Study

Qualitative research not only facilitates the investigation of the lived experiences of individuals to determine how those experiences shape present behavior but also allows researchers to gain a deeper understanding of the phenomena that they are investigating (Trochim & Donnelly, 2008). I investigated teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy in the middle school system. Taking a phenomenological approach (Glendinning, 2007) allowed me to assess the lived experiences, depth of knowledge, and beliefs of a sample of six middle school teachers to better understand their perceptions of multimodal literacies.

Research Question

The study was guided by one research question: What are middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy?

Conceptual Framework

The conceptual framework that I used in this study was the socioecological model (Robinson, 2008), which has its roots in ecological science (Chesworth, 1996). Robinson (2008) explained the ways that the five levels of the framework help to build on interventions at the individual, interpersonal, organizational, community, and policy levels. The conceptual framework helped me to identify the perceptions of middle school teachers of the efficacy of multimodal literacies to improve adolescent health literacy.

Bordage (2009) suggested that conceptual frameworks allow researchers to use different methods to study problems. Although researchers have identified many types of conceptual frameworks, Jabareen (2009) explained the importance of using a system of concepts to organize ideas involved in the framework; organizing these concepts helps researchers to develop clarity and describe the main themes of the phenomena under investigation. Husserl's concept of phenomenology has four interconnected components of intentionality (i.e., intuition, essence, reduction, and intersubjectivity) that researchers use to understand the meanings of phenomena (as cited in Kafle, 2011). By bringing these concepts together as phenomenology, I studied the lived experiences of six middle school teachers (Finlay, 2009).

Definitions of Terms

Adolescent: Young people between the ages of 10 and 19 years (Manganello, 2008).

Ecological model: A model used to examine how perception is constructed and understood.

Empowerment: Attempt by individuals to gain control of their lives in their communities (Fetterman, 2001).

Low health literacy: Difficulty understanding written instructions, following instructions, using information to carry out instructions, and solving health-related problems (Doak & Doak, 2010).

Middle school teachers: Teachers of students in Grades 7 and 8.

Modes: Sets of resources for making meaning (Roswell, 2011).

Multimodal literacy: Multimodal in this study refers to how teachers make meaning. Meaning making refers to how teachers present the curriculum (e.g., audio knowledge, written text, or computer-based knowledge). Meaning making happens when students read, view, understand, or respond to and produce and interact with multimedia and digital texts (Roswell & Walsh, 2011; Sanders & Albers, 2010; Walsh, 2010).

Phenomenological study: Illuminating specific phenomena by studying the lived experiences of individuals (Finlay, 2009).

Twenty-first century literacy: Socially motivated and engaging information that should work toward social action; is influenced by global perspectives (Sanders & Albers, 2009).

Assumptions, Limitations, Scope, and Delimitations

Assumptions

I assumed that the teachers would answer the interview questions honestly and to the best of their knowledge. I assumed that the middle school setting would be an optimal environment to provide health literacy to adolescents. I assumed that the participants

were representative of an urban school district in the Midwestern United States. I assumed that the teachers knew what multimodal literacies were and had used them in other subject areas. I also assumed that multiple themes would emerge from the analysis of the responses to the interview questions.

Limitations

Six middle school teachers were recruited to participate voluntarily in this study at one middle school; therefore, the results might not be applicable to elementary or high schools. In addition, the findings might not be relevant to other school systems interested in implementing a health literacy component into the curriculum.

Scope

One of the essential goals of this study was to gain a better understanding of middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy. I encouraged the teachers to express their feelings about the challenges and barriers that they perceived as being relevant to the efficacy of multimodal literacies to improve adolescent health literacy. The teachers' knowledge about their personal health impacted their responses to the interview questions.

Delimitations

All of the participants were middle school teachers employed at one middle school in the Midwestern United States. Future researchers could examine the structure of the middle school environment to determine how their positioning between elementary and high school could be used to improve students' health literacy skills.

Significance of the Study

The results of this study will provide the education system in Ohio with information about teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy. According to Flecha et al. (2011), health literacy skills will give students access information that they can use to ensure future health benefits. Understanding teachers' perceptions of the efficacy of multimodal literacies also could help to shape curriculum content.

Mogford et al. (2010) asserted that health inequalities are increasing and suggested that integrating health literacy into the curriculum and using multimodal literacies as a teaching strategy will give adolescents the information that they need to find out about critical health issues and ways to avoid or deal with them. The results will help teachers to identify the most efficacious multimodal strategies to teach adolescent health literacy.

Implications for Social Change

Middle school systems could be powerful stakeholders in improving the health outcomes of adolescents and building healthy communities. I explored the lived experiences of six middle school teachers to obtain their perceptions of the efficacy of multimodal literacies to improve adolescent health literacy and find out how they were incorporating multimodal literacy strategies into their teaching strategies. Without fully understanding the implications of teachers' perceptions related to health literacy and the efficacy of multimodal literacies, training future middle school teachers on adolescent health literacy might be difficult. New information gained from understanding the

perceptions of teachers of the efficacy of multimodal literacies could support the integration of adolescent health literacy into the middle school curriculum.

Summary

Schools systems are in position to provide information to adolescents that promotes healthy behaviors throughout the life span. By improving the health literacy of students, they will be able to address future health issues and assume more responsibility for their own health status. Understanding teachers' beliefs about the efficacy of multimodal literacies to improve adolescent health literacy could support socioemotional (SE) literacy, nutritional literacy, and any other literacy that supports the well-being of students while they are in middle school (Manganello, 2008). Researchers have demonstrated that school systems that support health literacy benefit positively and impact the health of communities (Sykes, Wills, Rowlands, & Popple, 2013).

In Chapter 1, I introduced the purpose of the study, background of the problem, nature of the study, and significance of the study. I also included a discussion of the importance of understanding middle school teachers' perceptions of the efficacy of multimodal literacies. In Chapter 2, I review the literature with a focus on health literacy, phenomenology, multimodal literacies, low literacy levels, teachers' perceptions, interventions and empowerment, and the ways in which these ideas highlight the efficacy of multiple literacies to improve adolescent health literacy. After reviewing the literature, I provide details of the research design and data analysis in Chapter 3. Chapter 4 includes the results of the study and provides details about the pilot study, participants' interview information, and data collection and analysis processes. Chapter 5 includes my summary

of the research findings and offers recommendations, discusses the limitations, and explains the implications of the study for social change.

Chapter 2: Literature Review

Introduction

It is important to incorporate a robust health literacy program into the curriculum, but before new programs can be initiated, school systems need to understand how adolescent health literacy will benefit the future health of students. I organized the literature review into seven sections: (a) literacy, defining the definition to promote clarity; (b) health literacy; (c) empowerment; (d) multimodal literacies; (e) health literacy programs; (f) teachers' perceptions; and (g) ecological systems. Discussion focused on how the concepts connect with teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy.

I obtained supporting research from peer-reviewed journals, dissertations, and scholarly books. I also searched the ERIC, Education from Sage, Academic Search Complete, ProQuest Central, Pubmed, EbscoHost, and Google Scholar databases for relevant material. Key terms used to search the literature included *literacy*, *health literacy*, *multimodal literacy*, *interventions*, *empowerment*, *teacher perceptions*, *phenomenology*, *ecological systems*, and *adolescent health literacy*.

Literacy

Osborne (2005) defined literacy as the ability to read and write to obtain the information necessary to reach desired goals. Osborne initially identified four fundamental characteristics that conceptually define health literacy: reading skills, comprehension skills, numeracy skills, and communication skills. Osborne also suggested

that proficiency in these conceptual skills will enable individuals to understand valuable health information.

Literacy has become a multifaceted conceptual model that includes the ability not only to read and write but also to understand how to navigate multimodal literacies efficiently. Concepts of literacy have expanded to include references to people's lived experiences and life functioning, as witnessed in the use of Facebook and other social networks. Restricting the definition to reading and writing limits the application of applied literacy. Although the use of literacy models and delivery modes has broadened, students continue to have low literacy levels (Pitcher, Martinez, Dicembre, Fewster, & McCormick, 2010). According to Pitcher et al. (2010), if students are low-level readers, their academic skills and motivation to learn will be reflected in their poor literacy skills. Teachers can alter the delivery modes of literacy to accommodate the needs of students.

Barton, Hamilton, and Ivanic (2000) separated literacy into two concepts: literacy events and literacy practices. Barton et al. defined literacy practices as the use of text necessary to navigate everyday life. This use of text is different from the ways in which students use educational text. Barton et al. defined literacy events as parts of a system: An education example would be understanding and mathematical numeracy systems. Perry (2012) explained that understanding literacy events and literacy practices helps to shape literacy development, and in the case of this study, this understanding can lead to the development of adolescent health literacy.

Multimodal Literacies

Jacobs (2012) prepared questions that teachers might consider when teaching with multimodal literacies. Jacobs stated that incorporating multimodal literacies into instructional strategies could help teachers to present the curriculum in more interesting ways. Implementing multimodal literacies as a tool to help clarify the *what* or *how* of a subject could engage adolescent students more readily. However, not all teachers have embraced the concept of multimodal literacies. According to Mills (2009), some teachers are uncomfortable with the vague definition of multimodal literacies and are not yet convinced that using multimodal literacies will increase students' learning. Mills asserted that some teachers will continue to teach predominantly using print-based components and virtually ignore the text engagement students undertake while they are outside of the school environment.

