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Ethnic Minority Young Adult Perspectives on Health Literacy Readiness for Adulthood

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Abstract

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MD, State University of New York, Upstate Medical Center, 1983

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Dissertation Submitted in Fulfillment

of the Requirements for the Degree of

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Abstract

Health literacy is a social determinant of health and health disparity and low health literacy contributes to poor health outcomes in ethnic minority young adults (EMYAs). There is a gap in the literature regarding the health literacy readiness (HLR) of EMYAs transitioning to adulthood. The overarching research question concerned the perspectives of EMYAs on HLR for the transition to adulthood. A phenomenological study design was used with a theoretical framework that integrated concepts from the socioecological and health belief models. Twelve purposefully selected EMYAs ages 18-22 from a southern U.S. county participated in the study. Data were collected by telephone using semistructured interviews. The interview questions centered on EMYAs' self-assessed HLR for the transition to adulthood, attitudes and beliefs about HLR, barriers to and benefits from HLR, and facilitators of HLR for the transition to adulthood. Recorded data were transcribed and analyzed, spirally coded, and reduced into overarching themes. Three categories emerged: deficient acumen, access problems, and application challenges. Results showed that EMYAs viewed HLR as vital for the transition to adulthood, though 92% reported low HLR. EMYAs reported individual factors; available time and deficient knowledge; and social factors, family support, and deficient school education as influencing their HLR. The study findings revealed poor HLR in EMYAs but identified areas that can be targeted to improve HLR. Results may contribute to positive social change by providing health educators with knowledge they can use to enhance community health engagement strategies and develop culturally sensitive interventions aimed at improving HLR in EMYAs.

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Dedication

This work is dedicated to the staff of Bridge to Life Ministries and its founder, Mark Carrington. Their commitment to holistic health has been the inspiration for my continued commitment to helping others enjoy optimal health.

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I would like to acknowledge individuals who have been instrumental in helping me to accomplish this goal. Deborah Ellis PhD, for providing me with inspiration at a time when life had no meaning, and Oliver Edwards PhD, Phylis Palmer, Judith Rey McCalla PhD, Rupert Ryan PhD, and Daren Jairam for their steadfast support. I would also like to thank Cheryl Anderson PhD and Earla White PhD for the guidance and wise counsel they provided before and during the dissertation process. Especially, I want to acknowledge my wife, Norma, and my children, Selwyn, Jr. (Ana-Michelle), Natalie (Roget), and Adrian, for allowing me the space to pursue this dream. Finally, I would like to thank the stakeholders and participants who made this effort possible. Your contributions matter.

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Chapter 1: Introduction to the Study

Introduction

The health of ethnic minorities presents a persistent public health challenge in the United States. This is evident in the rising prevalence of chronic diseases and the persistence of communicable diseases in this population (Bloom, Jones, & Freeman, 2013; Heron, 2017; National Center for Health Statistics, 2017). The development of optimal health in minority communities (African American, Hispanic, Native American, and Asian/Pacific Islander) is influenced by a complex array of individual and social factors termed *social determinants of health* (Anderson & Mezuk, 2015; Healthy People 2020, 2018; Singh et al., 2017). One of these factors, health literacy, is an influential social determinant of health and a health disparity affecting these minority communities at risk of poor health outcomes (Manganello & Shone, 2013; National Institute for Health Care Management [NIHCM], 2011; World Health Organization [WHO], 2016c). The development of a health literate minority community is therefore essential to the development of a healthy nation.

Deficient health literacy can prove problematic in affected communities. The WHO defines health literacy as the acquisition of the social and cognitive ability to access, understand, and utilize health care information and services to support the maintenance and promotion of optimal health (WHO, 2016c). Low health literacy has been associated with poor health outcomes, and researchers have called for further research on this problem in adults and adolescents (Manganello & Shone, 2013; Nutbeam, 2015; Patton et al., 2015). For ethnic minority young adults (EMYAs), also

referred to as emerging adults, the transition to adulthood requires achieving a state of health literacy readiness (HLR) that equips them to cope with an increasingly complex U.S. health care system (Massey et al., 2015). It is therefore important to pursue efforts to improve and eliminate this problem.

Although the challenge to improve health literacy is needed in all communities, it is particularly pressing in ethnic minority communities. Even though there has been a call for updated statistics on health literacy in minority communities (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. 2010), the most recent prevalence data for the United States comes from the National Assessment of Adult Literacy study, which revealed that only 8% of adolescents between the ages of 16 and 18 were health literacy proficient while 34% were at basic or below basic health literacy proficiency levels (Kutner, Greenberg, Jin, & Paulsen, 2006). Young adults between the ages of 19 and 24 did not fare much better; 11% were health literacy proficient, and 31% had basic or below basic levels of health literacy proficiency (Kutner et al., 2006). Lower levels of health literacy proficiency were noted among most minority communities, Blacks (2%), Hispanics (4%), American Indian/Alaskan Natives (7%), Asian/Pacific Islanders (18%), compared to a 14% rate in Whites (Kutner et al., 2006). Low health literacy rates have also been noted in specific segments of the adolescent and emerging adult population, including patients with asthma (Gupta, 2013; Valerio, Peterson, Wittich, & Joseph, 2016), inflammatory bowel disease (Huang, Tobin, & Tompane, 2012; Trivedi & Keefer, 2015), sickle cell disease (Stollon et al., 2015), HIV infections (Rikard, Head, & Thompson, 2016; Rikard, Thompson, Head, McNeil, &

White, 2012), and diabetes (Xu, Leung, & Chau, 2018). Therefore, corrective strategies should be explored and implemented to reduce and eliminate this disparity.

Individuals and communities derive benefits when the health literacy of EMYAs is improved. Lack of health literacy proficiency in communities adversely influences other health disparities thereby aggravating efforts to improve the quality of health in these communities (Currie et al., 2012; NIHCM, 2011; Nutbeam, 2015). Improved health literacy in populations empowers communities to successfully engage in community actions to improve health (WHO, 2016c). The empowerment health literacy brings to individuals facilitates the making of appropriate decisions regarding healthy lifestyle behaviors, facilitates access to appropriate care, and fosters the acquisition and correct application of skills for managing acute and chronic health conditions (Jacque, Koch-Weser, Faux, & Meiri, 2015; Manganello & Shone, 2013). Experts agree that lifestyle behaviors adopted during adolescence affect not only adolescent health but also future adult health (Agaku, 2014; Matthews, Kilgour, Christian, Mori, & Hill, 2015; NIHCM, 2011). Consequently, researchers have called for increased investigative emphasis on adolescent health literacy (NIHCM, 2011; Patton et al., 2016; Sawyer et al., 2012). Based on my research, the noted disparity in adolescent and young adult health literacy proficiency in minority youth, a major focus of corrective action should be the targeting these communities.

Limited research has been conducted on EMYAs' perspectives of their HLR for the transition to adulthood, based on my review of the literature. Emerging or young adulthood represents a distinct developmental phase of life between ages 18 and 25

(Weinstein et al., 2016). Because most minority communities in the United States are disparately plagued with low health literacy when compared to White Americans (Healthy People, 2020, 2015; U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010), exploring the experiences of EMYAs during the transition to adulthood can prove helpful in developing a holistic understanding of their HLR for adulthood. In this study, I explored the gap in the literature related to the HLR of EMYAs transitioning to adulthood to gain an understanding of their perspectives on this phenomenon, to acquire information that could prove beneficial in the development of approaches for improving this disparity, and to develop an awareness of what being health literate means to this sector of society. To gain an early view of this evolving process, I purposefully chose individuals from a southern U.S. county who were at the beginning of this developmental stage (age 18-22) for participation in this study.

This chapter includes the study background, the scope of the study, and discussion of why the study was needed. The problem statement, the purpose of the study, the research questions, and the theoretical/conceptual framework are also included. The nature of the study is discussed followed by definitions of key concepts and constructs. Subsequently, I address the assumptions, scope and delimitations, and limitations of the study. Finally, I consider the significance of the study as it relates to advancing knowledge in the area of adolescent health literacy and assess the potential for social change. The chapter ends with a summary of the chapter and a transition to Chapter 2.

Background

Adolescence and young adulthood are transitional periods of human development characterized by biological, social, behavioral, and relational changes that impact individuals for life. The adolescent period of life extends from age 10 to 19 (WHO, 2016a) after which individuals enter the period of young adulthood, which extends from age 18 to 25 (Centers for Disease Control and Prevention [CDC], 2017a; WHO, 2016a). Adolescents and emerging adults transitioning to adulthood experience stressful physical and psychological developmental issues and may pursue risky behaviors or accept too little responsibility for developing appropriate health behaviors, leading to complications in their health status (Chisolm, Sarkar, Kelleher, & Sanders, 2015; Colver & Longwell, 2013; Deering, 2016; Weinstein et al., 2016). In addition, youth are still developing the necessary sociocultural and cognitive control networks needed to adopt desired health behaviors and use appropriate health care services (Bergsma, 2011; Colver & Longwell, 2013). In the United States, ethnic minority groups constitute an increasingly large portion of the populace and the adolescent and young adult population continues to grow. (Healthy People 2020, 2015; National Center for Health Statistics, 2017). These challenges make it necessary to urgently engage EMYAs in efforts to adopt healthy lifestyles before reaching adulthood.

Adolescence and young adulthood open a special window of susceptibility to the formation of negative or positive health behaviors that may have lifelong effects. The lifestyle behaviors adopted during this phase of development can profoundly influence adolescent health and may extend into adulthood, adversely influencing adult health

outcomes (Colver & Longwell, 2013; Deering, 2016; Due et al., 2011; Weinstein et al., 2016). In particular, Matthews et al. (2015) noted that young adults are at a pivotal period of life associated with lowered subjective wellbeing and have the propensity to adopt lifestyle behaviors that can adversely influence physical and mental health. Furthermore, investigators have noted that minority youth are at highest risk for adopting unhealthy lifestyle behaviors (Bloom et al., 2013; Braveman et al., 2010; Singh et al., 2017). The effort to protect minority young adults from pursuing unhealthy lifestyles must remain a public health priority.

The challenge of securing healthier communities is deeply rooted in a society's ability to mitigate social determinants of health and reduce health disparities. This goal can be positively influenced by the development of a more health literate population (Mogford, Gould, & DeVoght, 2011; Patton et al., 2015; Wilkinson, & Pickett, 2010). Not only is health literacy a social determinant of health affecting health outcomes in ethnic minority groups in the United States, it is also a significant health disparity affecting most minority communities (Healthy People 2020, 2015; Kutnet et al., 2006; Sentell & Braun, 2012). People with low or limited health literacy are less likely to use prevention services; have less knowledge of their illness, treatment, and medications; are less likely to recognize the first signs of medical problems; and more likely to display decreased medical compliance and increased medical errors (Healthy People 2020, 2015; Institute of Medicine [IOM], 2004; Locke, Shiyanbola, & Gripentrog, 2014; Miller, 2016). Such persons were also less likely to manage chronic health conditions, less likely to communicate their concerns to health professionals, more likely to use emergency

department services and be hospitalized due to a chronic condition and were more vulnerable to workplace injury (Healthy People 2020, 2015; Miller, 2016; Ministry of Health, 2010). These outcomes can become increasingly important to young adults transitioning to adulthood, who must assume primary management of complex health care issues (Babler & Strickland, 2015; Huang et al., 2012). More so, these issues are of crucial concern to adolescents and emerging adults with chronic illnesses who lose parental or other caregiver input in transitioning to adulthood (Manganello & Shone, 2013). By improving the HLR of EMYAs it may be possible to reduce the burden brought about by poor health outcomes.

An important first step in understanding the HLR of EMYAs is to gain insight into their perspectives on the issue. Because young adults are pivotal stakeholders in developing their HLR (Ashdown, Jalloh, & Wylie, 2015, Wong et al., 2010), their input can potentially generate important contributions for improving HLR in similar communities who must engage the complex and ever-changing U.S. health care system. Designing and implementing interventions that are devoid of emerging adult input may not be the most appropriate path to follow if best practices are to be realized (Ashdown, Jalloh, & Wylie, 2015). Researchers have noted that egalitarian relationships between adults and youth are not always present in research findings and view childhood and adolescent involvement in the research process as increasingly important in developing options to improve health care (Wong et al., 2010). Furthermore, child and adolescent health promotion are gaining recognition as a viable approach for enhancing positive health behavior in this population (Wong, et al., 2010). Hence, involving young adults in

the effort to better understand the influence of HLR on their use of the ever-evolving U. S. health care system can prove beneficial.

Health education and improved health literacy can play an important role in developing a healthy EMYA population. In the effort to reduce the adoption of risky lifestyle behaviors during adolescence and young adulthood, experts have hypothesized that health educators should seek to improve HLR during these pivotal periods of development (Manganello, 2008, NIHCM, 2011). In so doing, a crucial first step can be taken towards improving health behaviors and health outcomes, especially in minority populations. By improving health literacy proficiency in minority adolescents and young adults, affected individuals and communities can be empowered to establish and maintain desired health goals (Manganello, 2008, NIHCM, 2011, WHO, 2016c). The increasing health-related challenges facing adolescents and young adults, the prominence of the health literacy disparity in minority communities, and the deficiency of information related to EMYAs and their HLR for the transition to adulthood compelled me to explore the perspectives of EMYAs on their HLR for the transition to adulthood to gain a holistic understanding of the issue.

Problem Statement

Adolescents and young adults, especially some ethnic minorities in the United States, have been facing greater health challenges in decade between 2005 and 2015. The increasing prevalence of noncommunicable diseases, mental health illnesses, preventable deaths, and health-risk behaviors in ethnic minority adolescents, which can lead to significant morbidity and mortality in adulthood, remains a key public health challenge

(National Center for Health Statistics, 2017; Kann et al., 2014). Ethnic minority status is associated with greater risk of major clinical pathology in youth (Bloom et al., 2013), and the status of an individual's or community's health literacy is a major factor contributing to this risk dynamic (National Network of Libraries of Medicine [NNLM], n.d.). These challenges produce greater strain on the U.S health care system.

One way to help tackle this problem is to address the health literacy disparity. Investigators have found health literacy proficiency to be critically low in many ethnic minority adolescent and young adult communities (Kutner et al., 2006; Manganello & Sojka, 2016; Sawyer et al., 2012; Soto Mas, Ji, Fuentes, & Tinajero, 2015). Lack of health literacy proficiency compromises an individual's ability to understand, access, use, and communicate health care information and health services (Nutbeam, 2015; U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010). However, health literacy proficiency in minority young adults is a complex sociological problem that is not easily resolved (Massey et al., 2013). In adolescents and adults, low health literacy is associated with poorer health outcomes and an increased economic burden on the U.S. health care system (IOM, 2004; U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010; Vernon, Trujillo, Rosenbaum, & DeBuono, 2007). With the added knowledge that lifestyle behaviors affecting adult health are usually formed in adolescence and early adulthood, there has been a call for greater investment in health literacy research in this population (WHO, 2016a; Colver & Longwell, 2013; NIHCM,

2011). Therefore, lack of HLR for the transition to adulthood in EMYAs could prove problematic.

Current knowledge about minority youth HLR for the transition to adulthood is limited, based on my review of the literature. There are multiple tools available to assess adolescent and young adult health literacy (Cohen et al., 2015); however, few studies have been conducted to assess EMYAs' HLR for the transition to adulthood. HLR refers to more than competence with tools; it also entails social, contextual, and biological factors that influence this phenomenon (Okan, Pinheiro, Zamora, & Bauer, 2015; Rask, Uusiautti, & Määttä, 2014; Sørensen et al., 2012). In this qualitative study, I explored the views of EMYAs on their HLR for the transition to adulthood to address a gap in the literature. The conclusions from this study may prove helpful in addressing ways to improve ethnic minority adolescent and young adult health literacy and HLR for adulthood. In addition, results could prove beneficial in informing interventions aimed at promoting positive health behaviors in EMYAs.

Purpose of the Study

The complex U.S. health care system demands that adolescents and young adults be prepared to cope with the challenges it presents while transitioning to adulthood. In late adolescence and emerging adulthood, individuals learn to master the intricacies of the U.S. health care system and start to make independent health care choices. These range from choosing health insurance coverage to choosing providers for continued clinical care for chronic diseases and obtaining associated services (Massey et al., 2013; Wong et al., 2015). In addition, young adults are adopting permanent lifestyle behaviors

that influence current and future health (Colver & Longwell, 2013; Deering, 2016; Wong et al., 2015). In the area of health literacy, evidence suggests that many ethnic minority adolescents and young adults may not be ready for this transition, however (Huang et al., 2012; Manganello & Sojka, 2016; NIHCM, 2011; Soto Mas et al. 2015). HLR in minority adolescents and young adults is pivotal to fostering desired health behaviors, improved health outcomes, and needed reductions in the economic burden of health care in the United States and worldwide (Healthy People 2020, 2015; Sawyer et al., 2012, WHO, 2016a). The mission of fostering a health literate EMYA community must therefore be a prominent public health objective

The purpose of this study was to explore the perspectives of EMYAs on their HLR for the transition to adulthood. Among EMYAs, developing a state of HLR can help in overcoming the health care-related challenges encountered when confronting the complex health care marketplace (Huang, Tobin, & Tompane, 2012). This research focused on minority young adults, between the ages of 18 and 22, who were from multiple ethnic backgrounds, residing in a southern county in the United States, and transitioning from adolescence to adulthood and assuming greater responsibility for their health care. Because egalitarian approaches to health care are not always equitable (Wong et al., 2015), it is important to understand how EMYAs view their HLR for the transition to adulthood. Such knowledge could provide insights into factors influencing HLR, help reduce the impact of this social determinant of health, and also help in improving health equity in this community (Manganello & Shone, 2013; Nair et al.,

2015; Wong et al., 2015). In so doing, the effective functioning of EMYAs in the health care marketplace can be enhanced.

Research Questions

In this study, I explored the experiences of EMYAs in a southern county of the United States to gain a holistic understanding of their HLR for the transition to adulthood. The main research question (RQ1) was, *what are the perspectives of ethnic minority young adults on their health literacy readiness for the transition to adulthood?* The subquestions were, as follows:

RQ2. As ethnic minority young adults transition to adulthood, what are their attitudes and beliefs towards being health literate?

RQ3. As ethnic minority young adults transition to adulthood, what are their perspectives on the benefits of and barriers to becoming health literate?

RQ4. What are the perspectives of ethnic minority young adults on facilitators (agents or agencies) influencing the development of health literacy readiness for adulthood?

Theoretical Framework

For this study's theoretical framework, I used concepts from the health belief model (HBM) and the socioecological model (SEM). The HBM postulates that the generation of a beneficial health behavior is based on the individual's perceived risk of developing a problem (Glanz, & Bishop, 2010). This risk perception is influenced by the perceived susceptibility to and the perceived severity of the health problem faced, and also the perceived benefits and barriers associated with generating the desired health

behavior (Asare, Sharma, Bernard, Rojas-Guyler, & Wang, 2013; Wright, Randall, & Grace Hayes, 2012). In addition, HBM postulates that internal and external cues to action influence health behavior choices and decision-making is bounded by individual self-efficacy, the self-confidence that one can perform a desired behavior (Glanz, & Bishop, 2010; Karimy & Zareban, 2018). However, among the limitations of the HBM is the failure to account for economic or environmental factors that influence health behavior (Glanz, & Bishop, 2010; Karimy & Zareban, 2018; Wright, Randall, & Grace Hayes, 2012). Consequently, concepts from the SEM were added to the framework to address this limitation.

The core concept of the SEM states that phenomena, like the health literacy readiness of an individual or community, are influenced by multiple, complex, tiered, factors originating internally or externally. The SEM not only assesses individual behavioral factors, but it also looks at other influential factors at meso and macro environmental levels (Higgins, Begoray, & MacDonald, 2009; Townsend, & Foster, 2011; Stollon, et al., 2015). Experts accept the development of health literacy proficiency as a process that involves the interplay of intrapersonal, interpersonal, organizational, community, and public policy issues (Parker & Ratzan, 2010; Schwartz, Tuchman, Hobbie, & Ginsberg, 2011) Therefore, I used an integrated approach, utilizing concepts from both theories, to generate the theoretical framework for this study. The framework helped to improve research rigor in data collection and analysis and guidance in the development of research questions. For example, RQ3 focused on perceived barriers and benefits, concepts drawn from the HBM, and RQ4 focused on social factors that may

influence HLR for the transition to adulthood, concepts drawn from the SEM. This theoretical framework will be discussed more extensively in Chapter 2.

Nature of the Study

For this research, I used a qualitative approach with a phenomenological design. This approach was used to explore the issue of ethnic minority health literacy readiness in a natural setting so that I could ascertain a holistic, comprehensive understanding of the issue. EMYAs are often difficult to recruit for participation in research and therefore factors influencing their HLR for adulthood can be difficult to ascertain and measure (Currie et al., 2012; Massey et al., 2013). As noted by Creswell (2013) and Levitt et al. (2018), this methodology enables the researcher to explore the experiences of study participants who have experienced the phenomenon under study and gain a holistic understand of the phenomenon. In this study, I am exploring the perspectives of EMYAs on their HLR for the transition to adulthood. This could not be accomplished with a quantitative approach, which has a singular measurable focus, is more inflexible, not allowing an evaluation of the complexity of the issue (Creswell, 2013). These factors influenced my choice of a qualitative approach for the study of this research problem.

Health literacy readiness refers to an individual's adeptness to cope with the challenges of the health care system for maintaining optimal personal and community health. For EMYAs, achieving this goal is pivotal since the comfort of parental support is being withdrawn as the transition to adulthood progresses. This state of readiness is especially needed in EMYAs with chronic illnesses (Manganello, & Shone, 2013). For this study, I collected data from EMYAs in a southern county in the United States. I used

semi-structured interviews, posing open-ended questions to participants. Collected data were transcribed, analyzed through repeated reflection on words and phrases in the transcripts, coded, and reduced into themes and categories.

Definitions

Following are the operational definitions for terms used in the study:

Adolescence: The period of life between childhood and adulthood, chronologically occurring between ages 10-19 (Sawyer et al., 2012; WHO, 2016a). This was the age range considered for the study. However, psychologically the period may begin as early as age 10 and last until age 24 (Sawyer, 2012).

Health literacy: A dynamic state of knowledge acquisition through which an individual procures the social and cognitive ability to access, understand, utilize, and communicate health care information and services to support the maintenance and promotion of optimal health, personally and in the community (IOM, 2004; Macek et al., 2011; Nutbeam, 2015; WHO, 2015).

Health literacy readiness: The dynamic state of cognitive and social development that allows individuals to be prepared to appropriately use the complex U.S. health care system for maintenance of optimal personal and community health.

Minority young adults (emerging adults): Members of ethnic communities between the age of 18-24 who did not descend from any of the original peoples of Europe, the Middle East, or North Africa (CDC, 2014). These individuals usually comprise African American, Hispanic or Latino, Asian, Native Hawaiian or Other Pacific

Islander (NHOPI), American Indian or Alaska Native, and Multiracial people (CDC, 2014).

Transition: The process of change from one stage of life to another, more particularly in this study, the developmental stage of life when maturing adolescents become adults. This phase of life is characterized by increasing psychosocial and physical maturity as the adolescent becomes more independent and assumes responsibility for her or his health care (Chisolm et al., 2015; Weinstein et al., 2016).

Assumptions

The assumptions made in this study are as follows: Firstly, that participants had adequate familiarity with what it means to be health literate and understand the challenges associated with developing HLR. Secondly, that participants would be able to articulate their experiences in a way that provide credible and comprehensive information. The previously noted low rates of health literacy proficiency in some ethnic minority adolescents and young adults generated the concern that these qualities may be difficult to find in this population and could compromise the quality of the information collected. A third assumption was that participants had an adequate perception of the transitional period to adulthood and could communicate experiences cogently. Another assumption was that participants would be willing to provide reliable and trustworthy information during the interview process. Finally, the assumption was made that adverse experiences with the health care system did not prejudice participants so that biased or misrepresentative information was presented.

Scope and Delimitations

Low health literacy is a silent epidemic adversely affecting populations worldwide and the United States is not excluded. It is particularly problematic in some ethnic minority populations in the United States (Healthy People 2020, 2015). In this study I explored the perspectives of EMYAs on socioeconomic, environmental, sociocultural, and contextual factors that influence HLR for the transition to adulthood. Ethnic minority young adults transitioning to adulthood should acquire the necessary cognitive function and social skills to ensure the development of appropriate health literacy-related readiness to aid in utilization of the complex U.S. health care system. Failure to address this need could result in poor maintenance of personal and community health and poor health outcomes.

In this study, I focused on a multiethnic population in a southern county of the United States, mostly comprised of minority immigrants and their offspring. In particular, I explored the perspectives of minority young adults from the African American, Asian, Haitian, and Hispanic sectors of the community who were between ages of 18 and 22. Participants had to communicate in English, regardless of ethnic background, live in the county, and have access to technology that allows telephonic virtual interviewing. In addition, I chose an equal number of participants from both genders to participate in the study.

In the effort to achieve transferability, I selected a sample reflective of the study community and collected rich, in-depth descriptions of participant's experiences. This can help the reader to determine if transferability is possible. However, exploring HLR for adulthood in this qualitative setting limits the potential of achieving transferability or

causality (Byrne, 2013). Therefore, the findings generated from this study apply exclusively to participants from this ethnic minority community, nevertheless, study findings could prove helpful in informing research and interventions in similar ethnically mixed communities in the United States.

Limitations

The use of a qualitative approach with a phenomenological design for this study was associated with certain limitations. The study was conducted in a southern county of the United States among English-speaking EMYAs, who may not be representative of other adolescents or communities nationwide. In addition, the sample represents young adults ages 18 to 22 and may not be representative of other age groups. Also, the sample size was small and in the qualitative setting one cannot draw causal inferences or relationships (Creswell, 2013). These limitations were addressed by collecting thick rich descriptions of finding so that appropriate comparisons could be made, a process that strengthens transferability (Miles, Huberman, & Saldaña, 2014). As emphasized by Burke & Miller (2001), the collection of qualitative evidence is subject to bias, both from participants and researchers. Consequently, another limitation is that of reporter bias, which can occur as a complication of self-reported data. Since data will be collected through a self-reporting method (telephone interview), there is increased probability of reporter bias (Burke & Miller, 2001). Since the interview is not conducted face-to-face, it may prove more difficult to determine if reported information is accurate (Mays & Pope, 2000; Roulston, 2010). I conducted virtual interviews so that I could observe participant's reactions to question, seek greater clarity as needed, and perform member checking to

help cope with this limitation. Another limitation is that of interviewer bias. In the effort to reduce interviewer bias and improve dependability of research, I used the strategy of reflexivity. I declared my background, beliefs, and any conflicts that could influence data collection and analysis.