Multimodal literacy is a strategy, not a method steeped in synchronization (Graham & Benson, 2010). Multimodal literacy strategies combine modes of literacies that result in meaning making, which happens when students read; view; understand; or respond to, produce, and interact with multimedia and digital texts (Roswell & Walsh, 2011; Sanders & Albers, 2010; Walsh, 2010). The purpose of these modes of literacy is to produce lifelong learners. Modes present opportunities for critical analysis in a myriad of areas; modes include linguistic, audio, spatial, gestural, and visual (Graham & Benson, 2010). These modes work in concert to produce critical thinkers. The linguistic mode delivers the spoken word, along with words in context; the audio mode uses music or other sound structures; the spatial mode must make sense of the space given for content;

the gestural mode is used to describe the actions made by individuals; and the visual mode determines how something looks (Graham & Benson, 2010). All of the identified modes, except the gestural mode, are used by the majority of students.

Sanders and Albers (2010) studied the wide usage of multimodal literacies among youth, but Mills (2009) contended that adolescents also must be taught how to think critically about the messages that they read and produce in their social and academic settings. Internet use and multimodal literacy skills are the foundation of 21st-century learning (Dalton & Smith, 2012), so students who have underdeveloped literacy skills will face challenges regarding not only their academic achievement but also how they deal with issues (e.g., mental, physical, emotional, etc.) in their personal lives.

Multimodal literacies offer low-level readers more opportunities to become engaged in the learning process. Mills (2009) observed that multimodal literacies also have ushered in many new hybrid literacies. Teachers might consider health literacy one such literacy hybrid. Integrating health literacy programs into the curriculum and teaching the content of these programs using multimodal literacies would give adolescent students more opportunities to learn about health issues relevant to their own lives.

Health Literacy

Integrating health literacy programs into the curriculum is one way to increase adolescent students' health literacy awareness (Mogford et al., 2010). Teachers might or might not understand the need for health literacy programs in the public school system. Mogford et al. (2010) suggested that health literacy programs should include components that educate and empower students at the individual level. Seros (2005) determined that

health literacy programs empower individuals to accept health knowledge in a way that encourages them to adopt new health habits.

Nutbeam (2000) developed three levels of health literacy. Level 1, *functional health literacy*, communicates information about health risks. Level 2, *interactive health literacy*, develops personal knowledge and skills in order to make independent health choices. Level 3, *critical health literacy*, develops cognitive skills that support effective social and political action, and is usually linked to the community or a particular population. These identified levels could be incorporated into health literacy programs that could then be integrated into the curriculum.

Confusion about health literacy and its inclusion in the curriculum continues. Teachers might have questions about how health literacy should be taught, where it should be taught, and by whom it should be taught; however, what is clear is that adolescents who have poor or low health literacy might become adults who have poor health status overall (Cunha, Souza, Peireira, & Sichieri, 2013). The education system has a responsibility to provide adolescent students with health literacy in preparation to be healthy adults. The Institute of Medicine (2004) reported the lack of health literacy as one of the most important health crises facing the United States. Students must begin to develop their health literacy skills long before they enter postsecondary school. Health literacy benefits the health outcomes of all children.

Danhauer, Johnson, and Caudle (2011) found that the teachers in their study demonstrated high compliance with a new intervention but low acceptance of the new intervention. Danhauer et al. surmised that low acceptance of the intervention was

partially the result of the lack of background knowledge about the intervention and partially the result of the teachers' negative attitudes toward the intervention. They also acknowledged that few researchers have investigated the knowledge that teachers have about new interventions that they are required to implement. Developing students' health literacy skills through the use of multimodal literacies to present the content of health literacy programs will require major changes to the curriculum (Sykes et al., 2013). Therefore, it is important to understand teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy via the introduction of health literacy programs into the curriculum.

Pleasant (2011) confirmed the importance of early health literacy development. Pleasant stated that students who have health literacy are capable of making beneficial health decisions. Part of adolescent health literacy also involves their understanding how they are involved in society, their environment, and their community. Students should be able to identify the social determinants or other outliers that could impede their health. Pleasant asserted that health literacy is essential in preparing individuals and the community to lead productive and healthy lives.

Early health literacy programs prepare students to become physically healthy and to think (Sykes et al., 2013). In order to do this, health literacy programs should include elements that teach students how to apply health literacy teachings now and into the future. According to Grace and Bay (2011), four identified health issues are detrimental to the lives of adolescents: tobacco harm, diet, lack of physical activity, and the use of alcohol. It is important for adolescents to know what the impact of each health issue is

and ways to improve or reduce their impact (reduce or stop smoking, improve diet, become more active physically, and abstain from alcohol use). Grace and Bay suggested that these subject matters could be incorporated into science programs, with the learning becoming a source of empowerment to students. School systems that do not have health literacy programs could develop activities for students that address SE literacy and low literacy.

Socioemotional Literacy

Emotions can help or hinder children's academic involvement and success (Durlak et al., 2011). Durlak et al. (2011) postulated that many students lack SE competencies, a situation that could negatively affect their academic success. Middle school adolescents encounter many obstacles, but when their SE literacy levels are low, their overall literacy levels are low, and poor academic performance can be the result.

Social and emotional learning/literacy (SEL) allows children to know and manage their emotions (Gunter, Caldarella, Korth, & Young, 2012). Defining SEL also involves the development of empathy, the ability to make decisions, develop skills that produce peer-to-peer relationships, and develop the ability to handle difficult situations in positive and effective ways. SEL refers to the development of skills framed around self- and social awareness, emotion regulation, responsible decision making, problem solving, and relationship management (Reyes, Brackett, Rivers, Elbertson, & Salovey, 2012).

Gunter et al. (2012) noted that recognizing internalized emotional challenges such as depression, classroom inactivity, and aggression could help to identify children in need of SEL interventions. Well documented is the fact that SEL is necessary; Kabasakal and

Totan (2011) determined that teachers and parents are responsible for promoting SEL skills. They also stated that protecting and implementing mental health programs for children will foster positive behaviors. Teacher commitment, as pointed out by Kabasakal and Totan, is an important element in the success and implementation of any program.

Jennings and Greenberg (2009) reported that without adequate resources at the onset of new programming, teachers might feel anxious about implementing the programming into the curriculum and presenting it successfully to students. Collie, Shapka, and Perry (2011) asserted that a commitment from teachers is important to ensure the success of SEL programming in benefitting students. Programs that are beyond the scope of teachers' understanding must have their support in order to be successful.

Low Literacy

Researchers have identified a correlation among social disadvantages, education levels, and future health outcomes. As stated by Weeks (2012), two of every five people living in the United States have low health literacy, a situation that should compel education systems and health agencies to develop partnerships to obtain more data. In particular, Flecha et al. (2011) determined that some citizens from challenging socioeconomic backgrounds lack opportunities and face future health disparities. Other researchers (Flecha et al., 2011; Weeks 2012) also have found that the home and school environments play an important part in the development of students' health literacy.

According to Tongsakul, Jitgarun, and Chaokumnerd (2011), teaching students to become literate has historically been the job of the school system. In the contemporary

Information Age, new curriculum content and instructional strategies must be employed to promote healthier futures for students. Health literacy in particular can empower students. Improving low literacy levels will facilitate the integration of health literacy programs into the curriculum.

Shanahan and Shanahan (2008) contended that individuals who have higher level reading skills and instructional support in their jobs have the opportunity to move into better jobs, whereas those with low reading skills work remain in blue-collar jobs. Low literacy levels also can be an additional challenge to patients, who might have difficulty reading health information, directions in health facilities, and directions on prescriptions. Following prescribed dietary instructions also can be difficult for individuals with limited literacy. However, health care professionals should be cautious not to misinterpret low literacy levels as a lack of intelligence. Individuals with poor literacy skills have fewer opportunities to benefit fully from health information. Reardon, Valentino, and Shores (2012) reported that 10% of 17-year-old adolescents have literacy skills comparable to those of moderately skilled 9-year-old children.

Numeracy is a skill vital to the maintenance of health, but educators should not assume that the mathematics traditionally taught in the school system prepares students to be proficient enough in numeracy to handle health concerns. Low literacy levels, along with nonexistence SE literacy components, will continue unless creative health literacy programs are developed and integrated into the middle school curriculum.

Health Literacy Interventions

According to Devraj, Butler, Gupchup, and Poirier (2010), many types of programs are needed to make the education system aware of the importance of adolescent health literacy. Students as consumers need multiple places to obtain health literacy information. School systems could help to determine the types of adolescent health literacy interventions needed to improve the health of students.

Clocksin, Watson, Williams, and Ransdell (2009) acknowledged that combining health literacy programs and media literacy would bring technology to health education. This particular combination has proven promising in terms of teaching younger students about health literacy. Clocksin et al. identified two components that can keep students interested in health literacy: (a) By combing physical activities with knowledge about the pitfalls of a poor diet, students seem to connect in a more engaging manner to health messages, and (b) by providing mental stimulation, along with physical activity and media inclusion, students participate in their learning in a more engaging way. Developers of health literacy programs also must consider structural limitations such as time.

Time plays an important part in health literacy programs. According to Clocksin et al. (2009), by using a 4-week unit design, they were able to keep the students interested long enough to complete the unit. Connely, Turner, Tran, and Girdino (2010) stressed the importance of gathering data to understand the perceptions of the students who participated in a health intervention. The design of health literacy programs for adolescent students should include technology and physical activities associated with how to use the acquired knowledge in the real world.

Adolescent health interventions designed to promote social-psychological interventions are powerful tools that could be used to develop students' numeracy literacy, a skill needed to become proficient in health literacy (Yeager & Walton, 2011). Saunders, Evans, and Joshi (2005) discussed many ways to introduce health literacy programs into the curriculum. Assessing and analyzing teachers' perceptions of the importance of integrating adolescent health literacy programs into the curriculum were one component of my study.

Keefe and Copeland (2011) contended that inequalities between affluent and less affluent school districts also can affect the quality and even inclusion of adolescent health literacy programs in the curriculum. The effectiveness of teacher participation in implementing adolescent health literacy programs will be one of the most important factors that will determine how enthusiastically students will participate. Health literacy programs must be developed carefully to ensure that all community groups are represented and that all students have access to them. Flecha et al. (2011) stated that health literacy can empower individuals to address such social issues as poverty.

Health literacy programs must incorporate multimodal literacies from science, social studies, and mathematics programs (Deal, Jenkins, Deal, & Byra, 2010). School systems would have to complete the groundwork to establish such programs and identify the specific type of program that would fit into the dynamics of the school environment (Doll & Cummings, 2008). Whether school systems select established programs or develop their own, they have to determine how they will evaluate the programs to

determine whether the overall objectives are being met. Sometimes, teams need to help to implement new health literacy programs (Nelson, 2009).

Jones, Brown, and Aber (2011) supported changing the way that educators look at health literacy programs. Jones et al. contended that historically, health literacy programs have focused on academics and have not promoted SE outcomes. Evidence from Jones et al. showed that children with low SE development are more likely to manifest academic and behavioral deficiencies. Health literacy developed for the whole child will benefit children, the school, and the community. Nutbeam (2000) posited that improved health literacy is critical to empowerment.

Empowerment

Empowerment gained through health literacy has the potential to help adolescents to develop the life skills needed to benefit their future academic success and health. Kelcher and Hagger (2007) argued that health literacy is essential for individuals to manage their health successfully. Empowerment has been a common theme in the literature on health literacy (Walsh, 2010).

The empowerment resulting from being health literate contains three elements that can be strengthened through health literacy programs: (a) having access to and understanding health care, (b) having a positive relationship with health care providers in the future, and (c) understanding self-care (Paasche-Orlow & Wolf, 2007). Students need to understand that becoming empowered by participating in health literacy programs involves self-commitment, power to change, awareness of health threats, responsibility to oneself to make healthy decisions, and use of learned skills. Empowerment is impaired

when low to moderate health literacy skills are not sufficient to produce positive self-management (Egbert & Nanna, 2009).

Critical health literacy empowers individuals to be their own health advocates (Egbert & Nanna, 2009). Sykes et al. (2013) identified critical health literacy as the most misunderstood health literacy. Attributes associated with critical health literacy are a high level of interpersonal skills, such as advanced personal and social skills, confidence in communication skills, and the ability to send and receive health messages. The depth of knowledge proficiency required of critical health literacy is what sets it apart from other health literacies (Sykes et al., 2013).

Teachers' Perceptions

Once teachers understand the importance of adolescent health literacy, they might be more willing to embrace the introduction of health literacy programs into the curriculum. Researchers have determined that literacy in the 21st century must be multimodal. To improve low literacy levels and health literacy awareness, teachers must have more opportunities to gain knowledge about the importance of health literacy in determining the future health outcomes of adolescent students. Harbin and Newton (2013) stated that teachers' beliefs, values, experiences, views, knowledge, and judgment play a pivotal role in the implementation of new curriculum.

Teachers' beliefs about health literacy programs, their experience or nonexperience teaching adolescent health literacy, their judgments about their involvement in the process of implementing health literacy, their perceptions of the value of health literacy programs, and their knowledge of health literacy and health literacy

programs will impact the integration of health literacy programs into the curriculum. Professional development workshops could be designed to support the value of adding health literacy components to the curriculum; participation in such workshops could lead to teachers changing their beliefs, perceptions, and understanding of the importance of health literacy. Understanding these identified building blocks of perception will help the initial development of teacher interventions needed to begin incorporating health literacy into the curriculum.

Many health literacy issues are associated with skills gained in school. Some of the skills required to be health literate require understanding what is read about a condition, medication regimens, rates of hospitalization, and costs of services (Osborne, 2005). When communication skills, numeracy skills, and comprehension skills are lacking, individuals experience frustration on hospital visits and are confused about information given (Smith & McCaffery, 2010). Therefore, the role of teachers in supporting the integration of health literacy programs into the curriculum cannot be overstated. Low academic achievement and poor literacy skills play a key role in influencing the future health outcomes of adolescents (Smith & McCaffery, 2010).

Ecological Systems Model

Middle school students could become empowered to take responsibility for their own health status if health literacy programs were to be integrated into the curriculum and made available to them. An ecological model comprising a complex set of interrelationships could help to show how underdeveloped or misunderstood components of the system could affect all other components of the ecological system. Any component

of an ecological academic system has the potential to impede academic progress. For the purposes of this study, I examined the perceptions of teachers to determine how their views of multimodal literacies could affect the implementation of adolescent health literacy programs in the middle school curriculum. Stokols (1996) suggested that the primary reason health-promoting programs are not successful is that they lack clear foundational development. Preparing a strong foundation for change relevant to incorporating adolescent health literacy programs into the curriculum could emerge from the knowledge obtained from the teachers' responses to the interview questions.

Ecological systems are broken down into components that represent the whole (Hong & Garbarino, 2012). The ecological model, which was conceptualized by Bronfenbrenner (1994), comprises subsystems that represent the understanding of human growth. The first subsystem is the microsystem, described as the intrapersonal relationship between the person and the immediate environment. In my study, the person is the teacher, and the environment is the school. The second subsystem is the mesosystem, described as the interpersonal link between two or more settings. In this study, the link is the teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy via the introduction of health literacy programs into the curriculum**.** The third subsystem is the exosystem, described as identifying how individuals play a role in constructing organizational experiences. In my study, the link is between the teachers' perceptions and their impact on students' health literacy. The last subsystem is the macrosystem, described as being related to one's culture and society

(Bronfenbrenner, 1994). I sought to determine how teachers' belief systems could influence the development of adolescent health literacy skills.

Bronfenbrenner's (1994) framework unites personal contributions and the environment, along with the emotional environment or physical environment, and the influence of those perceptions on others. The importance of health literacy was noted by Wharf-Higgins, Begoray, and MacDonald (2009), who reported that only 20% of youth in high school were learning how to stay healthy. Framing the concepts that contribute to understanding the perception of teachers relevant to adolescent health literacy will augment current research on the implementation of adolescent health literacy programs.

Perceptions and Phenomenology

According to Neumann (1990), perceptions are a conceptual group of actions whose function is to establish and make current internal representations of one's environment. Teachers' perceptions represent their views about particular concepts. Visual and auditory perceptions are skills learned through lived experiences and are critical to understanding how teachers, particularly those who participated in this study, perceived the integration of health literacy programs into the curriculum (Gregory, 1997). However, Gregory (1997) suggested that both sets of perception skills can change through awareness training and opportunities to practice.

Understanding how perceptions lead to knowledge is essential to the success of any social change agent. According to Cassam (2008), researchers should be aware of the connection between perception and knowledge. Cassam stated that knowledge comes from perceptions, making it important to understand where and how teachers' perceptions

and acquired knowledge about adolescent health literacy and health literacy programs originated. Curriculum content is delivered through multimodal literacies, but the effectiveness of their implementation throughout the curriculum is affected by the thoughts, beliefs, and perceptions of teachers. Data collected and categorized through the themes that emerged in this study will help to advance the integration of adolescent health literacy programs into the curriculum and the implementation of multimodal literacies to deliver the programs.

Martinez-Avila and Smiraglia (2013) stated that perceptions are components of phenomenology, which was built on understanding how individuals make meaning of their lived experiences. Teachers' lived experiences influence their implementation of multimodal literacies to deliver adolescent health literacy programs. Hathaway (1995) argued that researchers must not ignore the philosophical structuring of perceptions related to phenomenology. Hathaway also stated that if researchers do not structure their phenomenological process properly, their identified themes might not be clear.

The phenomenological approach allowed me to identify the participants' perceptions. Phenomenological research seeks to describe rather than to explain (Glendinning, 2007); therefore, I gathered the information by conducting interviews with the participants. Phenomenologists collect data to identify common paradigms of knowledge among the participants in studies (Lester, 1999) that can be used to synthesize and discover themes. Merleau-Ponty (1962) described phenomenology as the study of essences of perceptions. Merleau-Ponty explained that understanding these essences is essential to obtain an understanding of the real meaning of the perceptions.

Phenomenological research describes experiences. Elliston and McCormick (1977) described the phenomenological model of Edmund Husserl, the founding father of phenomenology. Husserl's contribution to phenomenology was the development of reduction. Bracketing, as described by Husserl, allows researchers to suspend their own views or ideas while collecting information from the participants about their lived experiences (as cited in Elliston & McCormick, 1977).