Significance

This study allowed me to explore of an important problem: adolescent and young adult HLR for engaging the health care marketplace during the transition to adulthood. At present, adolescents comprise 25% of the worldwide population and 21% of the U. S. population; a number that is expected to rise and contribute to further increases in the number of young adults worldwide (Healthy People 2020, 2015; Patton et al., 2015; Anonymous, 2015b). Lifestyle behaviors that increase health-risk remain problematic in minority adolescents and young adults (Kann et al., 2018). In addition, an associated rise in the prevalence of communicable and non-communicable diseases, mental illnesses, and preventable deaths is expected in this population (Sawyer et al., 2012). The development of a health literate minority adolescent and young adult population ready to cope with the health care challenges of adulthood is foundational to efforts aimed at improving minority health issues (Sykes, Willis, Rowlands, & Popple, 2013). In my review of the literature, there was much information available transitional readiness for adulthood in EMYAs with specific diseases, but limited information was available on HLR for the transition to adulthood in the general population of EMYAs. This study added to current knowledge about the views of EMYAs on their HLR for the transition to adulthood.

In addition, findings from this study provided a deeper appreciation of many factors facing EMYAs in the development of HLR for adulthood. The unearthing of these factors can also serve as fodder to stimulate further research and to inform interventions that could improve individual and community health in EMYAs. An investigation by Hargreaves et al., (2015) showed that unmet health care needs in adolescence is common (19.2%) and is an independent predictor of poor adult health as related to functional impairment, depressive symptoms, suicidal ideation, and fair/poor general health. Since the acquisition of lifestyle behaviors during adolescence and early adulthood influences adult health behavior and health outcomes (Colver & Longwell, 2013; NIHCM, 2011; Raphael, 2013), the recommendation of Hargreaves et al. (2015) is that strategies to reduce the prevalence of unmet health care needs address health engagement, care quality, and cost barriers. The effort to reach this goal will require a health literate adolescent and young adult population and policy aimed at reducing the prevalence of unmet health care needs, particularly in EMYAs. The findings from this study can help generate foundational information to influence such policy.

The finding of the study can also have implications for positive social change. The improvement of minority young adult health and health literacy is foundational to generating meaningful long-term social change in communities. These transitioning youth are at risk of failing to acquire the necessary health literacy skills to cope with health care issues (Manganello, & Sojka, 2016). The information derived from this study, provided helpful insights into factors contributing to poor health outcomes during adolescence and on into adulthood that result from poor HLR. Study findings can be used

to improve health awareness and health behaviors in EMYAs and the study community. Also, having a better understanding of factors influencing the development and maintenance of HLR for adulthood could lead health educators to develop better engagement strategies to enhance individual and community health. For example, understanding the views of EMYAs on HLR for the transition to adulthood could help in targeting areas of need like provider-patient communication or interpretation of medical information. By optimizing these strategies, EMYAs could develop needed self-efficacy to sustain health literacy while engaging the constantly evolving U. S. health care system. Such developments could generate positive social change by improving health outcomes, reducing health care cost, and by facilitating the passing on of a legacy of health to future generations.

Summary

Low health literacy proficiency is a silent epidemic that currently plagues the United States, especially in ethnic minority communities. This problem is associated with adoption of poor health behaviors, increased healthcare expenditures, and poor health outcomes in adolescence and adulthood (Healthy People 2020, 2015, IOM, 2004; Vernon et al., 2007). Adolescence and young adulthood are crucial periods of life during which individuals prepare for the transition to adulthood. Failure to develop appropriate health literacy during this phase of development can be associated with a decreased state of readiness for facing the health challenges of adulthood. This deficiency can contribute to poor health outcomes in adolescence and on into adulthood (Colver & Longwell, 2013; Stinson, et al., 2014). Minority populations face barriers that compromise their ability to

develop the necessary knowledge, opportunity to access, and ability to utilize health information and services (Yin et al., 2012). The development of a health literate minority young adult community may help to overcome these barriers and encourages the adoption of beneficial health behaviors on into adulthood. Consequently, an understanding of the perspectives of EMYAs' on HLR for adulthood is essential for improving their health behaviors and future adult health outcomes. By undertaking this study, factors influencing HLR for the transition to adulthood in EMYAs can be explored, and a better understanding of the issue developed. Chapter 2 includes the literature review and provides a more in-depth look at the theoretical foundations underpinning the study.

Chapter 2: Literature Review

Introduction

In the United States, achieving a health literate population is a goal that remains elusive. Health literacy disproportionately affects young adults, minorities, immigrants, and those who are over 65 years old (Healthy People 2020, 2015; Kutner et al., 2006; NIHCM, 2011). Not only is health literacy a social determinant of health in the United States and worldwide, it is also a health disparity (Nutbeam, 2000, 2015; Sawyer et al., 2012). Low health literacy adversely influences other health disparities thereby contributing to worsening health outcomes (Nutbeam, 2015; U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010). It has been estimated that, in the period between 2003 and 2006, health inequalities were responsible for 30.6% higher direct medical care expenditures for African Americans, Asian Americans, and Hispanics (Dankwa-Mullan et al., 2010). This mostly avoidable cost is expected to grow unless health disparities are reduced or eliminated (Dankwa-Mullan et al., 2010). It can therefore be deduced that by improving health literacy preparedness for adulthood it may be possible to reduce health care costs and positively influence health inequities and other health disparities influenced by health literacy. (NIHCM, 2011; Thorpe, 2013).

Despite the growing body of literature addressing adult health literacy, information about adolescent and young adult health literacy has lagged. More specifically, in my review of the literature, few researchers have investigated ethnic minority adolescents' and young adults' understanding of HLR for the transition to

adulthood and its effects on their health behavior, health outcomes, and community health practices. In addition, the rising prevalence of chronic diseases such as diabetes, overweight, and obesity; the persistently high rates of STIs and rising HIV/AIDS rates; and the inability to deter unhealthy lifestyle behaviors like smoking have led to an intensified call by health experts for greater attention to adolescent and young adult health and health literacy (Agaku et al., 2014; Lobstein et al., 2015, Patton et al., 2015; Rogers et al., 2014). The need for continued investigations in adolescent and young adult health is essential to improving the care of EMYAs.

A major problem in conducting such research is the unwillingness of minorities to participate, a challenge that further hampers the development of evidence-based information and interventions in EMYAs (Evans, Lewis, & Hudson, 2012; George, Duran, & Norris, 2014). In this study, I addressed an important gap in the literature related to the HLR of this population during the transition to adulthood. In this qualitative research, I explored the perspectives of EMYAs from a southern county in the United States on their HLR for the transition to adulthood.

The WHO (2016c) defined health literacy as the acquisition of the social and cognitive ability to access, understand, and utilize health care information and services to support the maintenance and promotion of optimal health. However, defining health literacy in the research setting is challenging according to Massey et al. (2012), and full agreement has not been reached by researchers. As the understanding of health literacy has evolved, other domains have been added to the definition. Many investigators now view health literacy not only as a functional understanding of certain basic skills needed

to understand health information and services but also as the acquisition of a complex array of skills needed to navigate available health-related information to make appropriate individual and community health care, disease care, and health promotion decisions (Benes & Alperin, 2016; Massey et al., 2013; Nutbeam, 2015; Rask et al., 2014; Sørensen, et al., 2013). This historical difficulty in formulating a consistent definition of health literacy with set, measurable domains that are reproducible across investigations has proven problematic in furthering health literacy research.

The dynamic state of health literacy also makes it difficult to have a definition with specific domains that will be permanently accepted by all investigators. Massey et al. (2013) noted that current definitions include multiple domains, which are always expanding thereby challenging the ability to compare research findings across studies. In addition, Abel et al. (2014) argue that the varying definitions used in public health and curative health complicate the ability to measure health literacy adequately and accurately. These schools of practice emphasize different aspects of the health literacy issue. Public health specialists focus on knowledge and skills while curative health specialists engage primarily with issues of access and utilization (Abel et al., 2014). As a result of this dilemma I chose the qualitative method for evaluating the HLR of EMYAs transitioning to adulthood.

The use of a health literacy definition that is comprehensive and holistic, and which recognizes the dynamic state of the issue, was essential in this study. Massey, Prelip, Calimlim, Quiter, & Glik, (2012) asserted that health care-related information could change daily, and, therefore, the acumen required for health literacy must be

dynamic. The authors adopted a more expansive perspective of health literacy, defining it as a set of skills used to organize and apply health knowledge, attitudes, and practices relevant to an individual's needs when managing the health environment (Massey et al., 2012). However, it should be noted that this definition also allows for the identifying of specific domains that can be empirically studied in the effort to gain further understanding of context specific issues influencing individual health literacy (Abel et al., 2014; Massey et al., 2013). By using the more open definition of health literacy in the person-centered setting, a more holistic picture of HLR can be obtained when investigating EMYAs transitioning to adulthood.

In Chapter 2, I review current literature, providing an exhaustive examination of current research related to adolescent and young adult health and health literacy readiness for the transition to adulthood, particularly in EMYAs. This chapter is divided into five sections. The first section includes the search strategy used to secure needed research. The second section provides the theoretical framework undergirding the study, and the third section focuses on an extensive investigation of minority adolescent health and health literacy preparedness for the transition to adulthood. This content is followed by a fourth section including a review of the methodology underpinning the study. Finally, I summarized chapter 2 and provided a transition to Chapter 3.

Literature Search Strategy

For this research, I performed an exhaustive literature search to find articles published over the past 5 years. I used the EBSCOhost database platform, Google Scholar, PubMed, ERIC, and Sage Premier databases. This academic review was limited

to full-text, peer-reviewed articles written in English and published between the years 2013-2018. The search terms used included *minority adolescents*, *minority emerging adults*, *health literacy*, *adolescent transition*, and combinations thereof. In addition, I reviewed online resources for white papers and reports from foundations, federal and state public health agencies, and organizations involved with health literacy and adolescent health issues. I also examined print media from public, private, and nonprofit organizations available on their websites. In a review of health literacy articles in the literature, Bailey, McCormack, and Paasche-Orlow (2015) noted a predominance of review articles and a relative scarcity of primary research articles on this subject. I noted a similar finding in reviewing the literature with the more recent articles providing reviews of data from prior health literacy studies and fewer original articles.

For this research, I obtained evidence from several disciplines, including education, social sciences, medicine, and public health, which are areas that impact or are impacted by health literacy. I used key search words to identify qualitative and quantitative research studies related to health literacy in adolescents and young adults. After an initial review of multiple titles and abstracts to determine the relevance of each article for the purpose of conceptual development, I read and retained 275 articles. Articles retained had to address the conceptual or evaluative discussion, provide an experimental investigation of adolescent/young adult/adult health literacy, or provide synthesis of bodies of literature related to adolescent/young adult/adult health literacy, particularly on transitional readiness for adulthood. Of major concern was the fact that only a limited number of primary articles were located that examined information related

to ethnic minority adolescents/young adults' perspectives on health literacy and only one article assessed their perspectives on health literacy preparedness for adulthood. This finding, though not desirable, was not unexpected considering the virginal state of this area of research and the prior history of egalitarian trends in applying health research findings.

Theoretical Framework

The second section of this chapter provides the theoretical framework for this study. As stated by Bradbury-Jones, Taylor, and Herber (2014), the use of theory is foundational to qualitative research. Constructs from the health belief model (HBM) and the socio-ecological model (SEM) were used to inform this study. The constructs of the HBM focus on factors influencing the individual's acquisition of knowledge, which leads to an intelligent understanding of risk (Glanz & Bishop, 2010; Panahi, Ramezankhani, Tavousi, & Niknami, 2018; Rikard et al., 2016). The key constructs governing individual readiness to adopt or not adopt a desired behavior include perceived susceptibility and perceived severity of a potential negative outcome, perceived benefits of, and perceived barriers to taking a prescribed action, internal and external cues to action, and individual self-efficacy (Karimy & Zareban, 2018; Panahi, Ramezankhani et al., 2018; Wright, Randall, & Grace Hayes, 2012). The ability to evaluate these variables in turn influences an individual's adoption of the desired behavioral and the development of self-efficacy to sustain the desired behavior (Panahi, Ramezankhani et al., 2018). Therefore, the HBM supports the need to promote the development of acumen in EMYAs so that they can

appropriately evaluate the risk/benefit relationship involved in acquiring HLR for the transition to adulthood.

The Heath Belief Model (HBM) has successfully provided a useful framework for conceptualizing individual attitudes that predict preventative health behaviors and for framing interventions to influence behavioral change since its invention in the 1950s. (Asare et al., 2013; Karimy & Zareban, 2018; Panahi, Ramezankhani, Tavousi, & Niknami, 2018). In the United States, Grace-Leitch and Shneyderman (2016) used constructs to predict preventive behaviors and acceptance of HPV vaccine among male college students in New York City. Results of their study revealed that self-efficacy and perceived susceptibility to HPV infection predicted vaccine acceptability, but not condom use (Grace-Leitch & Shneyderman, 2016). The HBM was also used to by Panahi et al., (2018) to assess whether an educational intervention to improve health literacy in college students in Iran could be effective in smoking prevention. The results showed that the intervention (use of social media messaging) increased acumen, health literacy, and predicted the adoption of smoking preventive behaviors (Panahi et al., 2018). However, there are some limitations to the HBM.

Among the limitations of the HBM is a failure to account for economic or environmental factors that influence health behavior (Shafiei, Taymoori, Maleki, & Sayehmiri, 2018). Since the development of health literacy is influenced by external factors from the physical, social, and political environments (Higgins et al., 2009; Rudd, 2015), it was important to insert an added dimension to the framework. Therefore,

concepts from Brofenbrenner' socioecological model (SEM) were added to accommodate this limitation.

For EMYAs, the acquisition of health literacy proficiency and readiness for the transition to adulthood mostly occurs in a social context influenced by individual and environmental factors. By using an ecological model, the multitiered factors influencing a phenomenon like health literacy readiness, can be better assessed (Glanz, & Bishop, 2010; Rudd, 2015; Townsend & Foster, 2011). The SEM recognizes the influence of these multiple, complex, and tiered environmental factors and allows for the integration of economic and environmental factors in the development of individual behavior (Glanz & Bishop, 2010; Schwartz et al., 2011; Shafiei et al., 2018). In addition, the SEM not only assesses internal individual behavioral factors, but it also addresses other external factors in the meso and macro environments that influence changes in health behavior (Shafiei et al., 2018; Townsend & Foster, 2011). Since environmental factors at various levels, namely family, school, community, organizational, and public policy, can influence health literacy in ethnic minority adolescents and young adults (Gupta et al., 2013; Koh, 2012; Zeh, Sandhu, Cannaby, & Sturt, 2014), concepts from this model helped in informing the conceptual framework for this study. These concepts also helped to guide the literature search, plan the study, develop interview questions, and to guide data analysis.

Health literacy readiness is not merely a static measurable state of knowledge, but a dynamic state involving the continual acquisition knowledge related to rapidly advancing health information and the ability to utilize continually changing and

improving healthcare services (Macek et al., 2011; Nutbeam, 2015; Parker & Ratzan, 2010). To reach this state, intrapersonal factors, namely cognitive awareness, inner motivation, and educational or literacy competence must be developed (Nutbeam, 2015; Parker & Ratzan, 2010). In addition, HLR is stimulated by interpersonal cues such as input from family, peers, school, media information, or the requirements of public policy (Benes & Alperin, 2016; Parker & Ratzan, 2010; Schwartz et al., 2011). Health literacy proficiency and readiness is also maintained by continued internal and external motivation, development of social and cognitive skills, continued education, and by exposure to changing health information and expanding health care services (Benes & Alperin, 2016). A holistic model to promote EMYA HLR for the transition to adulthood should integrate these concepts.

In conceptualizing the process of young adult health literacy readiness, the central focus is on the bidirectional relationships between three primary forces: individual acumen, access, and application (see Figure 1). Here, acumen refers to the ability to acquire the necessary knowledge to effect good judgment regarding personal and community health care (Nutbeam, 2015; Sørensen et al., 2012). Access refers to the provision of opportunity to develop a state of health literacy commensurate with, or appropriate for, the individual's health care needs and also those of the wider community (Benes & Alperin, 2016; Nutbeam, 2015; Rask, Uusiautti, & Määttä, 2014). Application refers to the ability of individuals to correctly utilize acquired knowledge on health care information and services to maintain and improve personal and community health (Sørensen et al., 2012). As hypothesized by Sørensen et al. (2012), it is the bidirectional

interaction between these forces that leads to the development of appropriate health literacy proficiency in the individual. It is the development and maintenance of this state of proficiency that leads to a state of HLR for the health care challenges of life (see Figure 1).

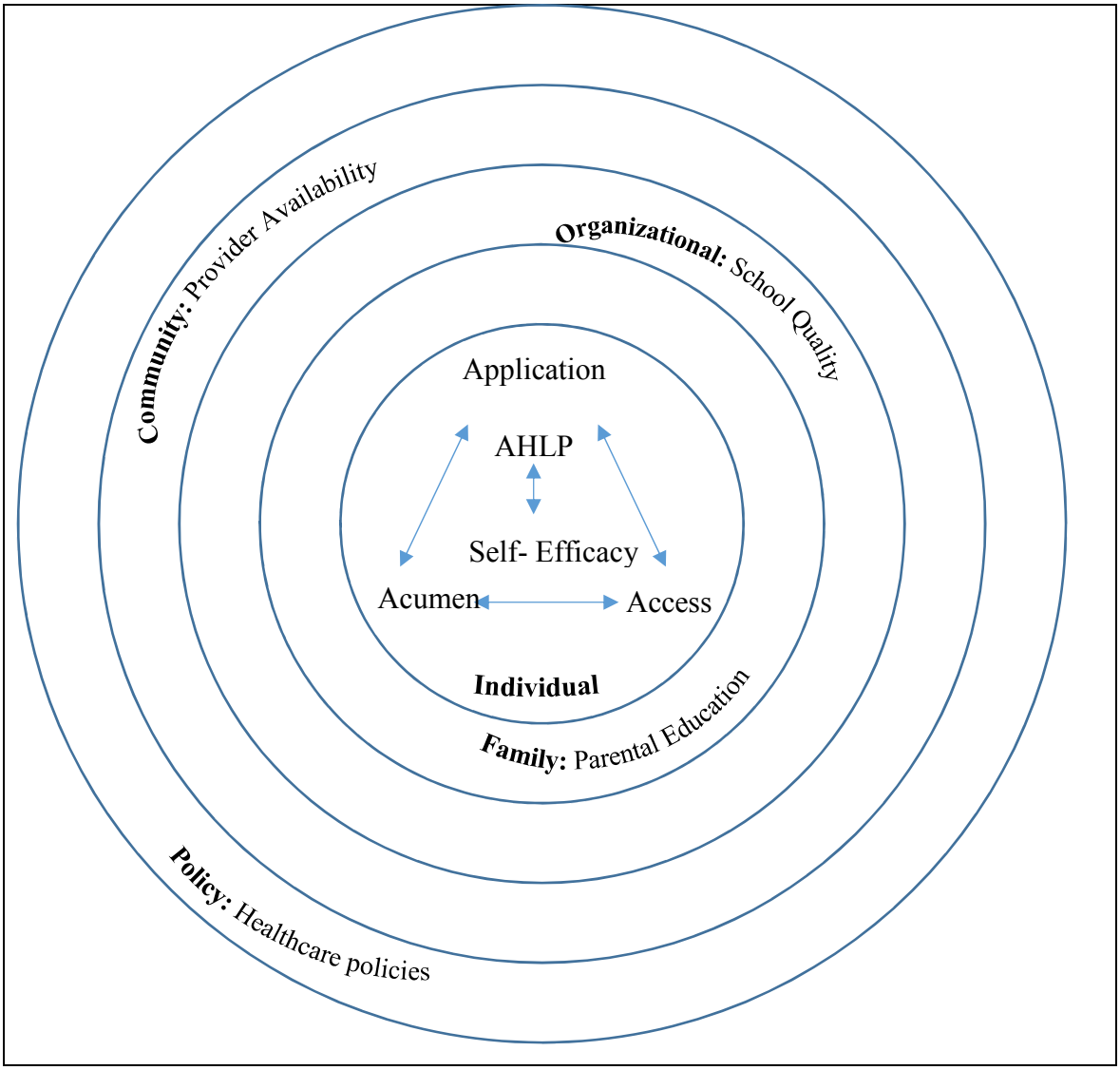

Figure 1. Ecological model of five domains for young adult health literacy proficiency in ethnic minorities with examples of contributing factors.

There are many complex ecological factors that influence these three forces in affecting the development of health literate adolescents and emerging adults. These include awareness factors, availability factors, biological factors, and skills-development ability factors (Parker & Ratzan, 2010; Rowlands, Shaw, Jaswal, Smith, & Harpham, 2015; Rudd, 2015). For instance, acumen is best developed when skill factors, namely, literacy level, numeracy ability, and English language proficiency, are well developed in a reciprocal relationship with physical and social environments (Rudd, 2015). Biological factors that determine cognitive function: genetic determinants, and disease burden, can also influence acumen (Parker & Ratzan, 2010). The same is true of awareness factors: socioeconomic status, sociocultural state, and environmental and contextual circumstances, which, together with internal cues, can influence acumen and enhance the development of a health literate population (Karimy & Zareban, 2018; Parker & Ratzan, 2010; Rudd, 2015). The development of acumen is foundational to realizing HLR in EMYAs.

Concurrently, efforts to ensure access must also be incorporated in the development of HLR. Access is influenced, not only by personal literacy and educational levels, but also by the socio-political environment (Rudd, 2015) These factors can influence the availability of health insurance coverage, provider services, health care policy, and details on health care information and services (Parker & Ratzan, 2010; Rudd, 2015). Access cannot be restricted to individual skills; it must also be supported by extra-personal factors: parents, providers, and policy makers, to foster a better understanding of

health information and services (Rudd, 2015). The procuring of access for EMYAs is therefore crucial to the development HLR for the transition to adulthood.

Factors influencing application, that is, the correct utilization of health care information and services, include health promotion policy with engagement strategies aimed at improving stakeholder communication, motivating the development of skills to ensure better self-care, and the ability to use available tools, such as technology, to secure available services (Parker & Ratzan, 2010; Rudd, 2015). This facet can only develop appropriately if the requisite acumen and available access is present. With improved acumen, available access, and correct application of health care information and services, HLR can be improved in EMYAs, thereby reducing the health literacy disparity and associated health outcomes noted in minority communities.

The continued bi-directional interactions among the forces of acumen, access, and application are also vital to the development of individual self-efficacy and the health literacy readiness for the transition to adulthood in EMYAs. Such a development can potentially influence the adoption of healthy lifestyles and influence behavior to secure lasting positive social change. With the development and maintenance of a health literate state, EMYAs can attain a state of self-efficacy and readiness for transition to adulthood. It is therefore important that a theoretical framework capable of incorporating the ecological factors influencing the ever-changing state of flux among acumen, access, and application be utilized in to undergird interventions that aim to develop HLR in EMYAs transitioning to adulthood.

Literature Review Related to Key Variables and/or Concepts

Young Adult Health and Health Literacy

The third section of this chapter covers the current literature on adolescent and young adult health, health literacy, and on young adult preparedness for the transition to adulthood. The issue of adolescent and emerging adult health has been gaining increasing prominence in the public health arena in recent years as multiple investigators have called for greater investment in research in this area (NIHCM, 2011; The Lancet, 2015b; Patton et al., 2016). Recent estimates show that 25% of the world's population is between 10 and 24 years of age (Anonymous, 2015b; Sawyer, 2012;). In the U. S. adolescents and young adults between ages 10 to 25 make up 22% 0f the population (Healthy People 2020; 2015). As of 2012 the number of children under age 18 in the U. S. population was estimated at 73.7 million with adolescents between age 12-17 comprising 48.8% of this number (Bloom et al., Jones, 2013). For the population under 18 years 52.9 % were White, 14.2% African Americans, 23.9% Hispanics or Latino, and Asians 4.6% (Bloom et al., 2013). This adolescent population will soon enter the ranks of emerging adulthood and, unless action is taken, the challenge of poor health outcomes related to low health literacy and associated disparities will persist, particularly in minority communities.

Medical and mental health issues influence the immediate and long-term health of this population (National Center for Health Statistics, 2017; Sawyer et al., 2012) and a health literate population is needed to cope with these issues. Even though 82.3% of children in the U. S. under age 18 and 76% of young adults ages 18 to 24 report excellent or very good health, ethnic minority adolescents and young adults still face health

disparities that worsen health outcomes (Aud, KewalRamani, & Frohlich, 2011; Bloom et al., 2013; National Center for Health Statistics, 2017). Furthermore, most ethnic minority communities face the challenge of increasing deaths related to homicide and gun violence, particularly in African American and Hispanic community sectors, substance abuse, prevalence of chronic diseases, and educational challenges (National Center for Health Statistics, 2017). As of 2017, adolescent and young adult deaths for individuals ages 15 to 24 were 43.5 per 100,000 population, with the leading causes being accidents (unintentional injuries), suicide, and homicide, (CDC, 2017a). These preventable causes of death could potentially be influenced by improved HLR in this population.

Young Adult Health Concerns

There are many diverse health issues facing adolescents that continue into early adulthood. Adolescents face an increasing burden from communicable, non-communicable, and mental health disorders that pose a threat to current and future health (Patton, 2015). Even though infectious diseases have plateaued or are declining in some life stages, the adolescent and young adult population continue to see increase in the prevalence of non-communicable diseases, mental health illness, and preventable deaths (CDC,2017a; Heron, 2017; Patton, 2015). Current trends in adolescent and young adult health show a rising prevalence of obesity and Type 2 diabetes, the persistently high prevalence of infectious diseases like STI's/HIV, and worsening challenges related to mental health issues, namely suicide, substance abuse, and eating disorders, (Catalano, 2012; Heron, 2017; Manganello, & Shone, 2013). These trends increase the need for

greater adolescent and young adult health literacy to help cope with these health challenges.

The most recent assessment of the health status of America's youth showed continued increases in the number of people classifying their health status as fair/poor, with White, African American, and Hispanic youth reporting at 3.3, 6.6, and 5.4 percent respectively (Aud et al., 2011). This state arises from the array of health issues confronting this segment of the population (Anonymous, 2015b; Isler, et al., 2014; Rogers et al., 2014). For example, incidence and prevalence estimates reported by CDC (2017b), show that young people between ages 15 to 24 acquire half of all new STDs and 1 in 4 sexually active adolescent females has an STD, such as chlamydia or human papillomavirus (HPV). When compared with older adults, sexually active adolescents ages 15 to 19 and young adults ages 20–24 were at higher risk of acquiring STDs from a combination of behavioral, biological, and cultural reasons (CDC, 2017b). These health trends in chronic and communicable diseases in this population point to future worsening of adult health and encourage the need for action at all ecological levels to mitigate fallout from adverse health outcomes associated with the adolescent health burden.

The need for improved adolescent health led to the formation of a Lancet Commission to further study the issue (Patton et al., 2015; Patton et al., 2016). In addition, recent work by the WHO aimed at improving adolescent health care led to the development of eight Global Standards and 79 criteria for measuring them (Nair et al., 2015). The standards aimed at improving adolescent health are: (1) adolescents' health literacy; (2) community support; (3) appropriate package of services; (4) providers'

competencies; (5) facility characteristics; (6) equity and nondiscrimination; (7) data and quality improvement; and (8) adolescents' participation (Nair et al., 2015). The implementation of these standards has the potential to improve young adult health and provide dividends on into adulthood.