Merleau-Ponty (1962) agreed with Husserl about the importance of describing lived experiences. However, Merleau-Ponty believed that the body cannot be bracketed from the mind in understanding phenomena. Researchers often use Husserl's phenomenological approach, which comprises four components (i.e., reduction, essences, intentionality, and description). I used description in the study (Giorgi, 2008; Reiners, 2012; van Manen, 2007). Hein and Austin (2001) believed that phenomenology evolved into two schools of thought and practices led by van Manen (2007) and Giorgi (2000), respectively: hermeneutic phenomenology and empirical phenomenology. Both researchers wanted to discover the lived experiences of their participants; their difference was in the approach. I focused on Giorgi's phenomenological approach. Hein and Austin compared the two schools and found that Giorgi's use of empirical phenomenology produced accurate descriptions of the participants' lived experiences in text derived from interviews. Hermeneutic phenomenology includes the use of other data, not just the lived experiences of the participants.

Qualitative Research

Qualitative research comprises techniques to collect and understand data from small groups (Schiavo, 2007). Qualitative researchers obtain in-depth information about particular phenomena (Martella, Nelson, & Marchand-Martella, 1999). Researchers must listen with nonjudgmental attention, offer no opinions, provide a comfortable setting for the participants, and be flexible in providing opportunities for the participants to respond in as much detail as they are willing to share. I explored and described the teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy by introducing a health literacy program into the curriculum.

Phenomenological researchers do not attempt to analyze the participants' experiences; they only want to find common meanings within the collected responses. Phenomenologists understand that reality is not fixed, so they must determine through inductive questioning what a particular reality is for an individual (Hathaway, 1995). Phenomenology is an inductive qualitative method used by researchers to understand or describe the lived experiences of their participants.

Denzin and Lincoln (2000) explained that qualitative researchers explore complicated social phenomena. I obtained the data for this qualitative study by interviewing the participants and then audiotaping their responses to the interview questions. I then categorized the audio tapes so that I could study them in more detail. Once I transcribed the text, I coded the responses and analyzed them to generate themes. Analysis of the transcribed interview responses required examining the text in detail to generate themes.

The framework of this study was the SE approach. According to Gombachika et al. (2012), the strength of the SE model as a framework lies in its use in investigations of multiple relationships. As stated by Capra (1996), ecology is the relationship that infuses all manner of the participants' world they existence in. The participants' world, as defined by the SE model, holds identified components of the individuals; their close relationships, which could be with family or work; their community, and their society. The SE model allowed me to systematically assess how the teachers' perceptions could facilitate implementation of a health literacy program into the curriculum.

Summary

Conceptual frameworks are a collection of systems of organizations based on systems of theories. According to Bordage (2009), conceptual frameworks are used to develop research projects. A strength of conceptual framework models is the structural design allows for each concept to be developed as a magnifying element to the problem (Bordage, 2009). I used a conceptual framework to identify the teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy via the introduction of a health literacy program into the curriculum. Trying to understand how much the teachers understood about health literacy by using a phenomenological approach made it easier for me to ask in-depth, probing questions during the interview process. The issue of health literacy education is not when to implement health education, but how to best implement health literacy programs. Teachers are one of the identifiable places to begin investigating what they know about health literacy. In Chapter 3, I describe the research design and provided details about the methodology and participants.

Chapter 3: Research Method

Introduction

The purpose of this chapter is to describe the methodology. As mentioned in Chapter 2, there is a lack of adolescent health literacy in the curriculum in some school systems. The CDC (2011) stated that not having health literacy skills could contribute to the poor academic performance of adolescents and result in future health disparities. The HHS (2010) identified the lack of adolescent health literacy as an emerging area of concern for many health organizations. Although the lack of adolescent health literacy is a serious health problem, little is known about ways to ensure that students receive the health education that they need to become healthy adults (Knopf et al., 2008).

Ohio is but one of many states that has not yet mandated health literacy as a component of the curriculum, a failure that could have negative consequences for the present and future health of adolescents in the state. School systems are logical places to implement and mandate health education. Information in the literature review emphasized the importance of improving the health literacy of adolescents in middle school. Skopelja, Whipple, and Richwine (2008) stated that although some states have implemented health literacy into the curriculum, many adolescents lack adequate reading comprehension skills and do not have proficient skills to research problems. Understanding middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy could support implementation of adolescent health literacy into the curriculum.

I used a qualitative, phenomenological design to conduct the study, and I used the SE model as the framework to explain how teachers' perceptions of the efficacy of multimodal literacies influenced their instructional strategies. Creswell (2006) asserted that qualitative research allows researchers to describe the social phenomena being studied. I explained how I obtained the participants and the procedure necessary to collect and analyze the data. My initial task was to collect narrative data from the participants. I conducted unstructured interviews to allow the participants to express their perceptions openly and naturally. Following in the next sections are explanations of the research design and rationale; my role as the researcher; and the study methodology, sampling procedure, and data collection and analysis protocols. The chapter concludes with a summary.

Research Design and Rationale

Qualitative researchers study human behavior and behavioral changes. Studying complex human phenomena in an organized manner helps researchers to stay focused (Creswell, 2006). I used a phenomenological approach to investigate the lived experiences of six middle school teachers to gain their perceptions of the efficacy of multimodal literacies to improve adolescent health literacy. Subjective experiences, as described by Lutz and Thompson (2003) are lived experiences told from the first-person perspective. According to Lester (1999), phenomenology allows researchers to delve deeply into the participants' perceptions. I conducted individual face-to-face interviews; if the participants agreed, I also recorded them using audio equipment. Experiences are derived from perceptions, emotions, and memories. Perceptions and experiences are

based in cultures, personal experiences and backgrounds, and levels of education. Phenomenological researchers recognize that the science of phenomenology seeks to describe a phenomenon rather than explain it (Husserl, 1970).

Descriptive phenomenology refers to a researcher's need to gain in-depth knowledge of the phenomenon (Giorgi, 1997). Unlike Heidegger's (1982) interpretive phenomenology, I did not intend to obtain knowledge for the purposes of interpretation. Instead, I used the data to describe the middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy.

Role of the Researcher

Qualitative researchers are interested in learning how the participants make sense of their world; in my study, understanding how the participants made sense of the world came from their perceptions (Costall, 1984; Merriam, 2009). The depth of the qualitative descriptions depended on the participants' willingness to share their lived experiences and perceptions during the interviews (Sandelowski, 2000). Qualitative researchers understand that the responses obtained from the participants will help them to identify and describe the lived experiences (Adolfsson, 2010).

Researchers also have to decide whether to use a structured or an unstructured interviewing process. Being knowledgeable about why and how to use a particular interviewing process is necessary to ensure the success of the interview, that is, the amount of information shared by the participants (DiCicco-Bloom & Crabtree, 2006). According to Peredaryenko and Krauss (2013), qualitative researchers are their own data collection instruments who extract and collect data from the participants without bias.

Researchers who support the phenomenological philosophy of Husserl must understand how to bracket their biases as part of the data collection protocol (LeVasseur, 2003). Ortlipp (2008) suggested that researchers keep reflective journals as part of the data collection process to bracket biases and opinions. Reflective journals help to promote the transparency of the research process (Watt, 2007), and they are a safe place for researchers to express feelings, ideas, and suggestions about the subject matter. Journaling, as described by Denzin and Lincoln (2003), Peredaryenko and Krauss (2013), and Turner (2010), is an essential skill that researchers can use to properly calibrate or check their researching instrument for accuracy.

Researchers also must be cognizant of the importance of producing credible research. The data must be useful and transparent, and researchers must be able to analyze them efficiently (Sinkovics, Penz, & Ghauri, 2008). Researchers must ask probing questions, listen intently, think clearly, and keep the interview process moving smoothly to gain knowledge of and insight into the situation (Denzin & Lincoln, 2003; Fink, 2000).

Methodology

I used descriptive phenomenology to study the perceptions of six middle school teachers about the efficacy of multimodal literacies to improve adolescent health literacy. I listened to the teachers' responses to the interview questions, interpreted their lived experiences, and identified themes that reflected their perspectives of the phenomenon under study (Willig, 2007). By choosing descriptive phenomenology, I explained the

participants' lived experiences and perceptions without interjecting my own insights or viewpoints (Kakkori, 2009).

Phenomenology

Husserl is considered the father of phenomenology, and Heidegger is considered a student of Husserl (Reiners, 2012). Phenomenology, as expressed by Heidegger and Husserl, is the process of revealing the lived experiences of people to explain social phenomena (Giorgi, 2000). Phenomenological researchers do not seek to establish new theories; instead, they develop explicit themes based upon the lived experiences of the participants in their studies.

Husserl based his foundation of phenomenology upon the transcendental ego, reductionism, essences, and bracketing. Heidegger disagreed with the idea of bracketing, so he developed his own branch of phenomenology, namely, hermeneutic phenomenology (as cited in Giorgi, 2000; Pascal, 2010), which is concerned with ontology and does not believe that individuals can bracket themselves from their lived experiences (Lopez & Willis, 2004).

Phenomenology has two schools of thought: hermeneutic and Husserlian. Hermeneutic phenomenology, the study of lived experiences, requires researchers to be mindful that they cannot separate what they believe from the phenomena being studied (Glendinning, 2007). Hermeneutics analyze their data using a hermeneutic circle, and the first interpretive meaning could emerge because researchers bring their own views into the interpretation. Researchers then go back to the information collected to decide whether that was what the participant was trying to convey initially. This approach allows

researchers to use the data to gain interpretive knowledge by fluctuating between pieces of the data and the whole collection of data to gain deeper insight (Wojnar & Swanson, 2007). Although Heidegger rejected the notion of transcendental occurrences, he did identify dasein, or the human way of being in the world (as cited in Campbell, 2001). Heidegger thought that it is impossible to study experiences without understanding how meaning is attached to them (as cited in Glendinning, 2007). Terms associated with hermeneutic phenomenology are *dasein*, *interpretation*, *reinterpretation*, and *meaning* (Campbell, 2001; Giorgi, 2000; Glendinning, 2007; Kakkori, 2009; Wojnar & Swanson, 2007).

I used Husserlian, or descriptive, phenomenology to conduct my study. Researchers use descriptive phenomenology, as described by Giorgi (1997), when they want to gain deep knowledge of the participants' lived experience. Gaining insight into middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy was the focus of this study. Reiners (2012) noted that Husserl's descriptive phenomenology states that researchers must describe everyday conscious experiences while simultaneously putting aside their preconceived ideas and opinions.

Reflective Journal

As mentioned earlier, I used a reflective journal to bracket my ideas and views (Broome, 2011). Bracketing, an essential component of Husserl's framework, occurs when researchers identify personal biases or ideas that they believe can interfere with the research (Chan, Fung, & Chien, 2013). Once I complete the bracketing process, I conducted the interviews.

Interviews

The interview questions were unstructured (Gill, Stewart, Treasure, & Chadwick, 2008). As the researcher, my primary goal was to listen intently to the participants' responses, be aware of the participants' body language as well as my own to ensure that the interview process stayed focused, and collected sufficient data to answer the research questions. I established the times and places of the individual interviews; each interview lasted approximately thirty to forty minutes.

Sampling

According to Giorgi (2008), the more depth of information that researchers wish to obtain, the fewer participants they should work with. Giorgi suggested as few as three participants in a sample. My sample comprised six middle school teachers whom I obtained from the teacher population in the community. The teachers were responsible for teaching different academic subjects.

Nonprobability purposive sampling resulted in participants who represented the target population of middle school teachers (Rea & Parker, 2005). Wilmot (2005) suggested that purposive sampling should be used when the size of the sample is not as important as the criteria used to select the participants, the first criterion being the character of each participant. Tongco (2007) stated that key informants often are selected based upon how observant they are, their reflective abilities, and their vast knowledge of the topic under study. Purposive sampling also is appropriate when a limited number of people possess specific insight into the importance of the study and are connected to the topic (Marshall, 1996). To be included in this study, the participants had to be middle

school teachers who were teaching curriculum content that did not include a component on adolescent health literacy. The participants were of any gender, had to have been teaching for a minimum of 6 years, and had to be willing to commit at least 1 hour to the interview process.

Data Collection

I sent an e-mail message to each volunteer participant that included details about the study. The principal had already given me verbal approval to contact the teachers who participated in the study. I used the school system's e-mail service as well as private cell phones to communicate with the participants. The selected teachers were representative of the teacher population in the school.

After I received approval from Walden University's Institutional Review Board (IRB approval #10-23-14-0173681) to conduct the study, I began scheduling the face-to-face interviews. I used an unstructured interviewing process to ask open-ended questions to obtain descriptive data (Holloway & Wheeler, 2010). Doody and Noonan (2013) explained that even though novice researchers might perceive unstructured interviewing as having no organization, researcher interviewers do follow interview guides. Boyce and Neale (2006) explained that interview guides ensure that researchers will not forget to ask important questions. Boyce and Neale also asserted that even if researchers are using unstructured interviewing methods, they should prepare and use interview guides to ensure that the research goals are met, such as preparing prompts that allow them to ask probing questions adjuvant to the original interview questions. Because interviews are based upon verbal communication structured to gain new knowledge about phenomena,

Bredart, Marrel, Abetz-Webb, Lasch, and Acquadro (2014) noted that the interview guide should not be viewed as an inflexible script to be adhered to.

Qualitative research methodologies and in-depth interviewing tools are used to gain insight into complex challenges (Britten, 2011). Open-ended interview questions should be formulated to ensure that they are not biased. Charmaz (2006) noted that researchers should be aware of how the questions are worded and try to ask the interviewees to describe situations rather than try to lead their responses.

Data Analysis

I analyzed the data gleaned from the interview responses to the open-ended questions. A number of strategies are available to analyze phenomenological data. Three of the most popular techniques are the Husserl-inspired approach, which comprises approaches used by Colaizzi (1973), Giorgi (2000), and Van Kaam (1966); the Heideggerian approach (1982); and the Utrecht approach (as cited in Reiners, 2012). All three techniques have specific ways of examining, categorizing, tabulating, and recombining data to develop themes.

Husserl Approach

The descriptive approach is based upon the Husserl-influenced data analysis that comes from the technique developed by Colaizzi (1973). Edward, Welch, and Chater (2009) described the seven steps of data analysis used by Colaizzi, who found a process to manage the rigor of phenomenology research. The seven data analysis steps developed by Colaizzi and presented by Edward et al. are as follows: (a) Transcribe all of the participants' verbal descriptions, (b) extract all statements directly related to the

phenomenon under study, (c) formulate meanings, (d) gather the information and generate themes, (e) produce a descriptive list that details the experiences of the participants, (f) clarify the fundamental structure of the phenomenon, and (g) validate the essence of the phenomenon with the participants. This method of data analysis is based upon Husserlian phenomenology, meaning that this approach can help to bracket researchers' ideas and views.

Heideggerian Approach

Unlike Colaizzi's (1973) descriptive phenomenological approach, Heidegger's circle uses an interpretive approach to analyze data. This second approach to data analysis is Heidegger's interpretive hermeneutic approach, which uses the hermeneutic circle method to analyze data. Butler (1998) defined circling as continually reviewing and analyzing between the parts of the data and the whole representation of data. The difference between Heidegger's approach and Husserl's approach is the use of bracketing. In Husserl's approach to data analysis, the researcher is an observer who listens attentively to the participants and then analyzes the data to develop themes. In Heidegger's data analysis approach, the researcher calls upon experience to interpret the data; the researcher cannot remove him or herself from the meanings that are extracted from the research data. The researcher's views become part of the analytical process.

Utrecht Approach

The third data analysis approach comes from the Utrecht method, which combines Husserl's descriptive analysis approach and Heidegger's interpretive circle analysis approach (van Manen, 2007). Researchers use this combination of the descriptive and the

interpretive approaches to analyze the data to identify themes. This approach is different from the other two in that it offers three options, as detailed by van Manen's method of analysis: holistic approach, selective approach, and selective approach (Polit & Beck, 2005). Once a particular method or approach has been selected, a researcher will identify themes, reflect on what was found by analyzing the data, and then return to the participants to validate whether what was discovered was accurate and true to their intent.

Giorgi's (2000) data analysis approach is based upon the discovery of common themes by listening. Giorgi supported Husserl's idea that researchers must bracket their ideas and views before they initiate the interview process. I used Husserl's descriptive technique to analyze the data in this study. I listened intently and ask probing questions until I reached data saturation.

Protection of Human Rights

Prior to conducting the study, I sent each participant a letter of cooperation. I anticipated that at least six middle school teachers would participate in the study. Once I begin the interviews, I made sure to code the data properly to maintain the confidentiality of the responses and the privacy of the respondents. The cover letter stated that the participants were volunteers, and the consent form disclosed that I intended to lock the transcriptions in a dedicated file and would not share them with any other parties.

Summary

I analyzed, categorized, and coded the data to develop the themes. The results might help to determine the efficacy of multimodal literacies to improve adolescent health literacy. The following chapter presents the results of this study.

Chapter 4: Results

Introduction

The purpose of this phenomenological study was to obtain the perceptions of teachers about the efficacy of multimodal literacies in middle school health literacy programs. I describe the collected data and the process by which the data were obtained. This chapter also includes information about the pilot study and its contribution to this study.

Pilot Study

I conducted a pilot study to (a) determine the efficacy of the research process and whether the interview questions could produce enough pertinent information, (b) ensure that the equipment and software were appropriate to accomplish the goals of the study, and (c) find out whether the allotted time of 45 minutes to 1 hour was appropriate for each interview. I created and then received permission to post a flyer at a neighborhood community center to solicit a retired teacher. The pilot participant was a volunteer at the community center who was a retired teacher. I explained the reason for the study and its connection to health and education. We agreed to meet in a private room at the main library. Once she signed the consent form, we engaged in the interview. Except for the volume being too low, the audiorecording equipment worked well, and the interview questions allowed me to collect enough data.

One problem was the location of the interview room. The participant had a difficulty finding the room because it was in a secluded area underneath the stairs. I made note of the problem and corrected it before the actual interviews began. The interview

went smoothly and took no more than half an hour. Following the interview, I thanked the volunteer for her time.

Setting

Although I had booked the room in the main library to conduct the interviews, two participants could not meet at that location. I subsequently found an alternate location at a library across town to meet these two participants. This library was smaller, and the room was easier to find. The interviews went as smoothly as well as the interviews at the main library.