Health Concerns in Minority Youth

Minority health is influenced by a multiplicity of socio-political factors and remains a public health challenge. Compared to Whites, most minority youth are disparately affected by chronic and communicable diseases. Chronic diseases like obesity, diabetes, and asthma; mental health issues like substance abuse, homicide and suicide, and communicable diseases such as STI's and HIV are particularly prevalent in ethnic minority communities (Ashcraft, 2013; Bloom et al., 2013; CDC, 2017a; National Center for Health Statistics, 2017). These problems remain the source of significant morbidity and mortality among ethnic minority youth (Heron, 2017). For instance, the persistently high prevalence of STD/HIV in some minority adolescents and young adults, especially rising HIV/AIDS rates in partners of Black men who have sex with men (MSM), presents a major public health concern (CDC, 2017b; CDC, 2017c; Champion, Harlin, & Collins, 2013; Isler, et al., 2014). These concerns were epitomized by the CDC (2017c), who reported that chlamydia rate among Blacks aged 15-24 years was 4.5 times that of Whites with a similar pattern of disparity existing between Blacks and Whites for other STDs (CDC, 2017c). With reference to reproductive health, teenage pregnancy is a challenge in African American and Hispanic communities when compared to Whites (Manlove, Steward-Streng, Peterson, Scott, and Wildsmith, 2013). However, these

researchers were able to show that improving the context of adolescence by adding additional controls like creating supportive family environments; teaching youth to discern individual, peer, and dating characteristics, and providing education on the characteristics of first sexual relationships and subsequent sexual experiences, these practices could potentially reduce teenage birth rates in African Americans and U. S.-born Hispanics by 40% and 35% respectively (Manlove et al., 2013). The improvement of HLR in EMYAs could prove beneficial in reducing the current health disparities present in minority health care.

In addition, the adoption of unhealthy lifestyle behaviors remains problematic in ethnic minority youth. Health-risk behaviors associated with higher morbidity and mortality remain a challenge for minority adolescents (Kann et al., 2014). Such behavior has contributed to the rising prevalence of Type 2 diabetes and obesity, together with the aggravation of other chronic diseases like asthma (Aud et al., 2011; Oliveira et al., 2015; Rogers, et al., 2014; Woods et al., 2016). On investigating African American youth, Oliveira et al. (2015) noted that this group was less physically active and experienced higher levels of obesity and other chronic conditions than their ethnic majority counterparts. In addition, Ashcraft (2013) noted that obese African American adolescent males had difficulty with self-perception and meaning of their disease, a factor that influences positive resolution of disease. Issues pertaining to other lifestyle behaviors such as alcohol, tobacco, and recreational drug use are associated with immediate and long-term health consequences and interlinked with violence and injuries in minority adolescents (Agaku, 2014). Adolescent and young adult alcohol use is also linked to

continued adult use, alcohol dependency, and other problems that extend on into adulthood (Jane Marshall, 2014, McCambridge, McAlaney, & Rowe, 2011). The promotion and adoption of positive lifestyle changes can prove beneficial in EMYAs with higher risk of low health literacy.

Finally, challenges with preventable behavioral and mental health issues, such as suicide, bullying, homicide, and unintentional injuries are particularly pertinent to minority young adult health. These issues are among the leading causes of death among this population (Bloom et al., 2013). Mental health disorders, more common in girls, are often not recognized by parents, teachers, or peers (Anonymous, 2015a). It is therefore imperative that these issues be addressed with appropriate interventions to prevent their occurrence and thereby improve individual and community health outcomes (Patton et al., 2015; Sawyer et al., 2012). An essential element for improving this dynamic is the development of a more health literate minority adolescent and young adult population.

Health Literacy

History and burden of health literacy. Interest in health literacy and particularly youth health literacy, is relatively new. Starting in the 1980s, it became increasingly apparent that health literacy was an important determinant of health (Bailey et al., 2015). Initially, most research was limited to functional health literacy in adults (Benes & Alperin, 2016; Nutbeam, 2000, 2015). This led to the development of various tests to assess an individual's literacy and numeracy capabilities and the development of efforts towards improving health literacy related skills. It was not until Manganello (2008) called for increased attention to the issue of adolescent health literacy that increased interest was

generated. Other investigators, recognizing the importance of this issue, have followed suit in encouraging attention to the issue of adolescent and emerging adult health issues and health literacy (NIHCM, 2011; Anonymous, 2015a; Patton et al., 2015). In the United States, the Healthy People 2020 initiative recognized that adolescent and young adult health literacy is crucial to the development of a healthy society and added goals for improving the health literacy of these groups (Healthy People 2020, 2015). As a result of these efforts during the past decade (2008-2018), interest in youth health literacy has come of age.

Health literacy is a multidisciplinary phenomenon that brings together concepts related to disease treatment and prevention, health promotion, health education, and health policy formulation that affects individuals and communities. This social determinant of health remains a crucial component in the effort to improve the health and health behaviors of adolescents and young adults. In the United States, the burden of low or limited health literacy proficiency affects the entire population but is disproportionately borne by minority populations (Healthy People 2020, 2015; Kutner et al., 2006). The most recent national study on adult health literacy showed that among adolescents ages 16-18 and young adults ages 19-24, basic or below health literacy rates were 34% and 31% respectively (Kutner et al., 2006). The telling story however is that 66% of Hispanics, 58% of African Americans, and 48% of American Indian/Alaskan Native adults were at basic or below levels of health literacy compared to 28% of White Americans and 31% of Asian/Pacific Islanders (Kutner et al., 2006). One recent study noted that 65% of African American Adolescents had low health literacy (Manganello &

Sojka, 2016). The problem is even worse in minority adolescents and young adults who use English as a second language where low health literacy rates can range from 36% to 98% (Sentell & Braun, 2012; Soto Mas et al., 2015). Deficient health literacy proficiency remains a significant problem in minority communities.

These findings highlight a disparity with a broad spectrum of multidisciplinary challenges facing young adults who are transitioning to adulthood. The most recent prevalence data done in the United States showed that only 8% of adolescents age 16-18 and 11% of young adults age 19-24 were health literacy proficient (Kutner et al., 2006), however, this data was not segregated by ethnic groups. The data for the adult U. S. population, age 16 and above, showed only 4% of adult Hispanics, 2% of adult African Americans, and 7% of adult American Indian/Alaskan Native were health literacy proficient (Kutner et al., 2006). This compares to proficiency rates of 14 % in adult White Americans and 18% in adult Asian/Pacific Islanders (Kutner et al., 2006). It is quite evident that health literacy proficiency is a prominent health disparity in minority populations, except for Asian/Pacific Islanders, which needs to be addressed.

Factors influencing youth health literacy. Health literacy is influenced by multiple individual and social factors occurring at various tiered system-levels, namely, individual, family, community, organizational, and policy (Gupta, 2013; Hahn et al., 2015; Sentell & Braun, 2012). These factors can be broadly categorized into upstream and downstream factors. Upstream factors include discrimination, prejudice, poverty, education, housing, transportation, and crime/violence (Rudd, 2015; Price, McKinney, & Braun, 2011). Socioeconomic inequality and unequal income distribution between rich

and poor have increased, influencing young adult health literacy and health outcomes (Elgar et al., 2015). Downstream factors influencing youth health literacy include access to physicians and diagnostic testing, provider availability, availability of disease treatments, adolescent social and cognitive skills, adolescent educational and literacy levels (particularly among those who use English as a second language) and adolescent social influences, both peer and parental (Paek & Hove, 2012; Sentel et al., 2012). For example, education level is an important factor in the development of health literate young adults. However, in the National Assessment of Adult Health Literacy study, Kutner et al. (2006) noted 45% of high school graduates had limited health literacy. Recent data on minority adolescent graduation rates from NECS (2018) for the 2015–16 school year showed that among American Indian/Alaska Native, Black and Hispanic students attending public high school 28%, 24%, and 21% respectively failed to graduate (NECS, 2018). These students also exhibit poor reading skills (NECS; 2014), a factor that contributes to low or limited health literacy proficiency. Graduation rates for Whites (88%) and Asian/Pacific Islander (91%) were above the national average (84%) (NECS, 2018).

The level and context of education can be associated with utility of health care services and health literacy. In patients with sickle cell anemia, Jonassaint et al. (2016) showed that those who did not have a high school education used emergency department (ED) services three times more frequently than those with post-secondary education. On the other hand, education was independently associated with potentially avoiding ED care (Jonassaint et al., 2016). The contextual setting of education also has an impact on the

health literacy of adolescents. In their evaluation of students attending schools in Suffolk County, NY, Goodman et al. (2012) found that respondents who attended a mostly White junior high school or currently lived in a mostly White neighborhood were more likely to have adequate health literacy when compared to those educated or living in predominantly minority or diverse environments. The investigators noted that this association was independent of the respondent's race, ethnicity, age, education, and country of birth (Goodman et al., 2012). These factors should be considered in health promotion efforts to improve HLR in EMYAs.

The combination of self-reliance, low income, and low health knowledge can also have a negative influence on adolescent and emerging adult health behaviors. On investigating HIV knowledge in low income African American adolescents age 13-18, Swenson et al., (2010) discovered that HIV knowledge in the community was limited, leading them to recommend better HIV/AIDS education, particularly with regards to condom use and the benefits of routine STI/HIV testing. In another study of adolescents at risk of suicide in suburban New York, 19% of whom were ethnic minorities, Labouliere, Kleinman, and Gould (2015) showed that extreme self-reliance was associated with reduced help-seeking, clinically significant depressive symptoms, and serious suicidal ideation during baseline screening evaluation and up to two years later. These findings highlight some of issues influencing adolescent and young adult health literacy, which need to be addressed in promoting HLR for adulthood.

Access to e-health literacy programs can also prove beneficial in low health literate individuals. In the effort to encourage greater adolescent e-health literacy, Paek

and Hove (2012) examined the influence of social cognitive factors (outcome expectations, health motivation, and involvement) and perceived social influence (peer and parental) independently, and jointly to determine their effect on adolescent e-health literacy in a sample of mostly White (90%) middle schoolers. Their findings suggested that the social cognitive factors of outcome expectations and involvement significantly improved e-health literacy (Paek & Hove, 2012). Also, all perceived social influence variables significantly improved e-health literacy (Paek & Hove, 2012). However, health motivation and the joint effect of social cognitive factors and perceived social influence variables did not show an effect on e-health literacy (Paek & Hove, 2012). These investigators concluded that educators should make e-health literacy programs personally relevant to adolescents (Paek & Hove, 2012), a recommendation that could be beneficial for developing methods to boost health literacy readiness for EMYAs. In a review of the literature, Kim and Xie (2017) concluded that, for low literacy individuals, efforts should be made to improve access to eHealth services to enhance health literacy.

A multitiered approach should be taken to address the multiple factors influencing young adult health literacy readiness for adulthood. At the individual level, factors such as literacy and English language proficiency, particularly in immigrant and low socioeconomic adolescent and young adult populations, need to be addressed (Hahn et al., 2015; McKee, & Paasche-Orlow, 2012). At the family level, improved parental education, parental involvement, and parental socioeconomic status can facilitate reaching the goal of a more health literate adolescent and young adult community (Hahn et al., 2015; Lee, Cintron, & Kocher, 2014). In the effort to determine the association

between parental health literacy and treatment response in patients with nephrotic syndrome, Borges et al., (2017) noted an association between parents with lower health literacy, specifically reading comprehension, and higher relapse rates among children with nephrotic syndrome with fewer children achieving complete remission. In another study evaluating the effort to reduce smoking behavior in school aged minority youth, Guilamo-Ramos, et al., (2010) observed that the higher the level of parental education and involvement the greater the benefit in reducing tobacco use. At the organizational level, researchers advocate that high schools and colleges must actively facilitate the development of health literacy proficiency in older adolescents transitioning to adulthood through appropriate classroom and extra-curricular education (Deering et al. 2016; Paakkari & George, 2018). In order to facilitate continued progress towards improved minority young adult health literacy, there must be a change in attitude towards their education.

At the community and policy levels it is imperative that health promotion and health education interventions and legislative boundaries be set in the effort to improve health literacy, health behaviors, and health outcomes in the young adult population. As encouraged by Okan, Pinheiro, Zamora, & Bauer (2015) there must be an increased focus on health literacy determinants during the adolescent years so that all children have an equal opportunity to become proficient when entering adulthood. In so doing, the primacy of preventive interventions must be positioned in the minds of adolescents, parents, providers, school personnel, communities, and policy makers (Deering et al.

2016). To successfully ensure HLR for the transition to adulthood in EMYAs, evidence supports engaging the issue at all socioecological levels.

Health care economics and health literacy. Lack of health literacy proficiency presents a significant economic burden for the U.S. health care system, especially from minority communities. Health care cost has been precipitously increasing over the past twenty-five years, especially in the area of chronic disease care (Thorpe, 2013). Chronic diseases occur at disparate rates in lower socioeconomic communities and expenditures are expected to rise, especially if health and other related disparities are not reduced or eliminated (Dankwa-Mullan, et al., 2010). The increasing prevalence of chronic diseases and the need to monitor and treat these diseases has contributed greatly to this cost increase (Garvey et al., 2013; Thorpe, 2013). As highlighted by Dankwa-Mullan et al. (2010), between the years 2003 and 2006, health inequalities were responsible for an estimated 30.6% excess cost of direct medical care expenditures for African Americans, Asian Americans, and Hispanics. In an evaluation of the Veterans Health Administration (VHA) between 2007 and 2009, French et al. (2015) noted that individuals with inadequate or marginal health literacy cost the system $143 billion more than those with adequate health literacy. In their study on health literacy and emergency department (ED) use, Griffey, Kennedy, McGownan, Goodman, and Kaphingst (2014), noted that as many as 88% of people who present to emergency departments (ED) for non-emergent situations have low health literacy proficiency. Therefore, the lack of health literacy proficiency in the population places significant economic burden on the U.S. taxpayer, one that was estimated to be in excess of 200 billion dollars a year (Parker & Ratzan,

2010; Vernon et al., 2007). Low health literacy is a major predictor of emergency department use and a major contributor to healthcare cost. Therefore, the development of interventions to improve HLR in all communities can contribute to reversal of this economic trend.

Health literacy and minority youth. For EMYAs, health literacy proficiency is a pivotal factor for influencing health behaviors and health outcomes. However, efforts to improve young adult health literacy, better understand their health behaviors, and generate better health outcomes, present a significant public health challenge in the U.S. and worldwide (Anonymous, 2015b; Patton et al., 2016). The challenge of diversity adds to the difficulty in improving the health literacy of minority young adults. This community is comprised of natives and immigrants from multiple ethnic backgrounds, individuals from lower socioeconomic levels, individuals who use English as a second language, and individuals who have limited or no health care access, all of which are important factors that influence or are influenced by health literacy proficiency (Sentell, & Braun, 2012; Soto Mas et al., 2015; Manganello & Sojka, 2016). In some urban areas in the United States more than 50% of the population is immigrant and over 70% use English as a second language (United States Census Bureau, 2015). Individuals who use English as a second language are particularly at risk for health literacy challenges, especially when limited English language proficiency (LEP) characterizes their communities (Hahn et al., 2015; McKee, & Paasche-Orlow, 2012; Soto Mas et al., 2015). Furthermore, according to Okan, Pinheiro, Zamora, and Bauer (2015), the lack of evidence-based recommendations from these communities is both concerning and

hampering. Further investigation is therefore needed to help in resolution of the health literacy disparity, especially in ethnic minority communities,

The multifactorial influences contributing to health literacy proficiency inspired the American Public Health Association (2010), in its policy statement confronting the issue, to urge

> public health and health care communities to organize and work with multi-sectorial coalitions (i.e., consumers, government, businesses, and nonprofit agencies) to reduce individual and structural barriers to health literacy, to promote the dissemination of accurate health information, and to involve and advocate for vulnerable populations and communities in their right to informed health decision making. (para 18).

This comprehensive approach is essential in addressing the health literacy needs of EMYAs who lack the required acumen to access health care information and services, and to correctly apply the skills and tools that are needed to implement acquired information.

In minority young adults, the care of both chronic and communicable diseases is impacted by inadequate health literacy. In evaluating minority adolescent women, Champion et al., (2013) noted disproportionately low STI/HIV health literacy, which was associated with increased risk of STI, HIV, and pregnancy, a trend that continues into early adulthood (CDC, 2017b). Recently, Castro-Sánchez, Chang, Vila-Candel, Escobedo, and Holmes (2016) reviewed studies that examined the relationship between health literacy and care of infectious diseases excluding HIV (data on HIV and health

literacy had already been published). In these studies, researchers noted that limited health literacy was associated with reduced adoption of protective behaviors such as immunization, and a poor understanding of antibiotics use for treatment of infections, however the relationship was not found to be consistent (Castro-Sánchez et al., 2016). For chronic diseases like diabetes and asthma, outcomes are worse in minority adolescents and young adults with low health literacy (Bloom et al., 2013; Chambers et al., 2015). In an investigation of teens with asthma and diabetes, Chisolm et al. (2011) observed that those with low and high health literacy searched for online health information at the same rate, however those with low literacy were less likely to express intent to use recommended sites. These complications of low health literacy could potentially lead to poor health outcomes.

Minority youth who are not health literate have a difficult time in following the instructions of healthcare providers. In evaluating an African American cohort to determine their competence in using the rapid human immunodeficiency virus (HIV) test, Schnall, John, & Carballo-Dieguez (2015) found that minority young adults with high risk of contracting HIV had challenges in correctly following instructions for completing the test (Schnall, et al., 2015). The noted knowledge deficiency in utilizing health information led to a call for the development of instructions that are more understandable in this community to help guide this group in proper use of medical devices (Schnall et al., 2015; Swenson et al., 2014). In addition, in their evaluation of asylum seekers, Wångdahl, Lytsy, Mårtensson, and Westerling (2015) showed that inadequate health literacy was associated with poorer quality of communication, the ability to receive new

health information, and the ability to receive new knowledge. A more health literate community can help to foster better patient-provider communication to enhance quality of care.

The ability to overcome destructive lifestyle behaviors and attain better health outcomes has also been problematic for minority youth with low health literacy. In studying a minority population of daily smokers enrolled in a smoking cessation program in Houston, Stewart et al. (2014) noted that low health literacy predicted recurrence in smoking behavior in the multi-ethnic, low-socioeconomic participants. In the effort to encourage adoption of beneficial lifestyles, Rask et al., (2014) recommended that youth, especially male youth, have more deliberate exposure to health literacy education. As noted by Richardson and Norris (2010) minority communities are often affected by lack of needed resources to access and appropriately utilize the health care system. In the effort to ensure a more health literate minority community, instilling the bi-directional relationships among acumen, access, and the ability to apply health care information during early adulthood should be an important educational goal. Such a foundation in EMYAs can contribute to positive lifestyle changes.

The Connection between Literacy and Health Literacy

Key to the development of young adult health literacy readiness for the transition to adulthood is the development of competence in general literacy. It is widely accepted that lack of literacy impairs educational attainment and cognitive development and therefore compromises the individual's ability to become health literacy proficient (Rudd, 2015; WHO, 2016c). In this case, literacy is defined, not merely as the ability to read,

write, and have basic numerical skills, but more so, competence in the ability to create meaning through connections with people, institutions, and all media services within the culture or subculture (Rudd, 2015; Rudd, Rosenfeld, & Simonds, 2012). By extending this concept to the healthcare system, the ability to develop competence in making appropriate health care decisions for daily living is basic to the developing health literate individuals and communities (Rudd, 2015; Stormacq, Wosinski, & Van den Broucke, 2016). Literacy serves as a springboard for attaining health literacy proficiency.

A pivotal need in the minority young adult community is an improvement of general literacy skills. Experts hold that becoming health literate is not independent of general literacy skills at the population or subpopulation levels (Jacobson, Hund, & Soto Mas, 2016; Rudd, 2015). In adults, the ability to make appropriate healthcare decisions for daily living requires a peculiar skill-set that is enhanced by higher literacy (Jacobson et al., 2016; Rudd, 2015). Furthermore, individuals with more general literacy skills and higher education levels tend to be more health literate and have a greater perception of personal health (Aud et al., 2011; Friis, Lasgaard, Rowlands, Osborne, & Maindal, 2016; Jacobson et al., 2016). On the contrary, limited literacy skills impede the ability of individuals to successfully navigate tasks that require problem-solving abilities or higher reading skills, thereby compromising health outcomes (Friis et al., 2016; Silk, et al., 2010). It is therefore imperative that adequate literacy levels be developed by the time EMYAs (and majority youth) approach the transition to adulthood.

Literacy and education are inextricably bound in a symbiotic relationship that serves to improve health literacy. As noted by Palardy, Rumberger, and Butler, (2015),

American high schools are highly segregated by race/ethnicity, socioeconomic status, and English language status; factors that contribute to worsening literacy, lower educational attainment, and lower health literacy. Experts agree that educational attainment has a direct influence on health literacy proficiency, with individuals having higher education levels being more health literate than people of lower education levels (Aud et al., 2011; Friis et al., 2016). By improving the socio-cultural dynamic of literacy and education, the effort to develop a more health literate ethnic minority population can become more achievable.

The public-school system has a major role to play in improving education and literacy levels in minority young adults. Recent trends in public education in the United States are encouraging with increasing graduation rates in ethnic minorities, however, this has occurred on a backdrop of rising dropout rates in Hispanics and African Americans (NCES, 2018). Minority adolescents failing to graduate from high school and those who dropout, have poor reading skills; a problem that is especially prevalent in immigrant minority populations (NCES, 2012). This failure of the public-school education system compromises health literacy readiness for adulthood in ethnic minority communities at risk for high dropout rates. Some investigators have suggested that current educational practices be reviewed and modified to better prepare adolescents and young adults to cope with health issues and other real-world situations (Deering et al., 2016; Paakkari & George, 2018). Such changes could prove beneficial for EMYAs in fostering higher literacy levels and greater health literacy proficiency.

The occurrence of low literacy in association with low education levels in ethnic minority youth can be catastrophic. This combination not only leads to low health literacy, but undesired health behaviors, and poor health outcomes (Stewart et al., 2014). Individuals with limited or low health literacy become part of a population incapable of adequately understanding presented health information, lack the ability to effectively articulate their healthcare needs, and are unable to act appropriately on healthcare recommendations (Healthy People 2020, 2015, Gupta, 2013; Ferrer, Trotter, Hickman, & Audrey, 2015; Metzger, Flanagin, Markov, Grossman, & Bulger., 2015). For instance, in minority communities, asthmatic adolescents with low health literacy have problems with compliance and experience higher hospitalization rates (Gupta, 2013). In their efforts to implement an HPV vaccination program involving minority adolescents, Ferrer et al. (2015) noted that literacy and language difficulties undermined informed consent and posed a problem in accomplishing vaccination targets. Also, Metzger et al., (2015) determined that low literacy adversely affected the acquisition of health literacy in individuals deriving health information from the Internet during the transition to adulthood. Therefore, low literacy and low education levels and resultant low health literacy, can place minority young adults at greater risk for adopting harmful health behaviors and poor health outcomes.

In the effort to reduce and eliminate barriers to understanding health information and improve ethnic minority youth utilization of the health care system, policies and procedures for obtaining health benefits could be simplified. In a study of HIV/AIDS adults, Gakumo, Enah, Vance, Sahinoglu, & Raper, (2015) explored the preferences of

African American patients on using a health literacy intervention to promote HIV management. Results showed that patients would entertain the intervention if the information was simple, if a team-based approach was used, if teaching strategies were tailored to individual needs, and if the patient's inexperience with technology was taken into consideration (Gakumo et al., 2015). Pursuing similar engagement strategies could prove beneficial in EMYAs.

Benefits of health literacy. The health of EMYAs at risk of low health literacy, and their communities and the U.S. health care system all stand to reap benefits from health literate young adults. The past decades of research have demonstrated that, in adults, health literacy skills predict health status and health outcomes more strongly than age, income, employment status, education level, and race or ethnicity (Ministry of Health, 2010; NCHIM, 2011; U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010). Research in adolescents and young adults has increased in the period 2008 to 2018 as downstream interventions have been studied to help improve minority adolescent and young adult health literacy (Ghaddar, Valerio, Garcia, & Hansen, 2012; Gupta et al., 2013; Kong, et al., 2013; Levy, 2011; Sheridan, et al., 2011). In a study aimed at improving adolescent understanding of the importance of using credible sources for online health information, Ghaddar et al. (2012) used a cross-sectional random sample to evaluate a group of Hispanic youth and determined that exposure to credible online sources (MedlinePlus) improved health literacy levels and that health literacy was positively associated with self-efficacy. In a randomized controlled study of Latinas at risk for chronic disease, Dominick, Dunsiger,

Pekmezi, and Marcus (2013) showed that higher health literacy scores at baseline were associated with higher physical activity self-efficacy six months post intervention. These researchers encouraged further study to confirm this finding. However, in a study using a convenience sample of HIV-infected young adults, Navarra, Neu, Toussi, Nelson, and Larson (2014), showed that literacy was more predictive of compliance with antiretroviral therapy (ART) than health literacy. Health literacy, measured by the Test of Functional Health Literacy in Adults (TOFHLA), was not predictive of adherence to ART. However, other studies have shown conflicting results on the association between health literacy and vaccine compliance (Lorini et al., 2018). These results indicate that health literacy can be important to developing self-efficacy but may not always be predictive of adopting beneficial health behaviors young adults.

Another benefit of health literacy is the empowerment of individuals and communities to better access and utilize health information and healthcare services. Health literacy proficiency is an important tool in the armamentarium of minority youth for gaining confidence and skill in mastering the control of chronic diseases like diabetes and asthma (O'Conor et al., 2014; Zeh, Sandhu, Cannaby, & Sturt, 2014), and in overcoming the challenges posed by the adoption of unhealthy lifestyles (Zoellner et al., 2011). Jacque, Koch-Weser, Faux, and Meiri (2015) argue that health literacy proficiency empowers individuals to make appropriate decisions in pursuit of healthy behaviors, in the acquisition of suitable access to care, and in the management of acute and chronic conditions. In reviewing observational studies to 2011, Zeh et al., (2014) found that low health literacy emerged among the eight key cultural issues that influenced the level of

diabetes care received by members of ethnic minority groups. This led them to recommend that culturally competent interventions be developed to foster greater health literacy, improve diabetes outcomes, and increase access to healthcare for specific ethnic minority groups (Zeh, et al., 2014). In evaluating patients with infectious diseases, such as tuberculosis, malaria, and influenza, and in infection-related behaviors, such as vaccination and hand hygiene, Castro-Sánchez et al. (2016) showed that lack of health literacy proficiency was associated with reduced adoption of protective behaviors, such as immunization, and an inadequate understanding of antibiotic use. However, it should be noted that this relationship was not consistent in their study, which excluded HIV cases since similar finding were already documented in prior HIV studies (Castro-Sánchez et al., 2016). Improved health literacy proficiency can help individuals and communities make more informed heath care decisions, which can foster adoption of beneficial lifestyle behaviors.