Research Background

I conducted this phenomenological study to examine the teachers' perceptions of the efficacy of multimodal literacies in middle school literacy programs. Six teachers, four women and two men, volunteered to join the study and share their perceptions. The participants had teaching experience that ranged from 8 to 40 years. At the time of the study, there were working at full-time teaching jobs. The study was guided by one research question: What are middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy? The interviews were guided by 11 open-ended questions. The amount of detail in the responses varied based upon the respondents' perspectives and experiences.

1. Can you speak on the changes in the area of health literacy that you have seen since the beginning of your teaching career up until now?
2. Is it possible for you to elaborate on the changes in cultural populations from your first year of teaching to now? If you perceive there have been changes

how would you describe how the changes have impacted adolescent health literacy?

3. Teachers that have over eight years of teaching had the benefit of witnessing academic health classes to support student health. What changes have you witnessed concerning academic health classes for students over the life of your academic employment?
4. What are your feelings about the importance of incorporating adolescent health literacy into the curriculum?
5. When you began teaching, you had a full time nurse in your school. How has the cutting of nurse hours to ½ a day benefited or hurt the students receiving health services and academic health literacy?
6. What do you do when you feel your students need the services of adolescent health literacy?
7. Can you elaborate on how the infusion of outside agencies has helped your student population as it relates to adolescent health literacy?
8. From your first year of teaching until now, can you compare and contrast your perception of the changing diversity being witnessed as it relates to providing adolescent health literacy to a growing population of immigrant children?
9. What are your views on how adolescent health literacy will help your particular discipline?
10. How do you feel about the adolescent health literacy you now have in place?

11. Who do you believe should be responsible for producing adolescent health literacy in middle school?

Phenomenological inquiry allows researchers to understand the lived experiences of the individual by describing rather than explaining a phenomenon (Glendinning, 2007). Profiling each participant provided background information about them and introduced them to the reader. It did not explain the phenomenon under study.

Descriptive phenomenology allows researchers to collect in-depth personal information from the participants (Giorgi, 1997). Heidegger (1982) promoted interpretive phenomenology, but I did not interpret any of the data that I collected; instead, I described the middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy. In Chapters 4 and 5, I identify each participant with the capital letter P and a number (P1-P6). The following section details the participants' profiles and describes the data collection and analysis processes.

Participant Profiles

Participant 1

P1 was an African American female who has been a teacher for more than 40 years. As long as she has been a teacher, she also has been a community activist who wants to improve the state of the community. The knowledge that she brought to the study was invaluable because she looked at the challenge of adolescent health literacy from a historical perspective, a community perspective, and an education perspective. Her truthfulness and insightful brought important perspectives to the study.

Participant 2

P2 was an African American female who has been teaching for more 16 years. This teacher brought a unique perspective to the study because she was bilingual in Spanish, had spent time in Mexico, and provided many cultural background elements to the perspective of adolescent health literacy. Because she taught language arts, she approached adolescent health literacy perspectives culturally. She also had many years of teaching in an urban setting. The benefit of growing up in an urban environment herself gave her many perspectives of adolescent health literacy, education, and the future health of her students that were invaluable.

Participant 3

P3 was an African American man who had been teaching for more than 16 years. This teacher brought not only years of teaching experience but also experience being a building manager for middle schools. He was particularly cognizant of the role of politics in education and ways to move the future of student health issues forward. His knowledge and ideas to improve the state of health of the middle school adolescent population were very fruitful. Solution oriented by nature, this social studies teacher provided in-depth solutions to adolescent health literacy in middle school.

Participant 4

P4 was a European American woman who had been teaching for 8 years. As a special education teacher, she brought a perspective than she shared with the general education teachers. This teacher had a background in the profession of child protection,

and she brought many of those skills into the classroom. The knowledge provided by this teacher brought many elements into the study that would not been present otherwise.

Participant 5

P5 was a Hispanic American woman who had been a paraeducator for more than 8 years. She will graduate in 2015 with an education degree majoring in special education. This community and this middle school have a large and expanding population of Mexican American and Puerto Rican students. At the time of the study, P5 was responsible for providing communication assistance to a growing body of Hispanic American students. This experienced paraeducator communicated intimately with students in many grades and had a particular cultural perspective on the adolescent health literacy needs of Hispanic American students. This participant also brought cultural aspects from Puerto Rico that influenced how the parents looked at adolescent health literacy in the United States.

Participant 6

P6 was a European American man who has been teaching for 16 years. This science teacher brought not only his knowledge of science to the study but also personal knowledge of being a coach. Athletic coaches have a unique connection to adolescent health literacy. The nature of being a coach gives him the opportunity to influence students in positive ways. This coach and science teacher brought to the study a sports health education perspective that could not have come from a noncoaching teacher.

Data Collection

The teachers in the sample were representative of the target population in the middle school. I used purposive sampling to select six teachers. Interviews were scheduled at two community libraries. I audiotaped the one-on-one interviews using Evernote software as the primary recorder and audiocassette recorder as the backup. Prior to conducting the interviews, I bracketed my views and ideas in a reflective journal. Bracketing is supported by Husserl's (1970) phenomenological approach to record researchers' views so that they do not interject any of their own views into studies. To obtain the most accurate descriptions from the participants, I bracketed before each interview, including during the pilot study. I also used bracketing during the data analysis to ensure the integrity of the data (i.e., contained no researcher bias).

Each interview lasted approximately thirty-five minutes. All of the participants offered many perspectives during and after the questions. I did not rush any of the participants, and I made every effort not to lead any of the answers. Not all of the questions were asked of each participant; however, they were used in case there was a lull in the interview process.

Data Analysis

Before transcribing the interview responses, I listened to them at least three times. Transcribing each interview took 2 to 3 hours using Microsoft Word. Once I transcribed all of the interviews, I then read each one several times to begin the process of developing themes, derived from shared and repeated information collected in the responses. Reading the transcribed interviews multiple times was important to obtain the

essence of each participant. The transcripts were completed and printed to make it easier to read and code them. After becoming more familiar with the data, I was able to generate themes.

I considered the identified themes broad statements that captured particular ideas. I considered the codes shortened versions of the broad themes. The first round of discovering produced the themes, and the second reading of the themes produced the codes used to develop the deeper meaning of the text. After all the interviews were transcribed and the themes and codes were developed, I manually imported the information into NVivo v.10, which I used to compare the themes that I developed to the themes generated in NVivo.

Themes and Results

As already mentioned, four themes emerged from the study: efficacy of multimodal literacy, health literacy, blending cultures, and responsibility. As mentioned earlier, the study was guided by one research question: What are middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy? (see Table 1).

Table 1

Research Question, Major Themes, and Theme Support

Research question	Major themes	Theme support
What are middle school teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy?	Theme 1: Multimodal literacies are ineffective in the implementation of adolescent health literacy.	I would say it is not helping. There is so much information available to them, but if no one is guiding them there are not likely to seek out this type of information. (P3)
		Students have computers and iPads and all that, but it would be about how do we get the information to them. Unless it is a lesson that they could be quizzed on or get a class grade, I think that is the only way to get the information to them. (P5)
		I believe it is like anything else; if you ask the kid to use an iPad or show them something on the smart board, you must show them what to look for. That way they can get fixated on the subject. (P6)
		Students are not prone to look up anything with regard to health literacy using social media. It is not hip, it's not what everybody is talking about; health is not what everybody is talking about. (P2)
	Theme 2: Perceptions of adolescent health literacy in middle school.	Health literacy programs do not exist in our school. (P1-P6)
		When I first started teaching, we had a home economics teacher. She would teach health classes about the body. (P4)
		In recent years, I have not seen any health literacy materials. I have not seen anything on health. (P5)
		I have seen another teacher doing some things. She is concerned with the whole child. (P6)
		I can only speak to the lack of health literacy. In the past, there were classes on hygiene, and now, everything rests on state standards. (P3)
		There has been a big change in health literacy. When I first started teaching, there were actual courses on health being taught. (P1)
		Health literacy, when I first started in 1998, did not exist and almost little has changed since then. You hear a little bit more about healthy eating, but you don't see any best practices of that in the school system. (P2)
	Theme 3: Responsibility to make sure students receive adolescent health literacy.	To get a subject into middle school, you are going to deal with the state department of education. (P1)
		I would say it is the department of education so that it could be added to curriculum maybe as part of physical fitness to get in health literacy. (P3)

Research question	Major themes	Theme support
		Our school would do better to look at the pilot program a teacher has with a group of girls. (P6) I would say it is the parent. Parents are supposed to raise them good and give the information. The next I would say it is the school because some parents don't feel comfortable talking to their children. I think it is a combination of both. (P5) I think all parties should be involved with health literacy. The administrative side of things as well as with the school board. (P2)
	Theme 4: Different cultures have different health challenges.	Cultures have blended in health literacy. All of the children have the same health literacy needs and concerns. (P1-P6) Children are not learning anything about their bodies. The girls will tell the boys when they stink, and the boys will tell the girls. (P4)

Theme 1: Efficacy of Multimodal Literacy

The teachers did not perceive multimodal literacies as an efficacious way to teach health literacy to middle school adolescent students. They did not see the manner of modality to be a barrier to implementing adolescent health literacy. The major barriers identified by teachers were the absence of adolescent health literacy from the curriculum and the lack of a health mandate from the state. These barriers to implementing adolescent health literacy programming had to do with common core and state testing standards mandated by the state, meaning that the teachers did not have the flexibility to teach content that had not been mandated by the state due to state testing requirements that the teachers had to prepare the students for.

According to the teachers, multimodal literacies could be effective in helping them to implement adolescent health literacy if they (i.e., the teachers) had the freedom to address the whole child. Teachers described the need for certain health subjects, but they were not willing to jeopardize their jobs by going off the curriculum script. P5 stated that

although the students had access to computers and iPads, they did not have access to the information and education needed to promote, improve, and empower their own health literacy. The teachers would need permission to give value to health literacy and include it as a subject to grade; if presented in this way to students, they might take the information seriously.

P1 commented:

> You will have to make it a formal thing that they can include some of those standards in with the middle school because I'm telling you middle school is so focused on passing this OAA. Teachers are not going to take on another burden when that's their focus; that's what we're graded on we're being beat across the head with it every day. The focus is on math and reading so you would have to deal with the state department of education in one way or another to get that ability to work with that and in terms of bringing in the school system. Bringing it in the school system is not going to bring it in until it's okay with the state department. It would appear to me that the United States, the federal government has made some effort to impact children's' meals.
>
> Here is a good example of training the kids when we were in school we did not have a lunch period per se they didn't make hot meals at school we could bring our lunch and we were served whole milk and that's what we liked and that's what we drank somewhere along the line they started serving 2% milk. Now kids will drink 2% milk and some will not drink whole milk and the same with margarine many of them don't like butter now that's not to say that one is

> better than the other that is to say that kids are trained. They are trained as opposed to what they will except and what they won't and what they will participate in. I just don't feel that we train the students to really participate in this healthy meals.

Before the teachers could bring adolescent health literacy into the curriculum, they would have to have academic autonomy. P3, P5, and P6 supported the option of having outside agencies come into the school setting to provide health programs. Subjects that the teachers felt could be addressed using multimodal literacies were identified under Theme 1 as sexual health literacy, nutritional literacy, personal care literacy, and SEL. However, although the teachers felt these health literacies were essential to the health of their students, these subjects were not being taught to middle school students. P6 felt that having powerful relationships with their students could promote engagement in health literacy programs. If they had the time to develop relationships, along with a curriculum to follow, adolescent health literacy multimodal literacies could be efficacious. However, all of the aforementioned stipulations would have to be in place.

Theme 2: Health Literacy

All of the teachers described adolescent health literacy in many forms: hygiene literacy, sexual literacy, nutrition, and SEL. During the interviews, the participants described the lack of outside agencies to teach adolescent health literacy, the cancellation of old health programs that used to be in place, and the ineffective use of the school health nurses to disperse adolescent health literacy.

P3 stated:

> Truthfully, I have not put too much thought (health literacy) in over a decade. There was a time when I left the classroom to be a building manager so I wasn't Around for a few years and when I came back to the classroom there was a mandate that you had to teach this certain curriculum.

The teachers described the outside agencies that used to provide adolescent health literacy to students as effective. These agencies provided sexual literacy and hygiene literacy. SEL, nutritional literacy, sleep literacy, sexual literacy, and drug information literacy were all considered essential literacies that the students needed but were not receiving. The participants felt that these literacies, along with mathematic literacy and communication literacies, needed to be in the curriculum. P3 believed that "students are afforded a financial literacy program provided by an outside agency."

In addition, P2 asserted:

> We are now living with a culture of children that don't see marijuana as a drug, we have a culture of children that don't see prescription and nonprescription drugs as a problem. Children are mixing things like codeine and liquor and getting high off of it.

P4 stated, "Health literacy is very important. I will stop a math lesson if I have to in order to explain issues that have to do with adolescent health literacy. I will deal with helping them through their mental health issues."

The participants explained that inside the school, students are provided with the services of a school health nurse for half a day each week. Before budget cuts and a

redefined curriculum, the home economics teacher taught many areas of health literacy. Because health literacy is no longer a dedicated subject, the nurse could be considered the logical individual for students to seek out for adolescent health literacy information. Once teachers were cut from the staff, students no longer received health literacy as part of the curriculum. However, because the nurse is in the school only on a part-time basis, the services provided in regard to adolescent health literacy were minimal. P5 remarked, "The nurse is there for emergency, but not for anything else."

P2 asserted:

> It definitely does hurt having a nurse half a day. Students go to the nurse to get an ice pack or Bandaid, there are not real conversations going on about what they are eating, or what they put in their bodies. No conversation on how your body is changing and what to do or what you might need for personal hygiene, there's not a lot of conversation.

P6 said, "Having a nurse half a day is for students that have a bump or bruise or a girl needs a pad."

Theme 3: Blended Cultures

All participants believed that adolescent health literacy is essential for all students, regardless of ethnic background, socioeconomic status, or culture. What the interview responses revealed was academic needs and health literacy needs were determinants of future health outcomes. One identified health concern was the health literacy deficiency in understanding issues such as HIV/AIDS. All participants shared the

experience of having to explain the Ebola epidemic to students, who had many incorrect views of how it was spread.

P2 commented:

> So our children are coming to school knowing a lot less about health literacy. An example of that; last year students had no clue about HIV or AIDS. So how is it in this day and age with all of the technology that surrounds us that our students don't know what HIV or AIDS stands for or how you get it they are clueless on it?

P5 noted:

> Because we have all these other activities you know on Friday, you have Ice Cream Day, for example. So say it is a day for health, tell them what's out there like right now the Ebola is out there and people are coughing and they go they have Ebola. You know, they are very ignorant on that subject. It would be nice to bring in people that specializes in this field to talk to them.

P3 stated:

> There are times when current events pop up like Ebola. They [students] thought you could just get it and didn't understand that you have to exchange bodily fluids. Education could make them more aware even with something as simple as the importance of washing their hands.

The teachers identified many barriers to implementation of multimodal literacies in middle school health literacy programs. They also expressed many ideas about which adolescent health literacies should be implemented. The participants were unanimous in

their belief about the importance of students having adolescent health literacy. Five of the six participants did not know of any outside agencies that could provide the information services that they believed that the students needed. The one teacher who was aware of outside services and agencies knew about them because her special needs students received such services.

All of the participants had concerns about the present and future health of their students. Health literacy, although broadly defined by individual participants, was considered an essential literacy component that deserved at least a discussion about implementation. However, regardless of the participants' personal adolescent health literacy concerns, they realized that the state-mandated testing requirements would remain a barrier to implementation.

Theme 4: Responsibility

The participants believed that their adolescent students needed to have robust health literacy programs as part of the curriculum. P1 stated, "To get a subject into middle school you are going to deal with the state department of education." P3 remarked, "I would say it is the department of education so that it could be added to curriculum maybe as part of physical fitness to get in health literacy." P6 commented, "Our school would do better to look at the pilot program a teacher has with a group of girls."

Kabasakal and Totan (2011) contended that parents and teachers are responsible for promoting and implementing health literacy.

P5 asserted:

> I would say it is the parent. Parents are supposed to raise them good and give the information. The next I would say it is the school because some parents don't feel comfortable talking to their children. I think it is a combination of both.

Dabasakal and Totan (2011) believed that implementing mental health programs could help to improve students' academic achievement. The ongoing barrier to such implementation, however, lies in the rigidity of the curriculum, which must meet state and federal mandates regarding testing. P3 stated, "I would say it is the department of education so that it could be added to the curriculum maybe as part of physical fitness to include health literacy." P2 commented, "I think all parties should be involved with health literacy. The administrative side of things as well as with the school board."

Summary

All of the participants had their own ideas and views about adolescent health literacy. There was unanimous agreement that the students did not have an adolescent health literacy component represented in the middle school curriculum in any formal way and that the adolescent health literacy needs are the same for all children from all cultures, regardless of any barriers related to English language skill deficits. All participants were frustrated not knowing what to do to provide their students with health literacy.

When asked about their perceptions of the efficacy of multimodal literacies in middle school literacy programs, the teachers believed that it did not matter what modes of literacy were available if students did not have formal curriculum programs that

specifically addressed the issue of adolescent health literacy. Most participants felt that an outside program that used to operate in the school was effective helping children to understand what was going on with their bodies. Other participants felt that having a strong relationship with the students could provide better opportunities to help students improve their future health status. What was identified as a potential way to implement adolescent health literacy was to have a public health nurse available in the school.

A very important point of view was expressed about female students' health future. The teachers felt that if the female students continued their present eating habits, they would not be healthy enough to have or care for progeny. Adolescents who do not have health literacy might not understand the connection between proper nutrition and future health consequences. Sleep literacy was raised as another serious issue for middle school students. The teachers were concerned with students' lack of nutritional literacy, SEL, and adolescent body literacy, all of which can be directly connected to academic proficiency.

Implementing adolescent health literacy in middle school will be challenging, so school systems might consider phasing in some forms of adolescent health literacy programs. The six participants viewed adolescent health literacy as an essential component of adolescent academic programs, but state testing requirements take precedence. Therefore, unless teachers receive a mandate from the state, students will likely have to receive adolescent health literacy from other entities.