Health literacy and the transition to adulthood. The development HLR is essential for the young adult transitioning to adulthood. Adolescence and emerging adulthood are major stages of development that begin with the biological, social, behavioral, and relational changes of puberty and ends with the transition to adulthood (Colver & Longwell, 2013; Weinstein et al., 2016). In these developmental stages, especially in later adolescence and early adulthood, individuals are primarily involved in the formation of a coherent sense of identity (Weinstein et al., 2016). For the transition to adulthood to be successful, the adolescent or young adult must be able to meet the challenges of the health care system: integration into adult medical practice, develop trust

in the adult health care team that provides service, and become an active partner in managing personal health care needs through cooperation, collaboration, and communication with providers of health care and health care service (Stinson et al., 2014; Weinstein et al., 2016). This not only requires the acquisition of knowledge related to health information and services, but also the ability to readily access said information and services and appropriately apply them to individual or community health situations (Sorenson et al., 2012). Individuals with low health literacy are less likely to use prevention services, have less knowledge of their illness, treatment, and medicines, and are less likely to recognize the first signs of medical problems (Sukys, Cesnaitiene, & Ossowsky, 2017). In addition, such persons are less likely to manage their long-term/chronic condition, are less likely to communicate their concerns to health care professionals, are more likely to be hospitalized due to a chronic condition, to use emergency services, and are more vulnerable to workplace injury (Griffey et al., 2014). If a state of HLR for adulthood commensurate with health care needs is not attained during adolescence and young adulthood, EMYAs transitioning to adulthood can have difficulty coping with personal and community health care needs (Stormacq et al., 2016; Sun et al., 2013). Therefore, developing a state of HLR for the transition to adulthood is pivotal in the development of EMYAs.

During the transition to adulthood, the parental support of childhood and early adolescence is coming to an end and greater responsibility and independence characterizes the life of the young adult (Aldiss, et al., 2015; Chisolm et al., 2015). Concurrently, throughout adolescence and early adulthood, a special window of

susceptibility to destructive health behaviors and the formation of individual attitudes to healthy lifestyles open and these can determine the trajectory of the young adult's health (Viner et al., 2012; Due et al., 2011; Weinstein et al., 2016). Consequently, Cooley and Sagerman (2011) argue that young adults should have the ability, confidence, and skill-set needed to master or maneuver through the maze of complex challenges presented by the U.S. health care system. The young adult assumes greater individual responsibility for health care: choosing health insurance plans, arranging appointments with health care providers, scheduling preventive care services, and also developing a deeper knowledge of available healthcare services and health information (Aldiss, et al., 2015; Weinstein, et al., 2016). It is therefore critical that, during the early adult phase of development, EMYAs realize a state of HLR appropriate for the health challenges of adulthood

Young adults face the challenge of caring for chronic diseases, mental health issues, and communicable diseases that can persist throughout this transition period and require continued care in the adult setting. Much young adult research has focused on transitional care for young adults as they seek care in the adult setting. Transitional care refers to the purposeful planning of care for adolescents with chronic conditions as they move on from child-centered to adult-oriented health care systems (Lotstein et al., 2010). During the transition to adulthood, young adults need to secure competent adult medical care and become responsible for disease self-management, a task that can sometimes prove difficult (Aldiss et al., 2015; Babler & Strickland, 2015; Cooley & Sagerman, 2011). This dimension to adolescent transitional health care is particularly true of special needs children (Chisolm et al., 2015; Lotstein, et al., 2010; Manganello & Shone, 2013).

The impact of HLR for adulthood on this process is not yet fully worked out but investigators have postulated that, with improved health literacy proficiency the health care challenges of entering adult-oriented health care systems could be mitigated in EMYA communities (Chisolm et al., 2015; Huang et al., 2012).

Ethnic minority young adults, especially those with chronic diseases, face a challenge when acquiring transitional health care services as they crossover to adulthood (Chisolm et al., 2015; Lotstein et al., 2010). Among adolescents with Type 1 Diabetes, 11-24% fail to follow up with adult health care providers and even among those who complete a transfer, clinic attendance is sporadic (Bowen, Henske, & Potter, 2010). In surveying young adults with Type 1 diabetes Garvey et al. (2013) determined they faced barriers in securing appropriate transitional care on entering the adult healthcare marketplace. Most prominent among the barriers noted were preventable challenges such as appropriate provider contact information, competing life priorities, and insurance coverage (Garvey et al., 2013). In an investigation of adolescents with chronic inflammatory bowel disease, Huang et al., (2012), demonstrated that provider perception of adolescent readiness for transition to adult care was higher than that of participants and was not readily reflective of adolescent perceptions of their own health literacy-related readiness for the transition. These noted barriers to transitional readiness could potentially improve with the development of a more health literate adolescent and young adult population.

In transitioning from adolescence to adulthood, minority young adults also need to develop the capacity to handle the complex healthcare system present in the United

States. In the effort to improve HLR for the transition to adulthood, some encouraging interventions have been advanced for improving adolescent health literacy (Diamond, Saintonge, August, & Azrack, 2011; Subramaniam et al., 2015; Woods-Townsend et al., 2015). The LifeLab project in Southampton England is one example of a planned intervention that can help in accomplishing the goal of improved health literacy in adolescent populations (Woods-Townsend, et al., 2015). This intervention, currently in progress, is recruiting younger adolescents and teaching them about how childhood, adolescent, and parental nutrition influences health, the impact of lifestyle on their cardiovascular and metabolic health, and about the excitement of research and future careers in science (Woods-Townsend, et al., 2015). Researchers hypothesize that such exposure will inspire greater health literacy and careers in science. However, researchers admit that the challenge of reaching ethnic minority youth, a group comprised of lower socioeconomic classes, immigrants, and alienated young adults who are deemed "hard to reach" is still a problem (Currie et al., 2012). Further research is needed to replicate the successes of health-related initiatives in majority populations in minority communities and to work out other associated challenges, like recruitment, facing the minority adolescent and emerging adult population.

Preventing low health literacy. A concerted investment in adolescent and young adult health literacy research is crucial to fostering greater HLR in minority young adults transitioning to adulthood. This ideology has been stressed by investigators during the period from 2008 to 2018 in the effort to improve health equity in adolescent and young adults and on into adulthood (Manganello, 2008; NIHCM, 2011, Patton, 2015). Health

literacy can be benefited by the improvement in upstream factors such as income equality, poverty, education, race/ethnicity, and policy initiatives. Research has showed that race/ethnicity, higher education level, and higher income level is associated with greater health literacy proficiency, which leads to better health outcomes (Karimy & Zareban, 2018; Kutner et al., 2006 Rikard, Thompson et al., 2016). Recent work focusing on upstream factors in Slovakia by Kolarcik, Geckova, Reijneveld, and Van Dijk (2015) revealed that discrimination can play a significant role in adolescent self-rated health, a factor that could prove prominent in EMYA HLR during the transition to adulthood. Also, Paek and Hove (2012) showed that the influence of social cognitive factors (interesting subject matter, beneficial training) and perceived social influence factors (peers and parents) positively and independently affected health literacy. Consequently, these investigators encouraged educators to focus on these measures in programs aimed at improving health literacy in adolescents. Other researchers argue the schools should become more involved in the development of health literacy (Paakkari & George, 2018) and efforts like the LifeLab project in Southampton England (Woods-Townsend, et al., 2015) represents advances in this area. Other researchers have showed that utilization of evidence-based standards in adolescent health education in high school is associated with improvement in their health knowledge and could lead to improvement in healthy lifestyle changes and health skills (Hubbard & Rainey, 2007) however, more recent data from School Health Policies and Practices Study showed a disturbing trend of decrease in teaching various recommended health topics in elementary and middle school districts

(CDC, 2016; Ye et al., 2014). The only areas of increase noted occurred in health education policies and practices related to violence and suicide prevention (CDC, 2016).

Health literacy is influenced by multiple factors occurring at the various socio-cultural levels. Therefore, methods aimed at improving minority adolescent and young adult HLR must concurrently focus on upstream and downstream factors. The use of a socioecological approach is imperative if meaningful improvement is to be realized (Rudd, 2015). In the effort to realize this objective, Gupta et al. (2013) engaged the novel approach of Photovoice and journaling to help improve adolescent, family, and community health literacy related to asthma in a minority community with high risk of asthmatic attacks. In this intervention, students received a ten-week education on asthma management, education in the use of Photovoice and journaling, and subsequently produced promotional public service announcements (PSA's) related to the disease (Gupta et al., 2013). This resulted in better personal, family, organizational, and community awareness of asthma and the factors that influenced decompensation of the disease (Gupta et al., 2013). This or similar socioecological approaches need to be reproduced on a larger scale in at-risk minority communities for asthma and other chronic diseases in the effort to improve health literacy.

At the individual level, interventions are also needed to help improve HLR. Primack et al., (2009) evaluated adolescents' impressions of antismoking media literacy education verses traditional programs and found that although media literacy provided a compelling format for the delivery of anti-tobacco programming, integration of components of traditional programming may help media literacy programs achieve

maximal efficacy. However, in a later cluster-randomized trial, where a majority of the sample was adolescent minorities, Primack, Douglas, Land, Miller, and Fine, (2014) noted that tobacco media literacy improved when students were exposed to a media literacy curriculum versus a standard education program, but general media literacy did not improve. The investigators concluded that a school-based curriculum using media literacy was more effective than a standard educational program when teaching adolescents about tobacco media literacy and in improving perceptions about the true prevalence of smoking (Primack et al., 2014). To further elucidate interventions that can improve HLR in EMYAs, investigators must actively continue research in this area.

An understanding of health inequalities encountered in minority young adult communities can potentially help in predicting areas of need and create mechanisms that can potentially reduce such health inequities. By using the environment of HackHealth, a program designed to devise innovative ways to assist adolescents with health literacy development, Subramaniam et al. (2015) evaluated parameters that could improve health literacy skills. These included identifying an information need, formulating one (or more) specific questions, looking for information, and processing, assessing, managing, and using online health information (Subramaniam et al., 2015). Through this investigation, these researchers were able to identify multiple factors ranging from information need identification and question formulation to information use that directly influenced the assessment and improvement of health literacy skills (Subramaniam et al., 2015). This acquired information helped investigators to offer specific recommendations for health literacy instruction to the multiethnic minority population under study (Subramaniam et

al., 2015). In recognizing the factors influencing EMYA HLR for adulthood and focusing research on these and other influential upstream and downstream factors, within a socio-ecological framework, investigators can help improve HLR in EMYAs as they transition to adulthood and potentially improve health outcomes on into adulthood.

Review of Methodology

For this study, I chose the qualitative approach to evaluate the perspectives of EMYAs on their HLR for the transition to adulthood. The qualitative approach tends to follow the constructivist/transformative knowledge philosophies thereby having the ability to identify the inner dynamics of social phenomena through evaluating the experiences of individuals or groups in a natural, holistic setting (Creswell, 2014; Levitt, 2018; McLaughlin, Dean, Mumper, Blouin, & Roth, 2013;). In so doing, it gives voice to individuals or groups that might not be otherwise heard. Since health literacy readiness is a non-static, socio-sensitive issue, the qualitative approach offers the advantage of exploring the nuances of this phenomenon while gaining an in-depth holistic understanding of associated challenges (McLaughlin et al., 2013; Creswell, 2013). By pursuing a deductive and insightful methodology to explore the ways in which EMYAs view the world and determine reality in the health care arena, valuable knowledge can be accumulated and utilized in health care education and management.

In addition, qualitative research offers different approaches to inquiry that facilitate the researcher's acquisition of knowledge. In this pursuit, Creswell (2014) outlines five main strategies of inquiry that can be utilized by the researcher: narrative, phenomenology, grounded theory, ethnography, and the case study. These approaches

utilize open-ended questions, emerging approaches, and text or image data to explore, describe, and understand the experiences of study participants in a holistic, real life setting (Creswell, 2014; Levitt, 2018). It is these qualities that makes the qualitative approach acceptable in the evaluation of EMYAs perspectives of health literacy readiness for the transition to adulthood. This dimension of knowledge is not readily amenable to quantitative inquiry. In the quantitative evaluation of health literacy, it is necessary to have defined variables that encompass specific domains for empiric analysis. However, current definitions of health literacy include multiple domains that are constantly expanding thereby challenging the ability to compare research findings across studies (Massey et al., 2014). In addition, Abel et al., (2014) argue that varying definitions as used in public health and curative health complicate measuring health literacy adequately and accurately. These schools of practice emphasize different aspects of health literacy with the former focusing on knowledge and skills and the latter dealing with access and utilization (Abel et al., 2014). This quandary makes the use of qualitative methodologies advantageous in investigating health literacy readiness for adulthood, a "variable" that is best defined subjectively.

Study design. The qualitative approach offers many designs for research. For this study, I used a phenomenological design because it afforded the researcher the opportunity to understand the essence of the experience of participants in developing HLR for the transition to adulthood. This design allows the researcher to recruit participants, usually five to 25, (Creswell, 2013) who have experienced the phenomenon under study: health literacy. The information realized from the study helps the researcher

to better understand meaning in describing the essence of the phenomenon in the lives of individuals and can also be used to alter or develop a course of action in public policy (Creswell, 2013). For this study, the sample size was 12 minority individuals between age 18 and 22 and from the various ethnic groups representing the research community. Information was gathered through telephone interviews.

Alternative research methods. Another option for this research was the case study design. This design affords the opportunity of studying the experiences of one to four cases thoroughly (Creswell, 2013). This strategy requires in-depth delineating and detailing of participant's experiences so that an analysis can be done to derive explanations (Creswell, 2013; Levitt, 2018). In such an inquiry, securing in-depth descriptions of the HLR from young adults transitioning to adulthood is paramount and a design that would be better suited for individuals who have been known to achieved HLR. For this design, interviews document reviews, observation of participants, and other data sources can be used to secure information. The understanding gleamed from the study gives the audience a comprehensive understand of the experience individuals have encountered (Creswell, 2013; Levitt, 2018). However, this was not the intent of the current study.

Of the other broad approaches outlined by Creswell (2014), ethnography was appealing but was not utilized. This approach focuses on evaluating an entire culture-sharing group (Creswell, 2013). The object is to describe and interpret the shared and learned patterns of values, beliefs, behaviors, and language of the group being studied and it is essential that the study community is in close proximity and shares the same

culture (Creswell, 2013). Since the purpose of the current study is to gain information the multiethnic minority young adult community from a southern county in the United States, this design was not be applicable.

The grounded theory method of inquiry, which focuses on developing a theory or a framework for further research was not suited for the intent of this study. This design is grounded in data from field research regarding experiences of the participants studied in the effort to develop new theory (Creswell, 2013), something that this study is not seeking. Finally, the narrative design, which explores the life of an individual or individuals by collecting stories relating to their life experiences (Creswell, 2013) was another option. In so doing, the investigator can discover and report a powerful narrative that reflects an understanding of the personal cost or benefit of a process or action affecting an individual's experience (Creswell, 2013). However, the intent of this study was not merely to discover and report experiences but to gain an in-depth understanding of the HLR for the transition to adulthood in EMYAs.

Summary and Conclusions

This section provides a summary of Chapter 2 and a transition to Chapter 3. This study focused on HLR for the transition to adulthood in EMYAs, an area where limited research is available. Ethnic minority young adult health and the lifestyle behaviors that influence it remain a public health challenge that requires continued investment to ensure the health of this community. The development of modalities to improve health literacy in this population is foundational to accomplishing the goal of health literacy readiness for adulthood (Manganello, 2008; NIHCM, 2011; Patton, 2016). This prepares EMYAs

with the ability to manage the complex challenges of the U. S. health care system. To the best of my knowledge, this is the first study in the community being evaluated to explore the perspectives of EMYAs from multiple ethnic groups on their health literacy readiness for the transition to adulthood. By achieving a state of HLR in EMYAs, self-efficacy can be generated thereby enhancing the chance of sustaining positive lifestyle behaviors and improved health outcomes. By exploring this gap in the literature, important information was added to the literature that can impact governmental and non-governmental educational organizations and management agencies who are seeking to improve HLR in EMYAs. The current study also has the potential to generate the social change. Study findings could influence engagement strategies among community health educators, educational institutions, and government agencies that improve the quality of health care in this at-risk sector of the population. The following chapter further describes research methods.

Chapter 3: Research Method

Introduction

In this study, I focused on the HLR of EMYAs in a southern county in the United States. Major health disparities in this population currently exist and need to be vigorously addressed if health outcomes in the community are to improve (Bloom et al., 2013). One factor contributing to the disparate health outcomes in ethnic minority adolescent and young adult is health literacy proficiency (Kutner et al., 2006; Manganello & Sojka, 2016; Soto Mas, Ji, Fuentes, & Tinajero, 2015). Experts have hypothesized that by addressing this challenge during adolescence and early adulthood, meaningful success in alleviating disparate health outcomes and other sequelae from poor health literacy proficiency can be expected (Agaku, 2014; Matthews, Kilgour, Christian, Mori, & Hill, 2015). In so doing, young adults can be adequately prepared to handle the challenges of the complex U.S. healthcare system while transitioning to adulthood. Young adults are pivotal stakeholders in improving their health literacy, and their input can generate important contributions towards improving this social determinant of health, health behaviors, and health outcomes (Ashdown et al., 2015; Wong et al., 2015). Therefore, I explored the perspectives of EMYAs to understand the nature of challenges facing them in the quest for HLR for the transition to adulthood.

In this chapter, I describe the research design, rationale, and methodology for the study. The first section of the chapter includes an outline of the research design and rationale and is followed by the second section, which describes the role of the researcher. The third section focuses on methodology, including participant selection

logic, instrumentation, and a data collection and analysis plan. The fourth section addresses issues of trustworthiness, including measures to protect study participants. Finally, I present a summary of this chapter with an introduction to the content of Chapter 4.

Research Design and Rationale

Research Questions

In this study I explored the experiences of EMYAS in a southern county in the United States to gain a holistic understanding of their HLR for the transition to adulthood. The main research question (RQ1) was, What are the perspectives of ethnic minority young adults on their health literacy readiness for the transition to adulthood? The Subquestions were, as follows:

RQ2. As ethnic minority young adults transition to adulthood, what are their attitudes and beliefs towards being health literate?

RQ3. As ethnic minority young adults transition to adulthood, what are their perspectives on the benefits of and barriers to becoming health literate?

RQ4. What are the perspectives of ethnic minority young adults on facilitators (agents or agencies) influencing the development of health literacy readiness for adulthood?

Rationale

The development of health literacy is a nonstatic, holistic process crucial to the well-being of individuals and communities. In childhood and early adolescence, parental support for health issues is the primary mechanism for coping with this problem, but in

late adolescence and early adulthood, individuals begin to assume primary responsibility for health care issues (Ashdown et al., 2015). Ethnic minority communities are at increased risk of low health literacy proficiency and disparate health outcomes (Bloom et al., 2013; Kutner et al., 2006; Manganello & Sojka, 2016; Soto Mas et al., 2015). It is therefore essential that the requisite knowledge base for health literacy proficiency be developed by the time these individuals transition to adulthood. Young adults can be better prepared to meet the health care challenges of adulthood when this goal is accomplished.

Health literacy is influenced by multiple complex factors occurring at the individual and societal levels that are not always measurable (Rudd, 2015). As a result, determining the health literacy of minority youth cannot be fully obtained by the empiric evaluation of the measurable components of this phenomenon (Massey et al., 2013). Therefore, I chose a qualitative approach to better understand the issue of HLR for the transition to adulthood in EMYAs. Qualitative inquiry is rooted in the ontological belief that reality is socially constructed and grounded in the epistemological position that knowledge is best derived from exploring the social experiences of individuals (Creswell, 2013). This form of inquiry seeks to holistically understand, describe, and explore the beliefs, behaviors, and meaning of the experiences of individuals in the natural setting (Creswell, 2013; Levitt, 2018). The qualitative approach provided the mechanism by which the complex human interactions related to the study phenomenon, like developing HLR for the transition to adulthood, which cannot be explained in simple terms, could be evaluated (see Creswell, 2013; McLaughlin et al., 2013). This approach also allows for

the study of phenomena in populations that are rarely studied or are difficult to study (Creswell, 2013), a characteristic that applied to this study. In seeking to gain a holistic understanding of the complex problem of health literacy in EMYAs in the natural environment, the quantitative approach was, thus, helpful.

Design

For this study, I used a phenomenological design. This approach allows the researcher to develop an in-depth understanding of the problem while grasping the essence of the experiences of the group being studied (Creswell, 2013; Kafle, 2011). Furthermore, according to Creswell (2013), the researcher derives a comprehensive description of the issue, and can perform a thorough analysis of the problem. Use of this design facilitated a comprehensive exploration of information needed to appropriately describe the views of EMYAs on their HLR for the transition to adulthood. I was also better able to understand their beliefs regarding this issue as well as generate recommendations aimed at improving the situation in the community studied. After obtaining consent, I collected data for analysis using telephone interviews. Recordings were transcribed, coded, and analyzed for thematic conclusions.

Time and Resource Constraints

The study was limited by time and resource constraints, which restricted my time for completing the study to 3 years. Recruitment of participants and data collection was completed in 8 months. Data collection took longer than anticipated because of difficulty recruiting EMYAs for participation in the study. The goal of interviewing a minimum of 15 and a maximum of 35 participants, pending saturation, could not be met. Ultimately,

twelve participants were interviewed. In addition, slow recruitment resulted in the need for an extension by the Walden Institutional Review Board (IRB), which I obtained without problem. Financial resources for the study were limited, and efforts were instituted by me to control cost; participants received a $10.00 gift for participation and the convenience of telephone interviews helped to ameliorate financial outlays.

Role of the Researcher

I was the primary instrument in data collection and made every effort to remain objective. I designed the interview protocol used for data collection and conducted a pilot study to improve its reliability and validity. I selected a purposeful sample of 22 minority participants representing required age, gender, and ethnicity; only twelve participated in interviews. These participants had no personal or professional relationship with this researcher. Using a self-prepared semi-structured interview protocol, I collected data from sample participants, obtaining in-depth information on ethnic minority young adult health literacy readiness for the transition to adulthood. I was responsible for ensuring participant's privacy, obtaining informed consent, securing and storing data, and performing data analysis. I was solely responsible for compiling the results of the study and making the reported conclusions. As recommended by Austin & Sutton (2014), I have declared my background during this document to engender honesty and transparency and reduce bias. Participants received a small gift of $10.00 for their involvement in the study to generate interest but also to minimize the potential for participation bias.

Methodology

Participation Selection Logic

The study population comprised of EMYAs age 18-22 from a southern county in the United States. The community is a multiethnic, multilingual, predominantly Hispanic community of approximately 2.7 million residents of which 51.3% are documented immigrants (United States Census Bureau, 2015). Individuals between age 15-24 comprise 12.4% of the population and approximately 81% of the population are high school graduates or better ((United States Census Bureau, 2015). The poverty rate for the community is 20.4% compared to 27.7% for individuals under 18 years of age ((United States Census Bureau, 2015). Participants for the study were recruited from this community because it offered access to a multicultural community of ethnic minority young adults with health literacy challenges. A purposive sample of 22 individuals between age 18-22 were chosen for participate in the study however only 12 people participated.

A sampling strategy is crucial to qualitative research. A wide array of sampling strategies for qualitative inquiry are outlined by Creswell (2013) and Miles et al., (2014) to help ensure the retrieval of meaningful data. However, these investigators emphasize that study conditions mitigate sampling strategy (Creswell, 2013; Miles et al., 2014). In the effort to generate meaningful qualitative data, this investigator selected participants in an ethical and feasible way, to ensure trustworthiness, reliability, and credibility of information (Miles et al., 2014). As encouraged by Creswell (2013) and Levitt et al. (2010), this strategy was chosen to ensure adequate representation of participants and

gain an initial understanding of a phenomenon from the various ethnic groups in the community who have had health literacy-related experiences but have been historically disenfranchised and underrepresented in the literature. In so doing, the effort to obtain rich, in-depth information that is credible, plausible, and persuasive could be maximally facilitated (Palinkas et al., 2015) IRB approval was obtained to recruit and involve participants in the study; Walden University's IRB approval number for this study is 03-23-17-0415743 and expires March 2019.

Inclusion criteria for selecting participants were as follows: residence in the southern U.S. county, member of an ethnic minority group, be between 18 to 22 years of age, be able to communicate in English, have access to a virtual media source, and have health literacy related experiences. Exclusion criteria were: under age 18 or above 23, inability to communicate in English, or inability to access a virtual telephone device, residence outside the study county, or not being a member of an ethnic minority community. After appropriate IRB study approval, advertising was initiated and interested participants contacted me for information.

Participants were recruited through print and online advertising targeted at high school seniors, college freshmen and sophomores, and also youth attending faith-based and local youth organizations. I obtained letters of cooperation from community youth groups, churches, and a medical center to help in recruitment efforts. After initiating recruiting efforts with convenience sampling, snowball sampling was added further recruit participants. As demonstrated by Rasmussen, Ward, Jenkins, King, and Dunning (2011), the strategy of print advertising in facilities to recruit initial participants followed

by snowball sampling to further facilitate the selection of a purposeful sample and maximize the retrieval of meaningful data, can be successful. As outlined by Creswell (2013), I used the critical case sampling approach as the primary strategy for recruiting subjects, but deviant sampling was also used to obtain information-rich and study-relevant cases to maximize chances of obtaining meaningful data about ethnic minority young adult health literacy readiness for the transition to adulthood. I interviewed all participants and depended on the honor system to confirm their eligibility for this study.

Grounded in the interpretivist epistemology that knowledge is best determined by exploring the social experiences of individuals (Creswell, 2013), a convenience but purposive sample of ethnic minority young adults was selected. Over 200 invitations were extended to EMYAs but only 22 expressed interest in proceeding with the study. After verifying eligibility, and addressing privacy and confidentiality issues, participants received an enrollment package. Effort was made to ensure representation from both genders and the main ethnic groups represented in the county. Of the individuals recruited, 22 received participation packets but only 14 agreed to participate in the study and were assigned pseudonyms. After reviewing the information, 13 participants electronically signed the necessary consent for participation. The pseudonym identity for participants was known only to participant and researcher to ensure confidentiality. I then scheduled interviews at a time convenient to participants. Of the 14 who agreed to participate, 12 individuals participated in the study, one was lost to follow-up, and the other had difficulty in scheduling the interview. My initial plan for the sample was to interview to saturation, little or no new information was forthcoming, or to a minimum of

15 or a maximum of 35 participants. However, difficulty in recruiting and resource and time constraints led to limiting the sample size to 12.

Instrumentation

In this study, the investigator (me) and the interview were the primary instrument used to gather information. Despite concerns about overuse in qualitative research, the interview format has been used extensively with great success and has proven to be a credible way of obtaining information (Muylaert, Sarubbi Jr., Gallo, & Neto, 2014; Oltmann, 2016). Furthermore, the interview process allows for audiotaping of interviewee information, which can prove invaluable when collecting and reviewing data (Creswell, 2013; DiCicco-Bloom & Crabtree, 2006). I chose a semi-structured interview format for obtaining data to have the flexibility of following up on unclear information, for observing nuances of participants, for in-depth exploration of the research question, for taking notes, and also to keep the interviewee and interviewer focused on themes related to the research question (Muylaert et al., 2014; Oltmann, 2016). These attributes of the interview process helped to ensure the accuracy and sufficiency of data collection. I developed the interview protocol (see Appendix A), and an investigator observation sheet (see Appendix B).

Interviews were conducted using the virtual telephone interview format (What's App or Facetime) because it is economical and allows the researcher to develop a deeper appreciation of the interviewee. These interviews were scheduled at times convenient to the participants and interviewer with the interviewee at home in a room away from distractions. Participants used the assigned pseudonyms during the interviews to ensure

confidentiality. In the effort to obtain in-depth information, seven structured and open-ended questions were asked during the interview. These structured questions were used to initiate responses, but I also used follow-up questions to clarify answers or gain additional information. The nature of subsequent questioning depended on the participant's initial responses. This method allows participants the opportunity to formulate and develop answers that reflect their experiences. Every effort was made to avoid coercion or dominance by the interviewer or interviewee, to avoid the promotion of personal or prejudicial platforms, or the promotion of interviewer or interviewee bias.

Interviews were audio-recorded using the GarageBand feature on Apple Mac computers. Audio files were created and securely stored in password protected files on a computer. On completion of an interview, audio files were transcribed, and transcripts stored in password protected files on the computer, and also on an external hard drive. The computer software assisted analysis program NVivo version 11.4.3 (2084) was employed in this process (Bergin, 2011; QSR International, 2014) so that files could be available for subsequent analysis. Observational notes gathered during the data collection process were also transcribed and stored on the computer and on an external hard drive in password protected files. Audio files were reviewed as quickly as possible after the interviews and if any technology problems were noted (diminished sound or garbled language), interviewees were asked to review of the transcript and fill in blank areas. Also, and preliminary codes appreciated were documented either in observation notes or in NVivo 11.4.3 (2084).

In qualitative research, instrumentation rigor is a major challenge, especially when the interview is the tool being used for data collection. In the effort to satisfy this concern, Chenail (2011) recommends the use of a pilot study or "interviewing the investigator" technique. Since the interview protocol used in this study is a researcher-developed tool, an effort was made to improve rigor by conducting a pilot study. Ethnic minority young adults who meet inclusion and exclusion criteria required of participants for the main research study were interviewed, however, these participants were not eligible for the main study. The pilot study helped to identify whether or not the planned interview protocol performed as expected among EMYAs in establishing sufficiency of data collection in answering the research questions. Efforts to enhance rigor and content validity were also satisfied by correlating transcripts with audio files and by allowing participant review of transcripts to confirm the accuracy of the created record. Finally, follow up questions arising from the transcripts were discussed with participants as needed to probe particular issues and statements that emerged during the interview. Input from the pilot study led to revision of the interview protocol and the research process was reinitiated after IRB approval of modified instrument.

Procedures for Recruitment, Participation, and Data Collection

Participants were recruited from faith-based and youth organizations, colleges, and universities by way of online, print advertising, and word of mouth. Flyers (see Appendix C) that were distributed online and in person to EMYAs to the various ethnic groups in the community. Participants received contact information from me and designated times for calling were identified so that any issues that arose could be

discussed. Interviews were conducted during the day as convenient to interviewee and interviewer. Participants were notified that additional participation may be required if further explanation of their responses was needed. I utilized a debriefing process to maintain an audit trail of my thoughts, feelings, and perceptions after interviews, writing notes in the observation log. This was done to glean information that may be helpful in subsequent interviews, to improve trust worthiness and, at the completion of interviews, to engaged participants and allay fears of deception. Also, at the conclusion of the interview I thanked participants for their participation and gave them a gift of $10.00. I reminded participants to be available if the need for clarification of information arose and promised them a copy of the final study document on its completion.

Data analysis plan. I analyzed collected data using the hermeneutic cycle: data was repeatedly read, reflections highlighted, and subsequent interpretations made. This analysis of data involved three phases. Firstly, there was pre-coding: the transcription of data, writing of analytic memos, and initial development of categories (Creswell, 2013; Kafle, 2011). Secondly, coding was done, namely: the reduction of data, the organizing of words and phrases into a hierarchy of nodes using the computer assisted software analysis package NVivo 11.4.3 (2084), and the checking and refining of nodes. These codes were organized into themes and categories (Austin & Sutton, 2014; Creswell, 2013). Finally, there was theorizing: a cyclical process of interpreting data, drawing conclusions, and developing theoretical frameworks (Austin, & Sutton, 2014; Creswell, 2013). Thus, over time, codes were categorized in terms of types and factors which influenced their development.

Data analysis was done manually, sequentially, and managed with the computer assisted coding software NVivo 11.4.3 (2084). As recommended by Creswell (2013), data analysis occurred concurrently with data collection so that this researcher could generate an emerging understanding of the research questions. I used a combination of manual and computer assisted coding during data analysis. Pre-coding was done manually during data collection leading to the development of a priori codes. On completion of this phase, a second wave of coding of all collected data was done from which themes and categories were determined. During this phase, transcripts were repeatedly reviewed, and an editing approach used to generate new codes or to modify initial codes (Miles et al., 2014). With this approach, segments of information were condensed into representative words or phrases and entered into nodes using NVivo 11.4.3 (2084). Generated codes were color-coded and the number of times a code occurred documented. On completion of coding, I then engaged a process reduction of codes for generation of themes and subsequently, the generation of categories. This process completed, conclusions were deduced, and general interpretations made from the collected data to answer the research question.

I chose this data collection and analysis strategy because it facilitated accurately answering the research questions, a factor which is essential to the integrity of the study. Also, this strategy helped to increase rigor by allowing member checking, corroboration of data, and review of rich and complex data for analysis, factors that are crucial in providing dependable answers the research questions. Discrepant data were incorporated in the discussion of results to give voice to discordant views.

Issues of Trustworthiness

As with quantitative research, qualitative methodologies also encounter threats to trustworthiness. Threats to trustworthiness in qualitative research arise from issues of credibility, transferability, dependability, and confirmability (Creswell, 2013). These issues can stem from both researcher and participant bias. Factors influencing researcher bias include the researcher's affinity to the community being studied, the researcher's mental discomfort, lack of adequate preparation for field research, and the orchestration of inappropriate interviews by the researcher (Chenail, 2011). It is therefore imperative that bias be managed effectively in the effort to improve qualitative research rigor. In the effort to reduce participant bias, I asked participants declare any social or political positions held on issues related to the U.S. health care system as it relates to health literacy. This was done during screening for study participation. Also, leading or suggestive questions were avoided to dampen participant response bias. In addition, study volunteers received a small monetary incentive for participation in the study; large gifts were not given to avoid biased participation.

In the effort to improve credibility, the process of data source triangulation was used. Audio files were compared with researcher's notes and interviewee reviewed transcripts. Member checking was also done during the course of interviews to ensure accurate representation of interviewee communications. In addition, as recommended by Creswell, (2013) and Thomas and Magilvy, (2011) I used rich in-depth descriptions to convey findings, I declared and clarified any known researcher bias, and I provided any negative or discrepant information to promote balance (). I did not use a peer debriefer or

an outside auditor to examine the progress of the project because of time and financial constraints.

In establishing transferability, I provided rich, in-depth descriptions of participant interviews and of study findings so that target audiences could determine whether or not findings can be used in theory or practice. As recommended by Miles et al., (2014), I described sampling and generated a diverse sample so that broad applicability and comparisons could be made to other samples. In addition, following the advice of Miles et al., (2014), I connected findings to prior theory so that the audience could determine settings in which findings could be productively tested. I did not make any generalizations to unstudied entities.

In the constructivist paradigm, the social environment is always changing and in establishing dependability the qualitative researcher must recognize this emergent dynamic. Therefore, as recommended by Miles et al., (2014), every effort was made to maintain connectedness to theory and the researcher's role was explicitly described. Since there is inherent flexibility in the qualitative research design, I improved dependability by following established protocols for data collection and analysis, while maintaining an audit trail to show how procedures and protocols were followed. Also, all decisions to make changes during the evolution of the research process were documented so that data could be efficiently reanalyzed as needed. In addition, I maximized data quality by reducing bias and deceit.

The effort to establish confirmability is crucial to qualitative research. Findings must reflect what participants have said and not researcher-generated fabrication, bias, or

prejudice. In attaining this goal, I explicitly described and detailed research methods and procedures, documented reflexivity, and linked conclusions to precise interviewee data. I also reported assumptions, values and biases, and affective states, indicating how they influenced the research process. In addition, I retained study data for analysis by others, as allowed by IRB regulations and participant-researcher agreements.

Other threats to trustworthiness that must be overcome include reflexivity of the researcher, lack of researcher humility, and inadequate field preparation (Chenail, 2011). In order to assess and account for researcher bias, many techniques or combinations thereof, can be used. I used open-ended questions to gain interviewee responses and conducted a pilot studies to determine if the interview questions were valid and reliable. In the effort to maintain transparency, reduce bias, and improve trustworthiness, I disclosed any held ideologies, preconceived ideas, and opinions that could influence the issue being investigated during the course of this dissertation. This is most prominently presented in chapter 5.

Ethical Procedures

Agreements to access. The satisfying of ethical concerns is crucial to protecting human subjects involved in scientific research and in obtaining IRB approval. Human subjects must agree to participate before the study can proceed. In accomplishing this goal, I obtained letters of cooperation from local churches, youth groups, and a medical clinic. These agreements allowed for advertising on websites, on the property, and for sending information to clients of these organizations. I did not seek access to patient's personal health records, but I did visit the premises of these organizations to advertise the

study. I provided participants with transparent information; a consent form outlining the study, the responsibilities of the research investigator, the research organization, and what is required of participants. I emphasized the participant's right to withdraw from the research at any time if conditions became unsatisfactory to them. After reviewing the document, participants contacted for any further explaining of the document's content as needed. On answering participants concerns, I had them consent electronically. Highlights of the document relating to withdrawal and confidentiality were again reviewed just before interviews.

Protection of human subjects. I made every effort to secure the privacy and confidentiality of participant's information and each individual was made aware of this policy. The names of participants and other identifying information was known only to the researcher. Pseudonyms were used during the interview process, transcriptions, and all other materials referencing participants. The code book linking pseudonyms to participants was secured in a password protected files on a computer and an external hard drive. This file was kept independent of other research files. Participants were informed of the potential, but minimal risks involved in conducting an interview, including feelings of nervousness and stress. When challenges occurred that made interviewing difficult to continue, participants were given the option to take a break and regroup or discontinue. I obtained Walden University's IRB approval for this study (03-23-17-0415743) which expires March 2019.

Elements of informed consent. The purpose of informed consent is to advise participants of elements related to the research being conducted. These elements are: the

study's purpose, duration, procedures, the right to decline/withdraw and any associated consequences, reasonably foreseeable factors pertinent to their decision to participate, prospective benefits or incentives, confidentiality limits, and contact information about their rights (American Psychological Association, 2016). These elements were incorporated in the consent document that participants reviewed and subsequently signed, if they were satisfied with the information presented to them.

Treatment of data. I had all collected data stored in confidential, password-protected files and I am the only person with access to these files. Audio files and transcribed interviews are identifiable by participant's pseudonym only. I transcribed all audio files and I am the only one with access to the code book that matches pseudonym to participant. All transcripts are kept in computer files with duplicates on a password protected external hard drive. I will be keeping files for five years after completion of the study. Subsequently, any reproduced hard copies of data will be shredded and discarded, and computer files will be expunged. This process maximizes privacy and confidentiality.

Other issues. I asked participants and myself to declare any associations that could arise, or could be perceived as of significant interest, during the performance of this study. None of the interviewees declared significant a conflict of interest related to the study.

Summary

In chapter 3, I outlined the research design, rationale for the study, and the role of the researcher. I used a phenomenology design because it allowed the opportunity to obtain rich, in-depth information on the subject of EMYA HLR for the transition to

adulthood. By using this approach I was able to gain a holistic understanding of what this phenomenon means to them. I also gained credible and trustworthy answers to research questions. The resultant data collection allowed readers to get dependable information related to participants' views on HLR for the transition to adulthood. This chapter also focused on methodology, including participant selection logic, instrumentation, and the data collection and analysis plan. I also discussed efforts to ensure rigor and address issues of trustworthiness, including measures taken to protect study participants with appropriate privacy restrictions and consent. In chapter 4, I present the study results. I also discuss results of the pilot study and its impact on the main study. In addition, I present an analysis of the main study data and its trustworthiness.

Chapter 4: Results

Introduction

In this chapter, I present the results from the qualitative interviews I conducted with EMYAs about their perspectives on HLR for the transition to adulthood. The participants were ethnic minorities living in a southern county in the United States. Health literacy is a major problem plaguing many ethnic minority populations in the United States, which is influenced by various individual and societal factors (Manganello & Sojka, 2016). NIHCM, 2011; Rudd, 2015; Sørensen, 2012). In addition, health literacy is a social determinant of health and a health disparity that worsens other health disparities (Currie et al., 2012). As a result of deficient health literacy, EMYAs suffer poor health outcomes and the cost of their care increases the economic burden of health care on the United States (Bloom et al., 2013). The improvement of HLR in ethnic minorities transitioning to adulthood, thus, remains an important public health concern. In my review of the literature, I noted that there was limited information on the issue of HLR in EMYAs transitioning to adulthood. Consequently, I conducted qualitative research using semistructured interviews with EMYAs to gain an in-depth, real life understanding of their HLR for adulthood. Adolescents and emerging adults are pivotal stakeholders in improving their health literacy proficiency (Ashdown et al., 2015; Wong et al., 2015). The input of this sector of the society can generate important contributions for improving health literacy proficiency and associated health outcomes.

In this chapter, I present the findings from my investigation. The main research question (RQ1) I sought to answer was, *what are the perspectives of ethnic minority*

young adults on their health literacy readiness for the transition to adulthood? The subquestions were, as follows:

RQ2. As ethnic minority young adults transition to adulthood, what are their attitudes and beliefs towards being health literate?

RQ3. As ethnic minority young adults transition to adulthood, what are their perspectives on the benefits of and barriers to becoming health literate?

RQ4. What are the perspectives of ethnic minority young adults on facilitators (agents or agencies) influencing the development of health literacy readiness for adulthood?

The remaining sections of this chapter include the pilot study performed to improve the quality of instrumentation, followed by study setting and participant demographics. I will then address the data collection and data analysis processes and evidence for trustworthiness. Finally, results are presented followed by a chapter summary.

Pilot Study

I conducted a pilot study to address the feasibility and efficacy of the data collection process; to confirm the reliability and validity of the evaluation tool with the target population and to assess potential bias issues. For the pilot study, I chose three participants from the sample community who met previously outlined study selection criteria. After these participants consented to participate, I assigned them pseudonyms, after which they participated in telephonic interviews. Participants chose to be seated in the privacy of their homes for the interviews and I sat in my office. Interviews were completed in 1 month. I conducted member checking during the interviews, and

participants received a transcript of their interviews to confirm accuracy or provide other feedback if needed. Participants confirmed the face validity of the instrument indicating that it adequately addressed the concepts to be measured and that it was understandable, appropriate, and efficient for interviewing the intended community.

Impact of Pilot Study

Initially the plan was for five pilot study interviews but with the encountered difficulty in recruiting participants, I presented my position to the IRB that the participant pool could be depleted in this difficult to recruit population. With appropriate approval from the IRB that three to five participants were acceptable, I terminated enrollment in the pilot study and proceeded to analysis of data after three interviews. The pilot study's findings unearthed the need to add more structure to the interview process to improve flow and clarity in questioning participants. Consequently, I made improvements in wording to the semistructured interview protocol with the addition of a set introduction. The essence of the interview questions remained unchanged, but words were added to improve flow of the interview process. The updated instrument was resubmitted to IRB for approval and used for the main study after appropriate permission was granted.

In conducting the pilot study, I also identified a major challenge, which was previously reported by Kim (2011): barriers and issues related to recruiting participants for research. The process of recruiting EMYAs took 6 months, longer than the estimated three months, and this contributed to a reduction in target goals for participant recruitment. The pilot study data also provided insights into possible themes that could

emerge from interviews in the main study and a priori preliminary nodes were created from this information. No data analysis strategies were affected.

Setting

I conducted this study in a multiethnic southern county in the United States with participants in their natural unmanipulated social environment and at their determined availability. To accommodate the schedule of busy emerging adults, I allowed participants to select a convenient time and place for virtual interviewing. This allowed participants to be focused, avoid distractions, and eliminate competing background noise for clear recording of information. Participants were consented and received pseudonyms to help ensure confidentiality and privacy before participation in the interview. I interviewed participants by telephone or tablet in a virtual setting and in the privacy of their homes. I audio recorded all interviews with participants' permission. In scheduling the interviews, I asked participants to set aside 1 hour; however, interview length ranged from 17-35 minutes. Participants appeared comfortable, were open to questioning, and answered all questions with minimal difficulty. No changes in personnel occurred, and no modifications in budget were made during the time of the study. No adverse events occurred.

I obtained letters of cooperation from supporting stakeholders (local churches, youth groups, and a medical office) to help with recruitment of participants. With their consent, I distributed print advertising at these facilities. In addition, I circulated digital copies of the recruitment flyer (see Appendix D) on the Internet, primarily Facebook and on the websites of the youth organizations who consented to participate in the research. I

also advertised by word of mouth and by sending text messages and e-mails to young adults who expressed an interest in the study. I contacted all interested participants and informed them about study participation criteria.

Demographics

A total of 12 EMYAs, individuals between the ages of 18 and 22 from multiple ethnic backgrounds, participated in this study. Participants were purposefully selected from a southern U.S. county because of its multiethnic population. Efforts were made to secure representative balance in gender and ethnic diversity. Participants represented ethnic groups of African American (33%), Asian (8%), Haitian (42%), and Hispanic (17%) origins and were mostly first-generation immigrants living in the United States. One African American participant had multiple generational presence in the United States. In this study, there was an equal representation of female and male participants and of participants under 21 years old and those 21 years old and older. Most participants had some college education; a minority had no college education. A health care professional was present in 58% of families represented, all participants had health insurance coverage, and 33% of participants in the study suffered from a chronic disease. Table 1 summarizes the characteristics of these participants.

Table 1

Participant Demographics

Case	Age	Gender	Education	Ethnicity	Accul.	HxCD	HPH
GX 1203	22	M	SC	AA	Y1	No	Yes
AI 9118	21	M	SC	AA	Y1	No	Yes
XT 8174	21	F	SC	Haitian	Y1	No	Yes
KH 2919	21	M	SC	AA	Y1	No	Yes
RD 4341	19	M	SC	AA	YN	Yes	No
EJ 2776	19	M	SC	Haitian	Y1	No	No
EV 7828	22	F	SC	Haitian	Y1	No	No
UR 1534	20	F	SC	Hisp.	Y1	No	Yes
IS 3223	21	F	NC	Haitian	Y1	Yes	No
BG 2352	20	M	NC	Hisp.	Y1	Yes	No
TG 9392	20	F	SC	Haitian	Y1	Yes	Yes
WU 6627	19	F	NC	Asian	Y1	No	Yes
GX 3884	Did not participate secondary to challenges with scheduling						
NA 5633	Lost to follow-up						

Note. Accul. = acculturation; HxCD = history of chronic disease; HPH = health professional in home; AA = African American; Hisp = Hispanic; SC = some college; NC = no college; Y1 = first generation American; YN = American multiple generations.

Data Collection

Participants

A total of 22 participants expressed interest in the study and received participation packages but only 14 replied. One was lost to follow-up and one had difficulty scheduling the interview. Twelve minority participants from multiple ethnic backgrounds provided interviews for this study (see Table 1). They all met selection criteria. The inclusion criteria for selecting participants was: the participant must be a member of the study community, must be from an ethnic minority, must be between 18 to 22 years of

age, must be able to communicate in English, must have access to a virtual device, and must have health literacy related experiences in the United States. Exclusion criteria were: age under 18 or over 22 years of age, inability to communicate in English, or inability to communicate adequately secondary to other conversational challenges, and residence outside the county being studied.

Location, Frequency, and Duration of Data Collection

I collected data from participants in a southern county in the United States. Local stakeholders: churches, youth groups, and a medical clinic, were contacted, and letters of cooperation were obtained from them to help facilitate recruitment. Walden IRB approval (03-23-17-0415743 expiring March 22, 2019) was obtained before any recruitment was initiated. After initial recruitment, I used the snowball sampling technique to help secure other participants. Because the period of data collection was prolonged by slow recruitment, an IRB extension was obtained. Other changes to the IRB request included, a change of age criteria from 18-20 to 18-22, changes to the interview protocol, and related updates to the consent form. These also contributed to prolonging the period of data collection. Interviews were conducted over an eight-month period. Of the 22 individuals expressing interest in participating, 13 participants consented, but one did not proceed with the interview secondary to scheduling problems. At the time of the interview, I reviewed consent with participants, reminded them that their participation was voluntary, that they could terminate the interview at any time, and that collected data would be kept confidential. My dissertation chairperson and I would be the only persons to have access to the code book with their pseudonyms, others would need their permission.

Data Recording

I conducted interviews virtually with electronic devices: phones, tablets, or computers, using Facetime or What's App. I interviewed participants from the privacy of my office and participants chose the privacy of their homes. Using GarageBand, a recording feature on Apple computers, I created voice recordings of all interviews. Interviews lasted from 17 to 35 minutes. Audio recordings of interviews were saved, transcribed, and kept in password protected files. I transcribed all recorded interviews and copies were uploaded to NVivo for Mac version 11.4.3 (2084) for coding. Transcripts were also stored in password protected file on a computer and on a back-up external hard drive.

Variations in Data Collection

Data collection for the main study occurred over the course of 8 months, from October 2017 to May 2018. This happened because of the difficulties encountered in recruitment; EMYAs were slow in responding and unwilling to participate. Because of the extended time needed to secure participants for the pilot study and the main study, IRB approval for the study had to be extended; this was obtained without problem. I terminated data collection after the enrollment of twelve participants. Original, I planned to enroll a minimum of 15 participants and a maximum of 35 if saturation was not reached before that point. However, despite the extended time for recruitment, response was poor among EMYAs and with projected increased study cost and resources, I decided, in consultation with my committee chairperson to terminate enrollment at 12

participants. We decided that, in this difficult to recruit community, the number of participants was adequate.

Data Analysis

Coding Process

With all interview transcripts uploaded to NVivo for Mac version 11.4.3 (2084), I started the data analysis process by first conducting word search queries of the data. By using this technique, I was able to identify meaningful and frequently used words in the transcripts. Subsequently, I developed word trees to further identify words and phrases that were used in association with particular words and the context in which these words and phrases were used. An example of how the process of word tree development was done is provided in Figure 2 where the word "ready" was identified and I developed a word tree to identify related words and phrases that could be coded to the node "readiness for adulthood." The identification of other words, phrases, and sentences were similarly coded to named nodes that embodied their content. Some nodes were established a priori as a result of insights gained during the pilot study. However, nodes were subsequently modified or rearranged as more information became available after a review of each interview transcript. After coding all interview information, I reduced and integrated nodes into themes. From these themes, I created three final categories: deficient acumen, access challenges, and application problems (see Table 2). I endeavored to objectively code and develop themes and categories from the information presented by participants in interviews. However, I recognize that my life experiences as an African American who has experienced the poor health outcomes from deficient health literacy in my

community, color my representation of findings and inherently contribute to my assumptions. This background will also contribute to bias and this may be reflected in my summation of findings and declarations made during the dissertation.

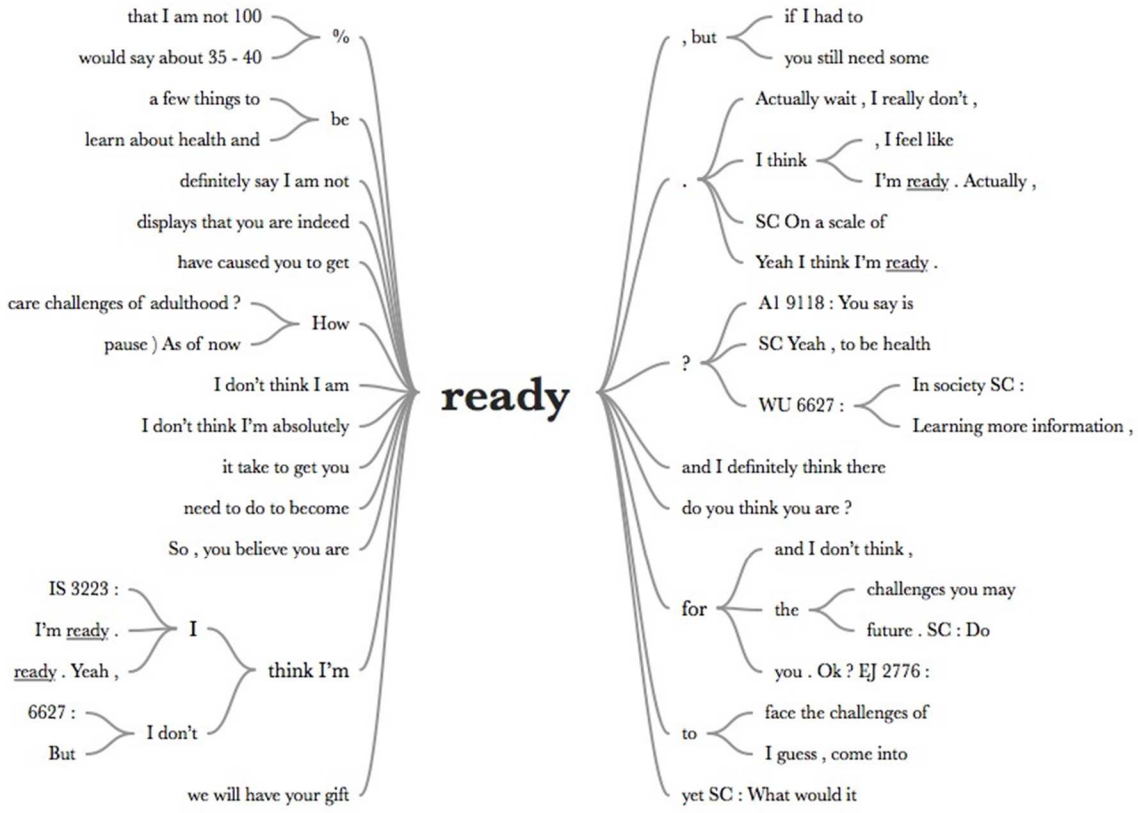

Figure 2. Example of a word tree I generated by text search during coding.

Table 2

Derived Categories With Supporting Themes and Selected Codes

	Categories		
	Deficient acumen (Knowledge and insight into health matters)	Access challenges (Getting available health information and services)	Application problems (Correct use of health information and services)
Themes Codes	Knowledge awareness Not good Personal benefits Better health Parental independence Improved health communication Understand documentation Better financial management Understand government policies Better understanding of disease Avoidance of preventable diseases Extra-personal benefits Helping others Deficient health care knowledge Inability to synthesize health information Little time investment Parental dependence	Internet availability Easily available Educational forum participation Extracurricular programs Media challenges Cannot interpret information Trustworthiness Lack of parental empowerment Controlling parents Deficient health education Poor high school/college preparation Social challenges Perceived discrimination Time management No time Demands of school, work Quality social support Deficient parental knowledge	Deficient preparedness Parents did everything Making appointments challenging Challenges with information processing Utilizing medical services Understanding the insurance process Challenges to utilization Understanding scientific information Social factors influencing application Personal and family health status Lack of practical support Utilizing medical services Educational forums beneficial Independent use of physician services helpful

I designed the interview questions to secure answers to the research questions. I constructed Interview Questions 5, 6, and 7 to answer the main research question, RQ1, which asked about participant's perspectives on their health literacy readiness (HLR) for the transition to adulthood. Eleven of twelve participants stated that they lacked the HLR needed for the transition to adulthood. They identified lack of time as a major factor in not developing HLR, however, experiencing personal or family illness was a major contributing factor encouraging EMYAs to develop improved HLR for the transition to adulthood.