School systems have many responsibilities. The burden of providing educational programs that address the whole child might not be afforded to all students. Although the

participants had a plethora of ideas to develop the whole child, the teachers were not in a position to promote or implement curriculum changes. The participants had many ideas about ways to provide adolescent health services. All of the participants acknowledged the need to restructure the curriculum to help students to become whole and healthy adults. Finally, all of the participants acknowledged the enormity of the challenge to include adolescent health literacy into the curriculum. They recognized the connection between health literacy in the curriculum and the students' academic lives and future health. In Chapter 5, I continue the discussion, present a conclusion, and offer recommendations based upon the results of the descriptive qualitative data. I also compare the findings to the literature review.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

There has been a paucity of research on ways to implement adolescent health literacy. The purpose of this study was to discover teachers' perceptions of the efficacy of multimodal literacies in middle school health literacy programs. I obtained the data from private interviews with the six participants. The middle school teachers represented an urban school district in the Midwestern United States.

Martinez-Avila and Smiraglia (2013) asserted that perceptions are components of phenomenology. I chose a phenomenological approach and interviewing to find out how the participants made meaning of their lived experiences. Gaining their perceptions during the individual interviews helped me to identify themes and barriers related to implementing adolescent health literacy.

Interpretation of the Findings

Data for this qualitative phenomenological research study were collected and analyzed based upon Husserlian (1970) techniques. I bracketed my ideas in a reflective journal before each interview. My goal was to capture the everyday experiences of the participants and describe their experiences. I transcribed all interviews and read them to develop themes. I used NVivo v.10 to analyze the content of the interview responses. Themes were established, analyzed, and reviewed. Following is a discussion of the findings. The four emergent themes were multimodal literacy, health literacy, blended cultures, and responsibility.

Theme 1: Multimodal Literacy

Despite ample research on adolescent health literacy, little is known about ways to improve adolescent health literacy. Reddy et al. (2003) stated that middle schools often structure the curriculum to meet academic mandates and do not provide instruction relevant to adolescent health literacy. The participants expressed their belief that the exclusion of adolescent health literacy will negatively affect the future health of their students. Five of the six participants were not aware of any outside interventions that could help to provide health literacy programs. The special education teacher was aware because special education students are provided with outside mental and social programs.

School systems have traditionally been designed and operated on the premise that their purpose is to teach students skills in reading, writing, and mathematics, but students also need to learn new literacies. Social and emotional literacy skills are but two of the emerging literacy skills that middle school students need to be able to control their own health destinies. Cohen and Syme (2013) stated that middle school teachers are in position to improve adolescent health literacy. Participants in this study acknowledged that even although students have access to many modes of literacy, they do not or cannot find health information on their own. The field of literacy has expanded exponentially, but students continue to exhibit having low levels of literacy. Some students do not even have access to health literacy.

Literacy concepts have expanded to include Facebook, Instagram, and other social media networks. The participants gave examples to show that if students are not taught

health literacy through multiple modes of literacy, they will not acquire the information, despite having access to multiple modes.

Theme 2: Health Literacy

The lack of adolescent health literacy was a recurring theme. Durlak et al. (2011) stated that adolescents in the United States have difficulty managing academic, emotional, and behavioral issues related to health literacy. All of these issues fall under the concept of adolescent health literacy. Health literacy related to school systems was of particular concern to Nutbeam (2008), who suggested that school systems could be natural partners in implementing health literacy programs. One of the first steps in implementing any new program is acknowledging that something is needed. All of the participants identified a need for students to have health literacy. Finding ways to incorporate adolescent health literacy into the curriculum will be the most expedient and efficient way to ensure that all students have this health information.

The importance of including adolescent health literacy in the curriculum was recognized not only by the participants but also by the NFID and Pfizer (2013), which reported that by being proactive in teaching students about health literacy, students will be better prepared to deal with future academic and health issues.

If it were to become a component of the curriculum, health literacy could help students to deal with many health issues, one of which is stress. The disconnection that many adolescents have with the health care system has resulted in a plethora of health issues for them. Data from the NFID and Pfizer (2013) proved that there is a relationship between poor physical and mental health and declining academic performance.

Adolescent health literacy should be a priority for school systems because it is directly related to improving and maintaining students' academic performance. The participants in this study also asserted that the challenges and consequences of not having adolescent health literacy in the curriculum were affecting all students in the same way, regardless of cultural backgrounds.

Theme 3: Blended Cultures

The responses from the participants aligned regarding the notion that all students need adolescent health literacy. According to the participants, students in middle school need health literacy specific to their age group. Manganello (2008) defined adolescents as young people between the ages of 10 and 19 years. This particular group should have health literacy domains that they can master.

Adolescents share certain developmental milestones. These milestones are made productive by the mastery of three identified levels of literacies (Nutbeam, 2000). Level 1 is functional health literacy, Level 2 is interactive health literacy, and Level 3 is critical health literacy. Functional health literacy helps adolescents to communicate information about health risks, interactive health literacy helps them to develop personal knowledge and skills in order to make independent health choices, and critical health literacy helps them to develop cognitive skills that support effective social and political actions.

When middle school adolescents do not have SEL skills, or when the literacies afforded them are low or nonexistent, their overall literacy levels also are likely to be low. According to Gunter et al. (2012), incorporating SEL into the current curriculum allows children to know and manage their emotions. Social and emotional literacies, for

example, facilitate the development of empathy, decision-making skills, and skills that can help them to handle difficult situations in positive ways.

Theme 4: Responsibility

The participants believed that their adolescent students needed to have robust health literacy programs as part of the curriculum. Adolescents need to have robust health literacy programs as part of the curriculum. Kabasakal and Totan (2011) contended that parents and teachers are responsible for promoting and implementing health literacy. They believed that implementing mental health programs can help to improve students' academic achievement. The barrier to such implementation, however, lies in the rigidity of the curriculum, which must meet state and federal mandates regarding testing.

Contributions to School Systems

The phenomenological approach that I used in this study demonstrated that collecting and analyzing data about the lived experiences of the participants are essential to understand social and academic issues. I sought to obtain the teachers' perceptions to identify possible barriers to the implementation of adolescent health literacy programs in the middle school setting. The results of this study can contribute to education by identifying specific literacy modes that have the greatest benefit to adolescents.

Contributions to the Field

The results of this study can provide the education system in Ohio with data reflecting teachers' perceptions of the efficacy of multimodal literacies to improve adolescent health literacy, which can give students the opportunity to use the skills learned to ensure future health and academic endeavors. Health literacy skill development

gives students the ability to access information, understand such information, and know how to use the information to their benefit. Understanding teachers' perceptions of adolescent health literacy can promote discussion about the importance of health literacy and discover which components can be incorporated with or without mandates from the state board of education.

Limitations

I recruited the sample of six middle school teachers from an urban school district in a Midwestern city. The results might not be applicable to high schools or elementary schools. The findings also might not be applicable to alternative schools that might not be interested in implementing adolescent health literacy using a multimodal literacy approach.

Recommendations

1. Researchers have acknowledged the difficulty in implementing adolescent health literacy in school. Middle school systems could be powerful partners in the advancement of adolescent health literacy. Therefore, teachers and their perceptions and their beliefs are vital pieces of information that is needed to push forth in a proactive way necessary health literacies.
2. Teachers expressed the need to have some form of adolescent health literacy in the curriculum. However, they are reluctant to implement their own programs into the curriculum until the state board of education sanctions programs for the school district. Until then, teachers must prepare students to pass state-mandated academic testing. This focus on academic testing puts a

great deal of pressure on teachers for test preparation and the teaching of the whole child is jeopardized. One solution is to use outside agencies to teach adolescent health literacy. Students would receive some exposure to health literacy, even though it might not result in sustainable health and academic benefits.

3. Introducing adolescent health literacy into the curriculum will give students many ways to obtain health information and develop skills to ensure their own positive health outcomes. Multimodal literacy is one strategy to offer this content. When students read, view, understand, discuss, respond to, produce, and interact with multimedia and digital text, they enhance their academic lives exponentially.
4. Community interventions, or school-wide interventions, must understand that although students are familiar with and use the internet on a daily basis, their literacy skills can still be less than optimal regarding health issues. Some students do not know how to conduct research, and others lack critical-thinking skills or the tools to apply information to become empowered. Being proficient in the use of technology does not mean being proficient in understanding the information obtained.

Implications for Positive Social Change

Multimodal literacies can help to close the achievement gap by having students engage in more than just the major academic subjects. Adolescent health literacy that includes SEL could be the academic outlier that schools need to improve. SEL could help

to curb violence, bullying, and poor academic performance while promoting academic success.

The results can help school systems to develop or at least understand how and why they should incorporate adolescent health literacy into the curriculum. The results should be used to discuss ways to infuse health literacy into the curriculum. By obtaining an in-depth understanding of middle school teachers' perceptions of adolescent health literacy, new insights have been gained. Despite not being mandated to teach health literacy, middle school teachers know the importance of implementing such a program into the curriculum. By discussing adolescent health literacy, teachers become more aware of its importance and are in a position to precipitate action plans to implement them.

Conclusion

Middle schools are in the best position to influence the future health of students. Adolescent health literacy in education has been overlooked or has not been considered. School systems can develop standalone adolescent health programs or use the services of outside agencies to teach these programs. School systems that are genuinely concerned about the success of the whole child might wish to discuss and promote SEL components to help to close the achievement gap.

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