I designed Interview Questions 1, 2, and 7 to answer research RQ2. This question inquired about their attitudes and beliefs of participants about being health literate on transitioning to adulthood and the importance of HLR in their lives. Participants believed health literacy proficiency was necessary for becoming a "mature adult" and should be desired to help guarantee a higher standard of living. They also believed that being health literate was essential for helping others: progeny, family, and the wider community. Participants believed that HLR for the transition to adulthood was essential to their wellbeing.

I framed Interview Questions 2, 3, and 7 to obtain answers to RQ3, which queried participants about the perceived barriers to and benefits derived from becoming health literacy proficient on entering adulthood. Participants noted multiple barriers to becoming health literate and developing HLR. These included the inability to discriminately interpret media information, parental dependency, inadequate preparation in high school and college, lack of participation in educational forums, and discrimination. Benefits

included better health, enhanced understanding of disease states, parental independence on health issues, improved health communication ability, and the ability to help others.

I designed Interview Questions 4 and 7 to answer RQ4. This question solicited participants perspectives on the entities that were helpful in developing their HLR for the transition to adulthood. Participants regarded the Internet as the major contributor providing information for HLR. Other helpful entities included parents, school, church, and medical providers. Table 3 provides a list of the research questions and the related interview questions designed to elicit answers to these questions.

Specific Codes, Themes, and Categories

I analyzed themes derived from nodes and generated three categories without prior assumption or known bias. However, inherent bias and assumptions, not overtly known to me could affect the process. The categories representing the perspectives of EMYAs on their health literacy readiness for the transition to adulthood are highlighted in Table 2. The categories that emerged were deficient acumen (knowledge acquisition and insight into health care matters), access challenges (the individual's ability to readily get available health services and health information), and application problems (participant's correct utilization of available health care information and services).

Table 3

Research Questions With Corresponding Interview Questions

Research questions	Interview questions
RQ1 (Main research question): What are the perspectives of ethnic minority young adults on their health literacy readiness for the transition to adulthood?	Q5: What are the driving factors that lead you to seek and maintain health literacy readiness as you enter adulthood? Q6: In your experience, what healthcare-related experiences, individual or societal, have prepared you to face the health care challenges of adulthood? F/U How would you describe your health literacy readiness as you prepare to meet the health care challenges of adulthood? Q7: Is there any further pertinent information on this topic that I should know that you did not mention during the interview?
RQ2: As they transition to adulthood, what are the attitudes and beliefs of ethnic minority young adults towards being health literate?	Q1: As you enter adulthood, please explain to me why being health literate is important to you? Q2: What benefits do you expect from being health literate as you enter adulthood? Q7. Is there any further pertinent information on this topic that I should know that you did not mention during the interview?
RQ3: As they transition to adulthood, what are the perspectives of ethnic minority young adults on the benefits of and barriers to becoming health literate?	Q2: What benefits do you expect from being health literate as you enter adulthood? Q3: What barriers hamper the process of being health literate as you start adulthood? Educational forum participation Q7: Is there any further pertinent information on this topic that I should know that you did not mention during the interview?
RQ4: What are the perspectives of ethnic minority young adults on facilitators (agents or agencies) influencing the development of health literacy readiness for adulthood?	Q4: What information sources have you relied on to improve your health literacy and prepare you for the health care challenges of adulthood? Follow-up: why those choices? Q7: Is there any further pertinent information on this topic that I should know that you did not mention during the interview?

Deficient Acumen

This category included themes from participants knowledge awareness of their HLR, personal and extra-personal benefits of HLR, and challenges related to deficient health knowledge. Participants knowledge awareness was mainly affected through Internet exploration, especially social media topics. Another prominent knowledge awareness source was parents, but some participants from Haitian ethnicity, did not always find this to be reliable. Other knowledge sources included personal exposure to illness/injury, provider care, and experiencing others with illness.

Personal benefits of HLR included improved knowledge of personal health quality and self-care issues, i.e. protection from injury, awareness of disease symptoms and understanding treatment, greater parental independence, and better provider communication. A second benefit was knowledge of health care services for enhanced care i.e. insurance benefits, doctor visits, and hospital visits. The third benefit was knowledge of health information sources: media sources, government health policy, provider information, school information, and church information. When asked, "what are the driving factors that lead you to seek and maintain health literacy readiness as you enter adulthood?" XT 8174 replied,

> One is my desire to remain healthy and seeing that health care is constantly changing and access to that is also constantly changing and I want to make sure that I can remain healthy for the rest of my life so that is one driving force that will keep me, that will give me the desire to remain health literate.

GX 1203 added,

> Heart disease runs real deep in our family, you know, my grandfather died the same way, my grandmother had many heart attacks, and things like that. So, of course I have diabetes, runs in my family, hypertension, so yeah, that's probably one of the first driving factors, you know.

For participants, extra-personal benefits related to the belief that health knowledge acquisition and insight would better prepare them to help others with health issues. Others primarily included progeny but also community members.

Participants also expressed concerns about deficient health knowledge. They saw this as being associated with poor health quality, increased ER visits, and inability to properly interpret health information, particularly media information. Other related challenges included financial management of health issues. EV 7828 had this to say about this issue.

> When I did go away for college and I got sick, I didn't know what to do and I didn't know if I should go to a doctor, I didn't know how much a check-up was, I wasn't aware if my insurance was, would be covered in my, at my university, let alone any local clinic.

Access Challenges

The access category was supported by themes and codes related to participant's perceptions about barriers to and benefits from acquiring health information and services. Themes from this category supporting benefits included Internet access and educational forum participation. All participants were able to access the internet freely; some benefited from extracurricular programs at school and church. In describing acquisition

of health care information, EV 7828 stated, “the Internet is usually where I go to first, but then I get scared, so I have to ask people and people calm me down.” KH 2919 added, “informational sources?” “I would definitely say computers, my phone, those are the main sources that I get access to.” These comments reflected the view of all participants

Themes related to barriers to access include media challenges, quality practical social support (accessing medical services like insurance and understanding medical information), deficient health education (deficient guidance from parents, guardians, mentors, school), lack of parental empowerment, discrimination (age, ethnicity), time management (demands of school/work, preoccupation with life). When asked about access barriers to HLR for adulthood, A1 9118 replied,

> How to utilize the system like as far as insurance carriers, like knowing how to get insurance, like knowing where to go for the best services and things like that, like just being able to navigate myself around the health care system would really help going into adulthood.

With reference to the influence of educational preparedness on health care access to foster HLR, XT8174 stated,

> Maybe not having access to different programs or things that could help you to find knowledge and, for example, if a school or some organization decided to have a health fair or something where they are able to kind of educate the community or just teach the community how to apply for different things for medical care.

> It should be noted some participants did not share the same view, revealing that they had adequate educational exposure, but other maturity issues hampered learning about health care issues.

For all participants, access to Internet sources for health information was a primary modality through which HLR was primarily mediated. This mode of access was a powerful readily available tool, but EMYAs expressed concerns that sources were not always correct or helpful. Sometimes this promoted skepticism when interpreting presented health information making access ineffectual.

Application Problems

This category, which relates to the correct use of tools and skills for the development of HLR, was supported by codes and themes related to participant's perceptions of their ability to correctly and competently apply health information and services. Themes from this category include challenges in processing health care information, and challenges to utilization, i.e. use of medical services: independent registering for hospital, clinic, or physician services, and securing insurance benefits. Participants felt that they were not independently ready to use health care information and services or that it was not a major priority at this time of their lives. The EMYAs believed that these factors contributed to a deficient sense of HLR for adulthood. AI 9118 reflected the perspective of participants,

> I know how to do basic things, but I'm not experienced as far as knowing what doctor to go to for certain things, like say, my hair is falling out, I wouldn't know

what doctor to go for that. I wouldn't know if I had to go to my general doctor or to a specific doctor; I honestly don't have a clue about that.

Social factors influencing utilization was another generated theme. These factors included personal illness, disease in a friend or family member, and lack of practical support in handling health care issues. The health care challenges identified included making appoints, communication with providers, correctly using online information, and health finances. XT 8174 expressed the general consensus of participants, "I think one barrier would be not having someone to guide me and knowing, not finding the proper way to do things." Most participants, particularly younger ones, viewed parental support as helpful to utilization. XT8174 stated, "I have relied on my parents and guardians to help me understand the different processes for receiving health care, as well as the Internet." However, older participants, over 21 years, related greater independence from parental support.

Having experienced the process of obtaining health care, most participants believed that going through the process was helpful with understanding the application component of for developing HLR for the transition to adulthood. WU 6627 confessed "I guess going, I think going through injuries and going to the hospital kinda prepared me to understand the system of how everything works. I guess in the hospital, that makes sense?"

Discrepant cases. During the data collection process differences in participant development of HLR became evident. Even though all participants agreed on the need for acumen, access, and application in developing health literacy readiness, there were

occasions where agreement on reaching these goals was discrepant. In such cases, the majority view prevailed in formation of the theme, but efforts were made to show that it was not a unanimous theme.

For instance, high school and college health education was seen by some participants (5) as influential in improving acumen, access, and application for attaining HLR. XT 8174 stated, "there are some resources at my school where the medical department sometimes provides different resources for us to us to help us become more knowledgeable about health care and how to get it." However, other participants (4) felt that school health education was not helpful. When asked, "So you are saying that education has not been that effective for you? Does that include both high school and college? UR 1534 replied, "yes, in the sense of health literacy, no, not really."

Other participants (6) felt that the extra-curricular school health programming was more helpful. IS 3223's response reflected the opinion of this group,

> School, yes. They usually have in these people, I cannot remember their names, but I know it's these groups of people who come and they talk to us about health… So, that actually helps me wake up to realize that I need to start trying to be more healthier or active and more mentally healthier too.

Another issue was the influence of home life on HLR for the transition to adulthood. Most participants believed this was a positive factor, but some individuals (3) said it was not. IS 3223 stated, "my home, no! My home a little bit. If I don't go out to go shopping for myself, then no. But most of the time, it will be all these other stuff." The majority response was more like that of KH 2119, "she (mother) may sometimes give me

advice, always review the information presented, and always have her review it so I can know what they (providers) are talking about." No references to paternal influences were mentioned.

Evidence of Trustworthiness

It is essential that research findings can be counted on to be honest and truthful. In establishing trustworthiness, there are four pillars that must be protected, credibility, transferability, dependability, and confirmability (Creswell, 2013). Threats can arise from researcher or participant bias, improper generalizations and not following study design protocols. The strategies outlined in chapter 3 were followed to ensure credibility, transferability, dependability, confirmability. The only exception was the inability to secure the intended maximum sample size of 35 participants.

Credibility

Credibility implies that research findings are believable; that results truthfully reflect the views of the participants and are not biased by the researcher. I made it clear that I was a member of an ethnic minority from the outset of the interview process and made every effort to refrain from projecting my views on participants during interviews. In the effort to ensure credibility, I asked open-ended questions and secured rich in-depth descriptions from participants, while performing member checking during the interviews to ensure that I clearly understood participants. Copies of voice recordings were kept on file to review and confirm participants statements and participants were asked to review transcripts to verify that the content represented their positions. Triangulation was

thereby accomplished. I provided exact quotes from interviewees to help the audience appreciate their perspectives.

Transferability

Transferability allows the reader to determine if study findings can be transferred to other settings because of shared characteristics. This was done by selecting an adequate sample reflective of the study community and by providing rich, thick descriptions of findings so that comparisons to similar communities can be made (Miles et al., 2014; Creswell, 2013). I have provided such descriptions of ethnic minority emerging adult health literacy readiness for adulthood from the multiethnic community being studied. I also connected findings to prior theory which can help in suggesting settings in which further testing of findings could be applicable. However, the results obtained only apply to the study community and should not be generalized to other communities.

Dependability

To ensure dependability, I recorded all interviews and personally transcribed them. I also asked participant to review transcripts to confirm that the information recorded was an accurate representation of their views and not a reflection of my bias. I also used NVivo for Mac 11.4.3 (2084) to help in analyzing data (word searches and phrases) to determine nodes, primary, secondary, and tertiary. These efforts were successfully implemented to ensure trustworthy and reliable passage of information to the audience.

Confirmability

In establishing confirmability, I detailed the research methods and procedures and for the study and meticulously followed them. The documented findings reflect the participant's views and not researcher-generated fabrication, bias, or prejudice; conclusions were linked to precise data. I disclosed my assumptions, values, bias and affective state and indicated how they influenced the research process. Study data was retained for analysis by others as needed, within confines of IRB regulations.

Results

Twelve minority, emerging adults, from multiple ethnic backgrounds in a southern U.S. county participated in this study. I interviewed these participants about their perspectives of HLR for the transition to adulthood. The primary research question, RQ1, was, what are the perspectives of ethnic minority young adults on their health literacy readiness for the transition to adulthood? The results of my data analysis are presented here.

Most participants felt that their health literacy was not proficient enough to be ready for the transition to adulthood. EJ 2776 said, "personally, I think like I'm less than average with knowledge of being health literate and I feel like I should learn more." Echoing a similar viewpoint, RD 4341 offered, "man, that's terrible. I am not prepared at all. I am not even; I don't know diddly squat about health care like that. Like I said, it was just way in the back of my mind." KH 2919 added, "not so good (HLR). Honestly, I have focused on school; health care was sometimes on my mind, sometimes not on my mind." Only one participant said that her health literacy-related readiness for adulthood

was adequate, others subjectively ranked themselves as being not ready for the transition. IS 3223 stated "I really don't, there is some challenges here and there…Eighty-five no 90% (ready)."

Participants identified multiple factors influencing lack of readiness. All agreed that lack of time, educational pursuits, and work obligations hampered HLR. Some highlighted financial outlays, personal commitment to learning about health issues, parental dependency, not taking health seriously, and inaccurate or invalid media output, especially on social media as other factors influencing their lack of health literacy readiness. AI 9118 related, "

> Also, school and just at this age trying to start a foundation, a financial foundation to get my education and everything, I don't get to focus as much time on myself as I would like to. Like that's one barrier right now, school and work and just trying to get myself established, that stops me from learning, from paying attention to myself, and learning about health.

On the issue of financial outlays EV 7828 stated, "

> And then basic medication, it can range from a twenty-dollar co-pay to like $300-$400 for something that you need and it's not that you are using it recreationally or it's not like; you don't have a choice. You need it, or you can become sick and then maybe die so that's one thing I don't think I am ready for.

KH 2919 offered this reaction on the issue parental dependence, "she (mother) would often tell me to bring most of the information to her first of all and she handled most of my health care … until I was seventeen sixteen." On the matter of understanding media

output EV 7828 stated, “the Internet is telling you one thing, but you know your doctor is telling you something else, it makes you scared, thinking that you have something that’s really big when it’s just a cold.” KH2919 added, “

> Some factors that I would notice are definitely commercials, definitely social media, … a lot of advertisements by people telling you not to trust doctors, not to trust society, not to trust government and telling you what is ok. There was lots of talk in politics about Obamacare on social media and all of that deception would tell you that from the Republican side or the Democratic side.

These issues confront EMYAs in the development HLR for the transition to adulthood.

RQ2. As they transition to adulthood, what are the attitudes and beliefs of ethnic minority young adults towards being health literate?

Participants believed that health literacy readiness is important for current and future health and should be desired in order to correctly interpret health information, obtain quality health care, and experience quality health. RD 4341 concurred, “I believe it’s important to me because, for one, health is key, also it can assure your future and your future family’s future.” GX 1203 added,

> I will be able to get better health; my patients that I will be getting soon as I finish school, I will be able to take care of my health better and my future family and friends and family health because I know something about health literacy.

KH 2919 had this concern, “in America I want to be able to choose the best option and the least expensive option and the one that keeps quality, definitely. And I would definitely want my health care to be good because I want to grow to old age.”

EMYAs participating in this study believed that HLR for adulthood facilitates the making of mature health care decisions, particularly as it relates to health insurance. Health literacy readiness was also seen to influence beneficial lifestyle changes, to protect from injury and disease, to facilitate better understanding of disease symptoms and treatment, and to avoid the development of preventable chronic diseases. Ethnic minority young adults also believed that HLR was important in the development of parental independence on health care related issues, something that was seen as necessary when living away from home. UR 1534 stated,

> I think it (HLR) is important because as an adult you have to start making your own personal decisions and that includes making your own health decisions and that includes things like health insurance. I need to make sure that I am making the correct decisions for me.

WU 6627 added, "because I am entering adulthood, I just, I feel like I should know about these things because I am not a child anymore and my parents are not going to be always there for me to teach me what many of these things are." UR 1534 concurred, "health literacy will help me not to depend on my parents anymore, and to make my own decisions regarding health." TG 9392 affirmed, "being health literate helps during adulthood by knowing different situations, if you're sick or not and knowing different types of symptoms and how to cure it.

With regards to the influence of HLR on adult health, EV 7828 states,

> My aunts and uncles, they weren't feeling well so they had to call an ambulance and I don't want that to be me; when I get older, when I am in my forty's fifty's,

> sixty's climbing up in age, where every time I go to the doctor it is an emergency. I just want to go in for a check-up, everything's cool and I can go home. Like I don't want to worry about a heart condition that I coulda caught when I was twenty, if I had listened to my physician.

IS 3223 added,

> Yeah and especially for me now in my life I've seen a lot of older people die of, die of diabetes. Not since, just diabetes, that's just something you know, I guess you can't control, but there is somethings like smoking cigarettes, it's just things that could have been avoided like eating healthier, it could have saved yourself a little.

Participants also believed that HLR fosters proper physician communication, improves quality of care, and helps in the determination of appropriate health care providers. It also helps in understanding documents and documentation, government health care policy, financial responsibilities, and in the synthesis of health information from media sources, providers, and parents. EV 7828 confirmed,

> From what I've seen and experienced it is important because like you know, the yearly check-up and having constant contact with your physician; its important because you don't want to not do these things just because I am young, and I don't get sick as often as my parents do and then when something is actually wrong I don't find out until two or three years later when I could've caught it beforehand.

All participants believed that HLR for adulthood is also crucial to the wellbeing of the wider society. GX 1203 stated, “I believe that everyone should know about health because you have health that you need to maintain.” EV 7828 added, “people talk about education and we talk about you know, how we affect the world, but nobody really talks about how we should take care of ourselves to take care of the world.” TG 9392 conformed, “being health literate will benefit me as an adult by knowing certain things and also helping others who might need access to their health.” These attitudes and beliefs convey important factors that influence lifestyle behaviors in EMYAs.

RQ3. As they transition to adulthood, what are the perspectives of ethnic minority young adults on the benefits of and barriers to becoming health literate?

Benefits. Ethnic minority emerging adults saw the development of HLR as beneficial, however, participants saw reaching this state as fraught with hurdles. Benefits described were both personal and extra-personal. Personal benefits reported include the expectation of better overall health, improved knowledge of diseases and decreased risk for contracting illness, hereditary or acquired, and enhanced self-care. Other personal HLR benefits include improved physician communication, better understanding of health documents, better financial management of health issues related to medical care and insurance benefits, improved ability to better synthesize information from online, provider, and parental sources, and the independent handling of health issues. AI 9118:

> If something happens to me like I do get sick, instead of panicking I’ll probably have a knowledge of what it is; like if it is a common cold or fever, I’ll know what it is, so I wouldn’t have to run to the hospital all the time or self-medicate.

KH 2919 added, “being able to understand doctors when they talk to me, able to understand government policies on health care, … have better take on documents.” IS 3223 affirmed,

> I watch YouTube and I actually am trying to become a vegetarian. The reason for the start though, I went on YouTube and ever since that moment I just got more interested, more interested in the whole health thing and learning new exercises.

UR 1534 agreed, “It helps you to understand your benefits like what the government has for you and what your place of work has insurance wise.” GX 1203 recommended,

> Push health literacy in schools more, even if you are not a health major, because as a health major I learned so much that some of my friends that are like business majors, accounting majors, and they know nothing about—just because I am a health major doesn’t mean that I have to know about health only.

Participants also highlighted extra-personal benefits, which include helping others: progeny and community. TG 9392 remarked, “being health literate will benefit me as an adult by knowing certain things and also helping others who might need access to their health.”

Barriers. Participants looked for support from mentors: parents, guardians, teachers, and for some, the absence of this factor provided a barrier in developing HLR for adulthood. Participants were dependent on their parents with younger participants (under 21) expressing greater dependence than older participants. Even though most participants felt that their parents were able to provide sound guidance with health

information and services, a minority from the Haitian community felt that parental guidance was inadequate, thereby generating an added barrier. XT8174 commented,

> I think one barrier would be not having someone to guide me and knowing, not finding the proper way to do things; for, in order to, I guess, to receive things or be able to work out the necessary things to get that health care, maybe not having access to different programs or things that could help you to find knowledge.

EV 7828 reflected,

> I talk to my mom, my mom has no type of medical background, but I talk to her (laughs) because she is my mom and she took care of me. Whenever I felt bad, she knew what to do and even my grandmother, she would be like, Vicks, Vicks; Vicks is everything (laughs).

Some participants identified the inability to access some programs due to lack of awareness, time, or decreased priority secondary to other pursuits as a barrier to their health literacy readiness. AI 9118 complained, "I don't really have the time to pay attention to myself and my health that much so that's the only thing that's holding me back." TG 9392 added, "I mean, you know, there are things at school that actually helps you out with health literacy but not having the time to go and attend those events or see what's going on with the health in our society."

Participants were divided on the benefits of health education during high school and college with 42% deeming the experience as helpful, 33% felt it was unhelpful, and 25% benefiting only from extra-curricular activities (See Figure 4). The following comments express some of these sentiments. UR 1534 complained,

I feel like I was not properly educated in health literacy

SC F/U: So, you are saying that education has not been that effective for you, does that include both high school and college?

UR 1534: Yes. In the sense of health literacy, no, not really.

RD 4341: contended,

They (school) just give you things like super, like really minute things like cells and stuff, but they don't really give you things that you can use for the general concept. Like unless you are a medical student, they don't give you things that you can technically use in the real world. So, I guess that's a barrier, they just give you things about cells and stuff that you won't necessarily need unless you are pursuing a health career.

On the contrary, EZ 3223 affirmed, "school, yes. They usually have in these people, I cannot remember their names, but I know it's these groups of people who come and they talk to us about health. TG 9392 added,

We do have like teachers that inform us about current events that going on throughout the school that deals with health, and also there is like this study place at the school that I go to a lot that actually gives out information about health, and there is also a booth at the school that comes around annually, every few months that gives us aid and certain … items.

EV 7828 complained,

Actually, I was blessed because my school always came and they always showed us, like they always brought people in to talk to us about health care and why it is

> important and why you show take care of yourself, but then as the internet progressed we lost some of that.

Other barriers cited as influencing HLR included the demands of school, preoccupation with starting adult life, and time management. One participant mentioned perceived discrimination, based on age, nationality, and race. Participants felt that these factors contributed to or revealed deficient knowledge and were barriers to adequate development of HLR. EV 7828 stated,

> I never got sick, … when I did go away for college and I got sick, I didn't know what to do. I called my mom and she told me what tea to drink and I drink the tea and I felt better. But that wasn't the right thing for me to do, I should have went to the doctor. I would have went to the doctor if it was normal for my family to go to the doctor. So that was weird.

AI 9118 complained, "I do get to learn about health and things like that, but I don't spend as much time on it, so I think that's the only barrier, yeah the time."

Even though all participants had health insurance coverage most did not understand how to use it. One participant found the coverage inadequate while one reported that associated copays sometimes presented a challenge (see Table 4). Participants admitted to problems in obtaining and understanding the health insurance process and in completing forms on hospital or doctor's office visits. They were mostly dependent on maternal help in this area. TG 9392 complained,

> At a certain age I couldn't receive certain benefits due to my Medicaid or a different health insurance, so I had to wait a bit or wait to a certain age to actually

> receive the benefits back. So, it's kind of hard to get different kinds of medical attention in case I'm sick or really injured.

RD 4341 added, "I mean, I haven't really got into it like that (obtaining health insurance), really don't know the whole technicalities on it." EV 7828 concurred, "I wasn't aware if my insurance was, would be covered in my, at my university, let alone any local clinic." XT 8174 recognized the importance of acquiring health insurance literacy, "get older and start working, more of the responsibility of having health insurance … would fall on me, so I think it is important to know what I am doing in order to make sure that I am doing everything properly."

Table 4

Selected Findings Related to Young Adult Health Literacy Readiness

Case	HLR	PD	Education	PHIS	HIC	HLR vital
GX 1203	NR	I	Helpful	Internet.	No	Yes
AI 9118	NR	SD	Not Helpful	Internet	No	Yes
XT 8174	NR	SD	*Helpful	Parent	No	Yes
KH 2919	NR	SD	*Helpful	Internet	No	Yes
RD 4341	NR	MD	Not Helpful	Parent	Coverage	Yes
EJ 2776	NR	MD	*Helpful	Health providers	No	Yes
EV 7828	NR	I	*Helpful	Internet	Cost	Yes
UR 1534	NR	MD	Not Helpful	Parents	No	Yes
IS 3223	MR	I	*Helpful	Internet	No	Yes
BG 2352	NR	SD	Not Helpful	Internet	No	Yes
TG 9392	NR	SD	*Helpful	Internet	Coverage	Yes
WU 6627	NR	MD	Helpful	Parents	No	Yes

Notes. HIC = health insurance challenges; HLR = health literacy readiness; MR = mostly ready; NR = not ready; PD = parental dependence; I = independent; MD = mostly dependent; SD = somewhat dependent; PHIS = primary health information source. *Extra-curricular education.

Even though participants were able to use the Internet, interpreting the information realized proved challenging. EV 7828 complained,

> Web MD is a source, but it is a bad source. Because as I explained I have a stuffy nose and I put stuffy nose and it says cancer. Everything points, like I swear, cancer is everywhere, and I don't want to go around in the world thinking I have cancer because I have a vitamin deficiency.

RQ4. What are the perspectives of ethnic minority young adults on facilitators (agents or agencies) influencing the development of health literacy readiness for adulthood?

In the current study, EMYAs used multiple facilitators to learn about, gains access to, and apply health information and services in the effort to procure health literacy readiness for adulthood. Participants used the Internet (see Figure 4) as their primary source of information with sites like Google, YouTube, and WebMD predominating. The easy availability of this resource on Smart phones, tablets, and computers was the reason cited for its use. Social media was another prominent source for learning about health issues. However, some participants cited incorrect or faulty health promotions on social media and in commercials as a deterrent to trusting such information. Other sources included parents, doctors, churches, and school.

KH 2919: "I use my personal computer, my phone, these are the main devices I use to get information about health care" UR 1534 added, "my parents and the Internet." EV 7828: "I talk to my mom, my mom has no type of medical background, but I talk to her (laughs) because she is my mom and she took care of me whenever I felt bad." IS 3223 recalled,

> I watch YouTube and I actually am trying to become a vegetarian. The reason for the start though, I went on YouTube and ever since that moment I just got more interested, more interested in the whole health thing and learning new exercises.

Participants also cited going through the process independently, having an illness and experiencing all facets of care, as a facilitator of HLR for the transition to adulthood.

Also seeing disease and death in others was another factor influencing the desire to develop HLR for adulthood. WU 6627 stated,

> For example, I just got a corneal ulcer in my left eye, but my mom wasn't there to go with me to the hospital, I mean she took me to the emergency room and then I had to (make) an appointment, but she wasn't able to come with me, so I went by myself. I guess going through that experience by myself, of doing all the paper work, I guess it prepared me for the future so I that I won't be as scared, and I do know that I have to bring this, these documents with me to the hospital and to know my information.

IS 3223 recalled,

> Wow! Actually, a friend of mine caught the disease and unfortunately, I have to see her in hospital all the time and that's not the condition I want to see anyone in.
>
> SC: What disease you said that was again?
>
> IS 3223: It's HIV. So … it wakes me up big time and it helps me realize that I need to be on tract and stay on tract.

GX 1203: reflected,

> So, if that (death) can happen to everyone else it can happen to me as well, and I believe that's what, going through those experiences, seeing those things, seeing those things happen to other people and you know being a part of it, being a part of my grandfather's funeral and things like that, that really made me realize that I really need to be healthy. I need as I get older to be honest; your health really never gets better, you just have to maintain it.

Summary

In this study, I explored the perceptions of ethnic minority emerging adults on their health literacy readiness for adulthood. The results of participants opinions were described in narrative and graphic form, representing themes and categories that were derived from interviews in answer to the research questions. This information revealed that most EMYAs perceive themselves as lacking HLR as they enter adulthood. This state is mediated by challenges in three primary areas: deficient personal acumen, challenges with access to health information and services, and the inability to correctly apply health information and services.

Participants believe that health literacy readiness is essential for current and future health and should be a prominent characteristic of their development as they enter adulthood. However, other pressing maturity issues: education and work, compromise their ability to reach this desired goal. Participants also perceive that multiple benefits are derived from HLR. These include correct synthesis of health information, proper physician care/communication for quality health, the understanding of the health insurance process, the interpretation and completion of health documentation, and for comprehending government health policies.

Participants also relate some barriers to developing health literacy-related readiness for the transition to adulthood. These include challenges with processing health information: insurance and Internet information, challenges with utilization health care resources: deficient knowledge of skills and tools needed to satisfactorily manage health-related issues, parental dependency, and other social challenges like quality health

education and perceived discrimination. With regards to facilitators influencing the development of HLR, participants relied heavily on the Internet for education despite challenges with interpreting information. Other trusted sources included parents, school forums, church organizations, and health care providers.

In the following chapter, I will present my interpretation of the findings. I will also review limitations of the study and offer recommendations for future research. In addition, I will explore the implications for positive social change based on study findings.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this qualitative study was to explore the perspectives of EMYAs on their HLR for the transition to adulthood and gain a holistic understanding of this problem through real life experiences. Emerging or young adulthood represents a distinct developmental phase of life between age 18 and 25 in which EMYAs are faced with notable health and health literacy challenges (Manganello & Sojka, 2016; Park, Scott, Adams, Brindis, & Irwin, 2014; Rosario et al., 2017; Weinstein et al., 2016). Health literacy is a social determinant of health that remains deficient in the U.S. population, with ethnic minority adolescents and emerging adults disparately bearing this burden (Kutner et al., 2006, Manganello & Sojka, 2016; Rosario et al., 2017; Soto Mas, Ji, Fuentes, & Tinajero, 2015).). This health determinant is also a health disparity that aggravates other health disparities in adolescence and emerging adulthood (Bloom et al., 2013; Manganello & Shone, 2013; NIHCM, 2011). Experts now accept the position that detrimental lifestyle health behaviors often have their origins during adolescence and emerging adulthood (Due et al., 2011; Manganello & Shone, 2013; Weinstein et al., 2016). Minority youth are more likely to pursue high risk health behaviors and have poorer health compared to the majority population (Park et al., 2014; Kann et al., 2018). Currently, a gap exists in the literature with reference to the perspectives of EMYAs on their HLR for the transition to adulthood and independent care. I explored the perspectives of EMYAs on the issue of HLR at the beginning of the young adult life stage, between the ages of 18 and 22. Study findings revealed that most participants

perceived that their health literacy-related readiness for the transition to adulthood was deficient. Participants identified personal and extra-personal factors that influenced this lack of health literacy-related readiness. These factors fell into three categories: diminished acumen on health issues, access challenges with obtaining health information and services, and the inability to correctly use tools and apply skills related to securing health information and services. All participants stated that developing HLR for adulthood was vital to sustaining optimum health. I will discuss these factors in greater detail as the chapter progresses.

Interpretation of the Findings

In this study I explored the perspectives of EMYAs on their self-reported health literacy-related readiness for the transition to adulthood. Results from this study indicate that most ethnic minority young adults do not see themselves as having the health literacy-related readiness required for the health care challenges of adulthood. The young adult participants in this study were mostly first-generation immigrants (one was African American progeny of multiple generations) and indicated this deficiency regardless of age, gender, the presence or absence of a health care professional in the family, educational level, or the presence or absence of a chronic disease. This finding occurred despite the position by all participants that developing HLR readiness for adulthood was vital to personal health quality and the facilitation of the wellbeing of others.

In this study, health literacy was defined as an individual's capacity to obtain, process, and use basic health information and services for making appropriate health care decisions needed in daily living. The ideal of forging emerging adult HLR for the

transition to adulthood is relatively new. Theoretically, HLR is a dynamic process that evolves as a function of three competencies: acumen; the awareness and discriminate use of acquired knowledge of health care information and service, access; the ability to obtain health care information and services, and application; the correct use of acquired knowledge, skills, and tools to secure health information and services (Higgins et al., 2009; Massey et al., 2013; Sørensen et al., 2012; Ye et al., 2015). The collaborative developing these competencies nurtures self-efficacy and prepares the young adult to handle the health care challenges of adulthood (Huang et al., 2012; Sørensen et al., 2012). Much of the research related to health literacy in EMYAs has focused on the area of patient-provider relationship among adolescents and young adults with chronic diseases who are transitioning to adult care (Cooley & Sagerman, 2011; Garvey et al., 2017; Javalkar et al., 2016; Xu, Leung & Chau, 2018). However, the pervasiveness of deficient HLR among the multiple ethnic groups participating in this study and at this developmental stage of life is a cause for concern. since it can portend continued unhealthy lifestyle behaviors and inadequate health care (Healthy People 2020, 2015; NIHCM, 2011).

Only one of the 12 (8%) participants in this study reported HLR, a finding that concurs with earlier national minority data from Kutner et al. (2006). Researchers who have conducted more recent studies have noted 47% of African American adolescents (Manganello & Sojka, 2016) and 30% to 98% of Hispanic adolescent and young adults (Soto Mas et al., 2015) as lacking adequate health literacy. These findings also raise concerns that, on the issue of health literacy proficiency, no real improvement has

happened in ethnic minority communities during the past decade. The poor state of health literacy noted in ethnic minority communities helps to emphasize the gravity of this health disparity.

Prior investigation has evidenced that the presence of chronic disease can have an impact on transitional readiness. In a study of late adolescents and young adults by Eaton, et al., the investigators showed that the population with chronic diseases tended to greater transitional readiness than healthy peers. Health literacy was not measured. However, in an evaluation of health literacy-related readiness for adulthood, Huang et al. (2012) studied a population of adolescents from majority and minority ethnic groups with chronic inflammatory bowel diseases. Investigators noted that the self-assessed health literacy-related readiness for the transition to adult care among adolescents, when compared to the assessment of clinicians, was lower than that expressed by clinicians (Huang et al., 2012). In their subanalysis of the study sample, Huang et al. found that health literacy-related readiness for transition to adult care was associated with White race (18% vs. 3%, White vs. non-White, p =.03) The lack of health literacy-related readiness in minority populations places members at significant risk for poor health outcomes and can worsen the health care burden in the United States (Healthy People 2020, 2015; NIHCM, 2011). This finding of deficient HLR supports the call by Manganello et al. (2017) to continue vigorous efforts to reverse this pattern in minority populations.

For the participants in this study, developing acumen and the ability to correctly apply the skills and tools needed to effect appropriate health care proved problematic.

This happened despite the belief that HLR was vital to their health and well-being and admitted easy access to quality health information and sources for the development of HLR. Researchers have consistently confirmed that the level of perceived benefits, a key construct of the health belief model, is a good predictor of an individual's instituting preventive health behaviors (Asare et al., 2013; Karimy & Zareban, 2018). However, in the study population, the development of HLR was not realized despite a deep appreciation for the benefits of this behavior. This finding engenders the concern that other factors contributing to HLR need to be addressed in this community such as prioritizing the early acquisition of health knowledge and management of barriers related to competing life priorities.

The primary source for information among participants was the Internet. Even though participants (100%) felt that Internet access to health care information and services was not problematic because of easy Internet availability, the benefit of access was curtailed by the inability to adequately interpret the health information acquired. In addition, some participants used sources with audio-visual content (YouTube, Pinterest) to help improve their understanding of health information and services. An investment in interventions to enhance engagement strategies to optimize use of current and evolving technology may prove beneficial in boosting HLR for the transition to adulthood in EMYAs.

The fact that emerging adults have access to Internet sources does not necessarily translate to adequate utilization of available services. In their analysis of peer reviewed studies on e-Health literacy competence among college students, Stellefson et al., (2011)

reported similar findings. Even though participants had access to Internet sources, their e-Health literacy was deficient (Stellefson et al., 2011). In the current study, participants' inability to competently interpret data stemmed from concerns about reliability of data, conclusions by online sources that proved discordant with their clinical situation, and concerns about the credibility of sources, particularly information on social media. These challenges further created a domino effect that influenced deficient acumen and the ability to correctly apply skills and tools when using health information and services.

Adolescence and emerging adulthood are life periods characterized by continual physiological and psychological change that can be profoundly influence future health (Colver & Longwell, 2013; Sawyer et al., 2012). At this stage of development, it is not surprising that challenges with interpreting health information would be present since emerging adults are lacking mature cognitive functions (Colver & Longwell, 2013) and remain somewhat dependent on parental support. In their review of eHealth literacy among college students, Stellefson et al., (2011) noted that even though there was easy access to and comfort with using the Internet students lacked the necessary skillset to find and correctly interpret health information. A similar problem with interpreting Internet information was noted in adult populations with low health literacy, a challenge that breeds distrust of Internet retrieved information (Diviani, van den Putte, Giani, and van Weert, 2015; Manganello et al., 2017; Metzger et al., 2015; Subramaniam et al., 2015). In adult all-comers with HIV, Kalichman, Pellowski, and Chen (2013) reported that individuals with low health literacy who requested help with reading, interpreting, and understanding medical information had challenges with compliance. Also, in a review of

online health service use by individuals with limited health literacy, Kim and Xie (2017) found that barriers to access and use of online health information could result from readability of content and poor usability of eHealth services.

With increasing use of the Internet, researchers have initiated efforts to improve the quality of information retrieved from this source. In an effort to improve the quality of retrieved Internet information in adults, Ghaddar et al., 2012 provided credible online sources (MedLine) and skills training to participants in their study. These researchers noted that this intervention was associated with improvement in health literacy proficiency (Ghaddar et al., 2012). Similar measures could prove beneficial in the minority emerging adult population after additional study. The use of mobile devises providing audio-visual content has been encouraged by Kim and Xie, (2017) as a beneficial option for low literacy individuals to aid understanding of health information and health services. Even though these studies did not link access modalities to the development of HLR for adulthood in EMYAs, helpful information from these studies, could form the basis for further investigation into interventions that could improve HLR in this community sector.

A positive and related finding noted in this study was the personal ownership of devices to access the Internet by all participants. The Pew Research Center noted rising Internet use in all segments of the population between 2000 and 2015 with 96% of young adults using the Internet (Perrin & Duggan, 2015). For minorities, usage among Asians was 97%, among African Americans 78%, and among Hispanics 81% (Perrin & Duggan, 2015). This finding may help to explain changing patterns in Internet access in ethnic

minority communities. Since participants were required to use a telephone or tablet to complete interviews, this finding may be tainted with some selection bias. However, in the past, other researchers have also demonstrated high Internet access rates among majority and ethnic minority adolescents from mid to late adolescence and on into emerging adulthood (Chisolm et al., 2011; Vyas, Landry, Schnider, Rojas, & Wood, 2012). This pattern of use makes online materials for health promotion and health education desirable and this strategy should be highly considered in seeking to improve HLR in ethnic minority adolescents and young adults.

In addition to the Internet, participants in this study also valued parental support and also looked to health care providers, campus health forums, churches, and places of employment as points of access for procuring health care information and health care services; information that contributed to their level of HLR. Participants who worked in the health care industry noted that the social support received in the work environment also contributed to improving their level of HLR. Recent work by Stollon et al., (2015) among sickle cell disease patients found parental and provider dependence to be prominent factors in developing health literacy-related readiness, but this investigation was done from a provider perspective. Also, in a large cross-sectional survey study, comprised primarily of African Americans, which evaluated the association between child and parent health literacy and obesity in children and adolescents, researchers found that the odds of obesity were higher for adolescents with low health literacy(Chari, Warsh, Ketterer, Hossain, & Sharif, 2014), Also the odds of obesity were higher with older parental age and lower with higher parental education (Chari et al., 2014). Health

literacy was measured by Newest Vital Sign and was not statistically significant in adolescent-parent dyad (Chari et al., 2014). Parental health literacy was associated with decreased risk for obesity in children, but parental obesity was associated with increased risk of obesity (Chari et al., 2014). Efforts encouraging continued or improved parental health literacy and education could therefore be beneficial to youth who are still dependent on parental support.

In addition, health care providers should be aware of the health literacy challenges of this community and implement strategies to effectively handle this problem. The work of Huang et al. (2012) revealed a discordance between the perspectives of emerging adults and physicians on HLR for the transition to adulthood with emerging viewing themselves as less ready than physicians assessed. It is therefore important to work on improving this dynamic.

In the current study, participants under 21 years of age more readily admitted to parental dependency than those over 21, a finding that was not unexpected considering their proximity to parental control in health matters. This finding complements current literature but also suggest an age indicator at which disengagement from parental dependency begins in EMYAs. Even though parental dependency is beneficial during adolescence and early adulthood, there comes a time when the young adult must assume independence for health care and for this, HLR is imperative. The issue of parents empowering adolescents and young adults to develop needed HLR to face the challenges of transitioning to adulthood has been promoted by the American Academy of Pediatrics (2011). The empowering of youth by parents to develop HLR for the transition to

adulthood is particularly needed in immigrant populations, and in young adults with chronic diseases (American Academy of Pediatrics, 2011). However, further research is needed to elucidate patterns of empowerment in minority youth and the best time to promote such change. The confirmation of such a pattern could guide interventions for EMYAs at high risk of low health literacy in the study community.

The benefit of extracurricular campus health education programs noted in this study has been previously reported. In a study of Black college students at two southeastern universities by Rosario et al. (2017), it was noted that access to campus health education programs was positively associated with health literacy proficiency. Health education interventions at schools, colleges, and in faith-based community organizations can therefore prove beneficial in improving ethnic minority HLR for adulthood. The provision of social support for EMYAs at various socioecological levels could prove helpful in improving their HLR during the transition to adulthood and should receive further investigation.

Acumen is essential if individuals would develop the necessary HLR for the transition to adulthood. For participants in this study, the development of acumen was compromised by multiple personal and extra-personal factors. Personal factors contributing to this deficiency included time constraints, the pressure of educational and/or job-related pursuits, a view that HLR was still a state more needed in the future and continued parental dependency. Factors influencing the acquisition of knowledge of health care information and services such as lack of need and lack of time have been previously reported by Chisolm et al. (2011). However, as noted by Kim and Xie (2017),

the development and increased availability of mobile apps to EMYAs could hold great potential for boosting their information seeking behavior and health knowledge, thereby leading to improved HLR when transitioning to adulthood.

In this study, extra-personal factors affecting acumen included lack of parental empowerment, deficient or ineffective classroom health education in high school and college, language used by providers or other agents providing health care information, especially online media, and government health care policy, particularly as it related to Patient Protection and Affordable Care Act (Obamacare). Concerns raised about the benefits of traditional school curricula are not new and efforts to institute changes have been initiated (Hubbard & Rainey, 2007), however, with no required standard test to formally evaluate HLR on completing high school or college it is difficult to evaluate how well recommended standards are working for ethnic minority emerging adults. Recent data from CDC (2016), indicate a trend toward less school districts providing instruction in specific, recommended health topics except for suicide and violence prevention. This appears consistent with the complaints of EMYAs in this study who complain that classroom health education was inadequate for building HLR for the transition to adulthood.

The adequacy of health education in adolescents and emerging adults has been a controversial issue for some time. In a study of Canadian adolescents, Higgins et al. (2009) raised the issue of the benefits traditional school curricula provide in developing HLR in mid to late adolescence, a group that saw this process as failing them in high school as a result of its relevance. In their study, findings similar to those in the current

study were noted; participants reported greater benefits to acumen from extracurricular health programming than class information (Higgins et al., 2009). Also, a similar finding was supported by Rosario et al. (2017) who evaluated the impact of the sociocultural environment on Black college student's health literacy and finding that extracurricular learning programs were more beneficial. This result implies that current classroom focus on health education for adolescents and emerging adults is not working optimally, especially for EMYAs, and the practice needs readjustment to help realize HLR on transitioning to adulthood (Subramaniam et al., 2015). In the adult Hispanic community, Soto Mas et al. (2015) demonstrated that using the Health Literacy and ESL (English as a second language) curriculum in a community-based setting could help improve health literacy in a Hispanic community. Classroom and extracurricular education modalities must be utilized to foster HLR for the transition to adulthood.

In the current study, participants concurred that acumen is needed to communicate with doctors, understand documents, and to understand health insurance benefits so that fiscally responsible decisions could be made. Participants had little knowledge on how insurance works; cost of plans or out of pocket financial outlays. This finding on insurance literacy is similar to that of Wong et al. (2015) who noted that among highly educated young adults (not exclusively minorities) shopping for health insurance on HealthCare.gov, the young adults with low insurance literacy had greater challenges. Other studies, not limited to EMYAs also confirm that low health literacy in adults adversely affect insurance coverage, provider visits, patient-communication, and the understanding of documents (Edward et al., 2018; Ferris et al., 2015; Waldrop-Valverde,

et al., 2010; Wångdahl et al., 2015). Health care providers and document writers should therefore consider their audience when communicating health information and institute mechanisms to render appropriate support to individuals with low health literacy.

Application, the ability to correctly apply acquired skills and tools to competently use health care information and services, proved to be a challenge for participants and contributed to the perception that their level of health literacy-related readiness for adulthood was inadequate. The ability to process information about health care and health care services and make appropriate decisions for individual and community health care can be quite complex and individuals with low health literacy can find it difficult to executing related task (NIHCM, 2011; Schnall et al. 2015). In the current study, challenges with making appointments, completing office and hospital health-related forms, and using insurance information led to persistent parental dependency for some EMYAs. Responses like "I have relied on my parents and guardians to help me understand the different processes for receiving health care" and "My parents taught me a lot" reflected participants' perspective. Similar findings were noted in high risk minority young adults by Schnall et al. (2015) who showed that this population had difficulty performing the rapid HIV self-test appropriately. These participants were noted to have adequate health literacy when tested using the Short Test of Functional Health Literacy in Adults (S-TOFHLA), but still had difficulty using the test correctly (Schnall et al., 2015). Application challenges were also reported in early adolescence in individuals from disadvantaged socioeconomic backgrounds and Subramaniam et al., (2015) initiated HackHealth, a program designed to develop more health literate youth through the use of

appropriate skills and tools. The development of the Self-Management and Transitional Readiness Assessment questionnaire, designed to gain a better understanding of self-management and health care transition skills in adolescents and young adults (Ferris et al., 2015) was another effort to aid the application process. This document focuses on issues like medication management, provider communication, engagement during appointments, disease knowledge, adult health responsibilities, and resource utilization, competencies which are helpful in application process (Ferris et al., 2015). Making such resources available to ethnic minority adolescents and young adults early in the transition to adulthood could prove beneficial in improving their HLR for adulthood.

In the current study, EMYAs did not only associate HLR with individual factors, they also saw extra-individual factors as contributing to HLR for the transition to adulthood. Past research has also noted the contribution of extra-individual factors and hypotheses based on the socioecological model have been proposed to explain the development of health literacy proficiency (Broeder et al., 2017; Higgins et al., 2009; Sorensen et al., 2011). A recent study of urban African American college students in the South-eastern United States showed that ecological factors were responsible for 28.7% of the variance in health literacy (Rosario et al., 2017). This finding implies that, as noted by Gupta et al., (2013) in their study of minority adolescents with asthma in an urban community, individual and societal forces must cooperate to effect improved HLR for adulthood and health outcomes in EMYAs. Also, in evaluating a group of racially/ethnically diverse adult smokers (51% Non-Latino White, 44.5% Black) with low socioeconomic status, Stewart, et al. (2014) showed that low health literate participants

were three times more likely to relapse. The association between socioeconomic status, health literacy and the increase risk of relapse, a factor that aggravates and influences the development of smoking-related diseases like heart disease, implies that the mitigation of upstream factors like income equality, poverty, and inadequate education can play a key role in improving disease outcomes (Stewart, et al., 2014). HLR can best be developed when personal and extra-personal factors are employed in a collaborative relationship.

In this study, the socioecological underpinnings of HLR for the transition to adulthood were reinforced. The socioecological approach seeks to integrate personal and environmental elements into a whole to better understand relationships among the various complex factors that influence HLR for adulthood in EMYAs. Study participants related that acquisition of needed health care information and services, not only involved personal efforts, but also input from parents, organizations (schools, churches), community activities (health fairs, health education forums), and public policy (Patient Protection and Affordable Care Act, Medicaid). These agents and agencies can be utilized to help improve the level of health literacy-related readiness needed in EMYAs to effect appropriate health care decisions during the transition to adulthood and beyond.

The HBM theorizes that perceived severity of and perceived susceptibility to a negative health outcome accompanied by perceived benefits of taking action, and perceived barriers to taking action on a health behavior, along with cues to action can predict adoption of beneficial health behaviors (Asare et al., 2013; Karimy, & Zareban, 2018) In the current study, constructs of the HBM became evident. Despite acknowledging the benefits of HLR, participants were faced with other issues (barriers)

that impeded the development of appropriate HLR for the transition to adulthood. This behavior supported constructs from the HBM, which hypothesizes that when perceived benefits of action on a health behavior are outweighed by perceived barriers to action, then the health behavior is not likely to be implemented. In addition, even though participants reportedly perceived the severity of having low health literacy and the susceptibility it presented to developing unwanted health consequences, developing adequate HLR for adulthood proved problematic, even in those participants with chronic health issues. Cues to action: personal illness, the development of disease or death in family or friends, were factors that stimulated participants to seek greater HLR, but participants still reported not achieving adequate HLR. These discordant findings highlight the fact that other environmental parameters are having an effect on the development of HLR in EMYAs.

The goal of improving acumen, optimizing access, and perfecting application for the development of HLR in EMYAs is to realize self-efficacy, a state in which the individual is confident in her or his innate ability to attain set behavioral goals. The attaining of self-efficacy, another construct of the HBM, is a prerequisite for developing and sustaining the HLR needed for adulthood (Asare et al., 2013). Conceptually, in the development of health literacy, the cohesive working of acumen, access, and application as it relates to health care information and services, leads to the development of HLR, a state that is crucial in cultivating self-efficacy (Ghaddar et al., 2012). Also, self-efficacy can help nurture HLR, potentially sustaining a health literate state lifelong. However, participants in the current study did not express a sense of competence or confidence in

the development of this reciprocal relationship between HLR and self-efficacy, a competency needed to prepare them for the transition to adulthood. This deficiency could further impair the ability of EMYAs to cope with health care challenges during the transition to adulthood and onward.

Practically, there is a need to monitor EMYAs to ensure that a state of HLR is reached and that self-efficacy is being developed as the transition to adulthood proceeds. Because of the significant health care disparity noted in these communities (Healthy People, 2015; NIHCM, 2011), monitoring should be considered, especially for individuals with chronic diseases who have the potential for experiencing health care complications. Incorporating WHO standards outlined by Nair et al. (2015) for improving adolescent health could prove beneficial in this community.

Limitations of the Study

There are several limitations to this study. This qualitative case study is limited to the population studied. The selected sample size was small, and participants may not be representative of other ethnic communities or the general population, hence findings cannot be generalized and are not transferrable to other populations. Another limitation is that self-reported health literacy readiness for the transition to adulthood is subjective, may vary from individual to individuals and ethnic groups, and is subject to various forms of reporting bias. In the effort to mitigate this limitation and that of sample size, I generated in-depth, rich, descriptive data by conducting tactful, virtual, telephonic interviews and I performed member checking. This helped to limit biased answers, tempering the impact of the limitation incurred by self-reporting. In addition, only

inferences from the study can be examined; conclusions regarding causation cannot be drawn. Since the purpose of this study was not to generate theory or generalize, but to explore participants perspectives on the issue of HLR for adulthood, these limitations are acceptable. Other limitations include selection bias and researcher interpretation bias. To counter the latter, I have declared information about myself and provided rich information quotes from participants. A small incentive of $10.00 was given to participants to temper selection bias.

Recommendations

The findings from this study provided helpful insights into influential factors that foster the state of HLR for the transition to adulthood among EMYAs and opens areas for future research. One important area for future research is the development of acumen in EMYAs. This sector of the community needs to develop the health knowledge needed to make insightful decisions about personal and community health care. The development of evidence-based interventions and policies targeting the improvement of acumen in EMYAs is desperately needed in this community.

An area for further research supported by this study is the need to create initiatives that make high school and college health education more relevant and meaningful to minority adolescents and emerging adults for the development of HLR. Since this study population indicated a dependence on Internet based information, the development of Internet-based education programs in conjunction with educational institutions could help to improve acumen and health literacy readiness in this population

is needed. Such research should also focus on ethnic minorities in early adolescence so that readiness can be attained by young adulthood.

The challenge for ethnic minority youth in interpreting online information noted during this study is a not new, but it is one that still needs further investigation. It highlights poor acumen in this population and compromises access to health information and heath care services and the application of skills and tools for improving health literacy readiness. Factors influencing this process, especially in immigrant minority communities, need further elucidation so that appropriate strategies to combat the issue of low health literacy-related readiness in EMYAs can be successfully implemented.

Based on the results of this study, further research aimed at developing in-school or extracurricular programming for EMYAs at risk of low health literacy should also be pursued. A quantitative measure to assess HLR for adulthood in this segment of the population is also needed. As noted by Schwartz et al., (2011) and Stinson et al. (2014) the development of criteria to determine young adult readiness for the transition to adulthood would be helpful, especially in ethnic minority populations. Ethnic minority young adults are an at-risk population for low health literacy and could benefit from health literacy screening at some point during the transition to adulthood. However, it should be remembered that HLR for adulthood is a dynamic process and cannot be evaluated by a single static test, it also requires a health literate individual and a supportive community to sustain this state and promote better health outcomes.

Also, efforts should be directed towards improving the use of skills and tools to ensure competency in application of health information and in using health services on

entering adulthood. The development of some equivalent to the LifeLab (Woods-Townsend et al., 2015) is needed in ethnic minority communities. Finally, even though participants in this study had little problem with accessing information, a challenge arose with interpretation of data. Addressing this issue is also important and further research is needed in this area to find ways that facilitate improvement in the interpreting of health information by EMYAs transitioning to adulthood.

The results of this study also revealed important suggestions for practice. One finding of this study was the persistent dependence on parents by EMYAs during early adulthood, a factor that has significant implications for practice. Since parental education level and health literacy are factors that can influence health literacy in children (Chari et al., 2014; Karimy & Zareban, 2018) it is important that these qualities are encouraged in parents. Parents, especially in immigrant populations, should be taught to empower youth to become health literate as prolonging dependency could become counter-productive, especially if parents have low health literacy proficiency. In practice, providers can encourage parental support for the process of generating HLR for the transition to adulthood in high school and on into the college years, but some practical assessment to ensure quality HLR should be conducted. Also, finding ways to appropriately reduce parental dependency during adolescence and on into young adulthood should be addressed. The development of such initiatives could enhance practice and HLR for the transition to adulthood in EMYAs.

The admission of deficient acumen, access challenges, and an inability to correctly apply skills and tools needed for HLR by participants should challenge

clinicians and health educators to develop an increased awareness of this problem in EMYAs and institute measures to cope with the problem. Consequently, efforts must be made by educators, parents, and providers to empower adolescents, before they reach emerging adulthood, to adequately develop the skills and master the tools needed to ensure optimal HLR health literacy readiness for the transition to adulthood.

Study results also provided insight into how programs aimed at improving health literacy readiness in minority young adults can be initiated. This population utilizes the Internet, parents, particularly mothers, health care providers, educational organizations, and/or churches for obtaining health information. Consequently, increased awareness of health literacy issues could be best accomplished by developing promotions that use these channels. Media resources can be an important tool in the hands of educators to promote improved HLR in this media-driven sector of the community. However, parental and provider reinforcement may be needed to confirm that information derived from media sources is correctly interpreted. One prominent area under continued development is computer software applications that improve health literacy. These applications can be tailored to ethnic minority adolescents and emerging adults and should be culturally sensitive, inexpensive, and accessible. The recommendation by Giuse et al. (2012) to educate patients based on their health literacy level and learning style preference should be incorporated when developing such applications. The adoption of these suggestions can potentially enhance practice. Further research into the needs of EMYAs will be needed to foster knowledge development applications and these should be fast-tracked for use in educational facilities serving this community. The commonality of issues

related to application health information and skills among the multiple ethnic groups in this study suggest an inherent socioecological issue that needs further elucidation.

I was surprised at, and discouraged by, the low level of interest exhibited by EMYAs in this subject and their unwillingness to participate in the study, a factor that prolonged the estimated period for data collection. I am African American, a member of the immigrant ethnic minority population of the county being studied, and I have personally experienced health complications from limited health literacy and I have seen similar results in the community. These experiences could affect my judgment and influence my opinion on the issue of HLR for the transition to adulthood in EMYAs in the community being studied. However, exposing ethnic minority youth to clinical and social science research should become a priority. In so doing, needed information can be obtained and valid and reliable conclusions reached to improve HLR and the quality of health care in these communities at higher risk for poor health outcomes. The area of emerging adult HLR for adulthood is still young and further research is needed to validate the findings of this study in other settings and to derive best practices for implementing interventions that facilitate the improvement of ethnic minority HLR for adulthood.

Implications

The findings of this study adds to current knowledge of EMYAs' perspectives on health literacy-related readiness for adulthood, presents powerful implications for improving HLR in this population, and highlights socioecological factors requiring improvements to build more health literate EMYA communities. Public health efforts

must focus on the development of personal HLR in EMYAs, improving the quality parental support, particularly in immigrant communities, for transitioning EMYAs, improved health literacy awareness and promotion in schools, churches, and at provider visits, and the formulation of policy that facilitates culturally sensitive interventions and learning opportunities related to health care information and services for EMYAs. These areas must be recurrently addressed, monitored, and evaluated in EMYAs to enhance and ensure the development of HLR and self-efficacy during the transition to adulthood. In doing so, advances in health information and health services can be continually addressed, facilitating community transformation and better health outcomes.

Positive Social Change

Positive social change in the culture represents the ability to modify environments by effecting beneficial evolutionary changes in communities through evidence-based research or the implementation of meaningful and sustained interventions. In this study I explored the perspectives of EMYAs on HLR for the transition to adulthood. Information derived from this study can positively impact the current and long-term health of the community studied. The increasing prevalence of chronic diseases in adolescents and young adults, the persistence of infectious diseases, and the continued adoption of unhealthy lifestyles during adolescence and early adulthood, especially in minority communities, has contributed to the call for further emphasis and action on adolescent and emerging adult health literacy (health.gov., 2015; Patton et al., 2016; Sawyer et al., 2012). With improved HLR for the transition to adulthood in EMYAs, it is expected that personal and community health outcomes would improve.

In this study participants identified several personal and extra-personal benefits that could be derived from improved HLR for the transition to adulthood in EMYAs. These included enhance the quality of health by fostering healthier lifestyles, improved patient-provider communication, better understanding of insurance benefits, better understanding of health care policies, and by improving the ability to cope with the health care bureaucracy. Participants also saw benefits in helping others, especially progeny, to build healthier generations. Consequently, implementing strategies to improve HLR in EMYAs can have positive social change in this community by improving health knowledge and in reducing the health care burden on the U.S. economy.

The study findings can also lead to improvements in parental support and in the development of enhanced engagement strategies for health educators and educational institutions in tackling the problem of deficient HLR in EMYAs. For example, EMYAs incur the highest rates of STD/HIV and homicides in the United States. Reducing this pattern would reflect positive social change in the community that leads to healthier EMYAs, reduced health care cost, improved health outcomes, and reduction or elimination of a key social determinant of health and health disparity; health literacy. Reduced health care cost would be particularly beneficial to individuals, the county, and state. Also, for minority communities, further benefit could be derived from increased productivity and disposable income. Such social change is able to positively transform a community.

Conclusion

HLR for adulthood is an important ingredient in the recipe for improved health care and health outcomes in EMYAs and greater effort should be focused on improving deficient HLR in this population. This study targeted younger EMYAs transitioning to adulthood in a southern U. S. county and found that 92% of participants viewed their HLR for adulthood as deficient. To the best of my knowledge, this is the first study of its kind to target this community. In addition, participants provided insights into factors influencing this lack of health literacy-related readiness for adulthood. These factors included circumstances related to deficient acumen, challenges with access, and the inability to correctly apply the skills and tools needed to utilize health care services and health care information. The information derived from this study adds to existing literature, provides building blocks for further research, and sharpens the focus on various areas that need to be addressed when developing interventions to improve this problem.

The procurement of HLR allows EMYAs to acquire needed health care knowledge, develop and procure access to health care information and services, and competently apply the skills and tools needed to engage the ever-changing health care challenges of adulthood. Since behaviors that alter adult health trajectories are usually formed during adolescence and young adulthood, positively influencing this phase of development can have major influence on individual and community health outcomes. Health literacy-related readiness should not be viewed as a static, measurable state of health knowledge, but rather, a dynamic state in which health knowledge is constantly improved to appropriately cope with and satisfy the evolving health care needs of the

individual. As proposed by the National Action Plan to Improve Health Literacy (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010), developing a state of HLR in young adults should be incorporated in their education at home, during high school and college, at provider visits, and through community organizations and public policy. HLR should continue into young adulthood and on into adulthood to maintain preparedness for engaging the complex health care encounters life presents. This dynamic is especially relevant to adolescents and emerging adults with chronic illnesses. A multi-faceted, theory-driven approach with rigorous evaluation of interventions that target appropriate socio-ecological levels influencing the process (Burrus, 2018; Higgins, Karimy & Zareban, 2018; Sørensen et al., 2012) is required to address the development of health literacy-related readiness in EMYAs before and during the transition to adulthood. The deficient state of HLR in EMYAs should be aggressively addressed and corrected, to ensure reduction in health inequalities, reduction in health care costs, and to secure improvements in health outcomes for this population. The accomplishment of this goal could lead to positive social change that impacts minority communities for generations. Larger studies building on the core findings of this study will prove critical in confirming findings and in developing continued focus on enhancing HLR for the transition to adulthood in EMYAs.

References

Abel, T., Hofmann, K., Ackermann, S., Bucher, S., & Sakarya, S. (2014). Health literacy among young adults: A short survey tool for public health and health promotion research. *Health Promotion International, 30*(3), 725-735. doi:10.1093/heapro/dat096

Agaku, I. T., King, B. A., Husten, C. G., Bunnell, R., Ambrose, B. K.,' Hu, S. S, … & Day, H. R. (2014). Tobacco product use among adults — United States, 2012–2013. *MMWR, 63*(25), 542-547. Retrieved from https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6325a3.htm

Albright, A. E. & Allen, R. S. (2018). HPV misconceptions among college students: The role of health literacy. *Journal of Community Health*. Advance online publication. doi:10.1007/s10900-018-0539-4

Aldiss, S., Ellis, J., Cass, H., Pettigrew, T., Rose, L., & Gibson, F. (2015). Transition from child to adult care – 'It's not a one-off event': Development of benchmarks to improve the experience. *Journal of Pediatric Nursing, 30*(5), 638–647. doi:10.1016/j.pedn.2015.05.020}

American Psychological Association. (2016). Ethical Principles of Psychologists and Code of Conduct. Retrieved from http://www.apa.org/ethics/code/index.aspx

American Public Health Association. (2010). Health literacy: Confronting a national public health problem. Retrieved from http://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/09/08/00/health-literacy-confronting-a-national-public-health-

problem

Anderson, S., & Mezuk, B. (2015). Positive youth development and participation in an urban debate league: Results from Chicago public schools, 1997-2007. *Journal of Negro Education*, *84*(3), 362-378. doi:10.1016/ j.adolescence.2012.04.005

Anonymous. (2015a). Adolescent health: Boys matter too [Editorial]. *The Lancet*, *386*(10010), 2227. doi:10.1016/S0140-6736(15)01160-5

Anonymous. (2015b). Adolescents with diabetes [Editorial]. *The Lancet, 385*(9982), 2016. doi:10.1016/S0140-6736(15)60975-8

Asare, M., Sharma, M., Bernard, A. L., Rojas-Guyler, L., & Wang, L. L. (2013). Using the health belief model to determine safer sexual behavior among African immigrants. *Journal of Health Care for the Poor and Underserved, 24*(1), 120–34. doi:10.1353/hpu.2013.0020

Ashcraft, P. F. (2013). African american adolescent males living with obesity. *Public Health Nursing*, *30*(1), 29-36. doi:10.1111/j.1525-1446.2012.01044.x

Ashdown, H., Jalloh, C., & Wylie, J. L. (2015). Youth perspectives on sexual health workshops: Informing future practice. *Qualitative Health Research, 25*(11), 1540–1550. doi:10.1177%2F1049732315570125

Aud, S., KewalRamani, A., & Frohlich, L. (2011). *America's Youth: Transitions to Adulthood (NCES 2012-026).* U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing.

Austin, Z., & Sutton, J. (2014). Qualitative Research: Getting Started. *The Canadian Journal of Hospital Pharmacy, 67*(6), 436–440. doi:10.4212/cjhp.v67i6.1406

Babler, E. & Strickland, C, J. (2015). Moving the Journey Towards Independence: Adolescents Transitioning to Successful Diabetes Self-Management. *Journal of Pediatric Nursing*, *30*(5), 648–660. doi:10.1016/j.pedn.2015.06.005

Bailey, S. C., McCormack, L. A., & Paasche-Orlow, M. A. (2015). Current Perspectives in Health Literacy Research, *Journal of Health Communication, 20*(S2), 1-3. doi:10.1080/10810730.2015.1083637

Batista Ferrer, H., Trotter, C. L., Hickman, M., & Audrey, S. (2015). Barriers and facilitators to uptake of the school-based HPV vaccination programme in an ethnically diverse group of young women. *Journal of Public Healt*h, *38*(3), 569-577. doi:10.1093/pubmed/fdv073

Benes, S. & Alperin, H. (2016). *The Essentials of Teaching Health Education: Curriculum, Instruction, and Assessment*. Champaign, IL: Human Kinetics.

Bergin, M. (2011). NVivo 8 and consistency in data analysis: reflecting on the use of a qualitative data analysis program. *Nurse Researcher*, *18*(3), 6-12. doi:10.7748/nr2011.04.18.3.6.c8457

Bergsma, L. (2011). Media Literacy and Health Promotion for Adolescents. *Journal of Media Literacy Education, 3*(1), 25-28. Retrieved from https://digitalcommons.uri.edu/jmle/vol3/iss1/10/

Berkman, N. D., Sheridan, S. L., Donahue, K. E., Halpern, D. J., & Crotty, K. (2011). Low Health Literacy and Health Outcomes: An Updated Systematic Review. *Annals of Internal Medicine, 155*(2), 97–107. doi:10.1059/0003-4819-155-2-201107190-00005

Bloom, B., Jones, L. I., & Freeman, G., Division of Interview Statistics. (2013). Summary health statistics for U.S. children: National Health Interview Survey, 2012. National Center for Health Statistics. *Vital and Health Statistics*, *10*(258), 1-73. Retrieved from https://www.cdc.gov/nchs/data/series/sr_10/sr10_258.pdf

Borges, K., Sibbald, C., Hussain-Shamsy, N., Vasilevska-Ristovska, J., Banh, T., Patel, V., & ... Parekh, R. r. (2017). Parental Health Literacy and Outcomes of Childhood Nephrotic Syndrome. *Pediatrics, 139*(3), 1-8. doi:10.1542/peds.2016-1961

Bowen, M. E., Henske, J. A., & Potter, A., (2010). Health care transition in adolescents and young adults with diabetes. *Clinical Diabetes, 28*(3), 99-106. Doi:10.2337/diaclin.28.3.99

Bradbury-Jones, C., Taylor, J., & Herber, O. (2014). How theory is used and articulated in qualitative research: Development of a new typology, *Social Science & Medicine, 120*, 135-141. Doi:10.1016/j.socscimed.2014.09.014

Bradley, B. J. & Greene, A. C. (2013). Do Health and Education Agencies in the United States Share Responsibility for Academic Achievement and Health? A Review of 25 Years of Evidence About the Relationship of Adolescents' Academic Achievement and Health Behaviors. *Journal of Adolescent Health*, *52*(5), 523–532. doi:10.1016/j.jadohealth.2013.01.008

Braveman, P. A., Cubbin, C., Egerter, S., Williams, D. R., & Pamuk, E. (2010). Socioeconomic Disparities in Health in the United States: What the Patterns Tell Us. *American Journal of Public Health*, *100*(Suppl 1), S186–S196.

doi:10.2105/AJPH.2009.166082

Braveman, P. A., Kumanyika, S., Fielding, J., LaVeist, T., Borrell, L. N., Manderscheid, R., & Troutman, A. (2011). Health Disparities and Health Equity: The Issue Is Justice. *American Journal of Public Health*, *101*(S1), S149-S155. doi:10.2105/AJPH.2010.300062

Broeder, J., Okan, O., Bauer, U., Bruland, D., Schlupp, S., Bollweg, T. M., & ... Kessl, F. (2017). Health literacy in childhood and youth: a systematic review of definitions and models. *BMC Public Health, 17*(361), 1-25. doi:10.1186/s12889-017-4267-y

Burke, L. A & Miller, M. K. (2001). Phone Interviewing as a Means of Data Collection: Lessons Learned and Practical Recommendations. *Forum: Qualitative Social Research,* 2(2). Art. 7. doi:10.17169/fqs-2.2.959

Burrus, B. B., Krieger, K., Rutledge, R., Rabre, A., Axelson, S., Miller, A., … Jackson, C. (2018). Building Bridges to a Brighter Tomorrow: A Systematic Evidence Review of Interventions That Prepare Adolescents for Adulthood. *American Journal of Public Health, 108*(S1), S25–S31. doi:10.2105/AJPH.2017.304175

Byrne, D. (2013). Evaluating complex social interventions in a complex world. *Evaluation*, *19*(3), 217–228. doi:10.1177/1356389013495617

Centers for Disease Control and Prevention. (2017a). Adolescent Health. Retrieved from http://www.cdc.gov/nchs/fastats/adolescent-health.htm

CDC, (2017b). STDs in Adolescents and Young Adults. Retrieved from http://www.cdc.gov/std/stats14/adol.htm

CDC. (2014). Definitions: Racial and Ethnic Minority Populations. Retrieved from

http://www.cdc.gov/minorityhealth/populations/REMP/definitions.html

CDC. (2017c). STD's in Racial and Ethnic Minorities. Retrieved from http://www.cdc.gov/std/stats12/minorities.htm#foot15

CDC. (2016). Results from the School Health Policies and Practices Study. Retrieved from https://www.cdc.gov/healthyyouth/data/shpps/pdf/shpps-results_2016.pdf

Castro-Sánchez, E., Chang, P. W. S., Vila-Candel, R., Escobedo, A. A., & Holmes, A. H. (2016). Health literacy and infectious diseases: why does it matter? *International Journal of Infectious Diseases*. *43*(Iss C), 103-110. doi:10.1016/j.ijid.2015.12.019

Catalano, R. F., Fagan, A. A., Gavin, L. E., Greenberg, M. T., Irwin, C. E., Ross, D. A., & Shek, D. T. L. (2012). Worldwide application of prevention science in adolescent health. *Lancet*, *379*(9826), 1653–1664. doi:10.1016/S0140-6736(12)60238-4

Chambers, R. A., Rosenstock, S., Neault, N., Kenney, A., Richards, J., Begay, K., & … Barlow, A. (2015). A Home-Visiting Diabetes Prevention and Management Program for American Indian Youth: The Together on Diabetes Trial. *The Diabetes Educator. 41*(6), 729-747. doi:10.1177/0145721715608953.

Champion, J. D., Harlin, B., & Collins, J. L. (2013). Sexual risk behavior and STI health literacy among ethnic minority adolescent women. *Applied Nursing Research*, *26*(4), 204–209. doi:10.1016/j.apnr.2013.06.003

Chari, R., Warsh, J., Ketterer, T., Hossain, J., & Sharif, I. (2014). Health Literacy: Association between health literacy and child and adolescent obesity. *Patient Education and Counseling, 94*(1), 61-66. doi:10.1016/j.pec.2013.09.006

Chenail, R. J. (2011). Interviewing the investigator: Strategies for addressing instrumentation and researcher bias concerns in qualitative research. *The Qualitative Report, 16*(1), 255-262. Retrieved from http://nsuworks.nova.edu/tqr/vol16/iss1/16

Chisolm, D. J., Sarkar, M., Kelleher, K. J., & Sanders, L. M. (2015). Predictors of Health Literacy and Numeracy Concordance Among Adolescents with Special Health Care Needs and Their Parents. *Journal of Health Communication*, *20*(S2), 43-49. doi:10.1080/10810730.2015.1058443

Ciampa, P. J., White, R. O., Perrin, E. M., Yin, H. S., Sanders, L. M., Gayle, E. A., & Rothman, R. L. (2013). The association of acculturation and health literacy, numeracy and health-related skills in Spanish-speaking caregivers of young children. *Journal of Immigrant and Minority Health, 15*(3), 492-8. doi:10.1007/s10903-012-9613-7

Cohen S.E., Hooper S.R., Javalkar K., Haberman C., Fenton N., Lai H…, Mahan J.D., Ferris M. (2015). Self-Management and Transition Readiness Assessment: Concurrent, Predictive and Discriminant Validation of the STARx Questionnaire. *Journal of Pediatric Nursing*, *30*(5), 668-676. doi:10.1016/j.pedn.2015.05.006

Colver, A., & Longwell, S. (2013). New understanding of adolescent brain development; relevance to transitional healthcare for young people with long term conditions. *Archives of Disease in Childhood*, *98*(11), 902–907. doi:10.1136/archdischild-2013-303945

Cooley, W. C. & Sagerman, P. J. (2011). Supporting the Health Care Transition from

Adolescence to Adulthood in the Medical Home. *Pediatrics*, *128*(1), 182 -200. doi:10.1542/peds.2011-0969.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches (3rd ed.).* Thousand Oaks, CA: Sage Publications, Inc.

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.).* Thousand Oaks, CA: Sage Publications.

Currie, C., Zanotti, C., Morgan, A., Currie, D., De Looze, M., Roberts, C., … & Barnekow, V. (2012). *Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/10 survey*. Copenhagen, Denmark: World Health Organization Regional Office for Europe. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0003/163857/Social-determinants-of-health-and-well-being-among-young-people.pdf

Dankwa-Mullan, I., Rhee, K. B., Williams, K., Sanchez, I., Sy, F. S., Stinson, N., & Ruffin, J. (2010). The Science of Eliminating Health Disparities: Summary and Analysis of the NIH Summit Recommendations. *American Journal of Public Health*, *100*(Suppl 1), S12–S18. doi:10.2105/AJPH.2010.191619

Davis, T. L., Boyce, L. S. Rose, E., Swatzendruber, A. DiClemente, R., Gelaude, D., & Carry, M. (2015). Lessons Learned from Delivering Imara, an HIV/STI Risk Reduction Intervention for African American Girls in Juvenile Detention. *Health Promotion Practice*, *17*(1), 31-39. doi:10.1177/1524839915606395.

Deering, P. D., Martin, K. L., Buelow, S. M., Hoffman, J. T., Cameli, S., Martin, M., …

& O'Neill, T. B. (2016). Preparing young adolescents for a bright future—right now! *Middle School Journal*, *47*(1), 19-26. doi:10.1080/00940771.2016.1059726

Dharmapuri, S., Best, D., Kind, T., Silber, T. J., Simpson, P., & D'Angelo, L. (2016). Health Literacy and Medication Adherence in Adolescents. *The Journal of Pediatrics*, 166(2), 378 – 382. doi:10.1016/j.jpeds.2014.10.002

Diamond, C., Saintonge, S., August, P., & Azrack, A. (2011). The development of building wellness™, a youth health literacy program. *Journal of Health Communication, 16*(S3), 103-18. doi:10.1080/10810730.2011.604385.

DiCicco-Bloom, B., & Crabtree, B. (2006). The qualitative research interview. *Medical Education*, *40*(4), 314 – 321. doi:10.1111/j.1365-2929.2006.02418.x

Diviani, N., van den Putte, B., Giani, S., & van Weert, J. C. (2015). Low Health Literacy and Evaluation of Online Health Information: A Systematic Review of the Literature. *Journal of Medical Internet Research, 17*(5), e112. doi.10.2196/jmir.4018

Dominick, G. M., Dunsiger, S. I., Pekmezi, D. W., Marcus, B. H. (2013). Health Literacy Predicts Change in Physical Activity Self-Efficacy Among Sedentary Latinas. *Journal of Immigrant and Minority Health*, *15*(3), 533-539. doi:10.1007/s10903-012-9666-7

Due, P., Krølner, R., Rasmussen, M., Andersen, A., Damsgaard, M. T., Graham, H., & Holstein, B. E. (2011). Pathways and mechanisms in adolescence contribute to adult health inequalities. *Scandinavian Journal of Public Health*, *39*(S6), 62–78. doi:10.1177/1403494810395989.

Eaton, C. K., Davis, M. F., Gutierrez-Colina, A. M., LaMotte, J., Blount, R. L., & Suveg, C. (2017). Different Demands, Same Goal: Promoting Transition Readiness in Adolescents and Young Adults With and Without Medical Conditions. *Journal Of Adolescent Health, 60*, 727-733. doi:10.1016/j.jadohealth.2017.01.002

Edward, J., Williams, M. V., Morris, S., Mataoui, F., Granberry, P., & Torres, I. (2018). The impact of health and health insurance literacy on access to care for Hispanic/Latino communities. *Public Health Nursing, 35*(3), 176-183. doi:10.1111/phn.12385

Elgar, F. J., Pförtner, T.-K., Moor, I., De Clercq, B., Stevens, G. W. J. M., & Currie, C. (2015). Socioeconomic inequalities in adolescent health 2002–2010: a time-series analysis of 34 countries participating in the Health Behaviour in School-aged Children study. *The Lancet*, *385*(9982), 2088–2095. doi:10.1016/S0140-6736(14)61460-4

Evans, K., Lewis, M., & Hudson, S. (2012). The Role of Health Literacy on African American and Hispanic/Latino Perspectives on Cancer Clinical Trials. *Journal of Cancer Education*, *27*(2), 299-305. doi:10.1007/s13187-011-0300-5

Everitt, I, K., Gerardin, J. F., Rodriquez III, F. H., & Book, W. M. (2017). Improving the quality of transition and transfer of care in young adults with congenital heart disease. *Congenital Heart Disease, 12*, 242-250. doi:10.1111/chd.12463

Ferguson, B., Lowman, S. G., & DeWalt, D. A. (2011). Assessing literacy in clinical and community settings: the patient perspective. *Journal of Health Communication*, *16*(2), 124-134. doi:10.1080/10810730.2010.535113

Ferrer, H. B., Trotter, C. L., Hickman, M., & Audrey, S. (2015). Barriers and facilitators to uptake of the school-based HPV vaccination programme in an ethnically diverse group of young women. *Journal of Public Health*, *38*(3), 569-577. doi.10.1093/pubmed/fdv073

French, D., Haun, J. N., Patel, N. R., Campbell, R. R., Lapcevic, W. A., French, D. D., & Bradham, D. D. (2015). Association between health literacy and medical care costs in an integrated healthcare system: a regional population based study. *BMC Health Services Research, 15*, 249. Doi:10.1186/s12913-015-0887-z

Friis, K., Lasgaard, M., Rowlands, G., Osborne, R. H., & Maindal, H. T. (2016). Health literacy mediates the relationship between educational attainment and health behavior: A Danish population-based study. *Journal of Health Communication, 21*(2), 54-60. doi:10.1080/10810730.2016.1201175

Gakumo, C. A., Enah, C. C., Vance, D. E., Sahinoglu, E., & Raper, J. L. (2015). "Keep it simple": older African Americans' preferences for a health literacy intervention in HIV management. *Patient Preference & Adherence*, *9*, 217-223. doi:10.2147/PPA.S69763

Garvey, K. C., Foster, N. C., Agarwal, S., DiMeglio, L. A., Anderson, B. J., Lyons, S. K., & ... Laffel, L. M. (2017). Health Care Transition Preparation and Experiences in a US National Sample of Young Adults with Type 1 Diabetes. *Diabetes Care*, *40*(3), 317-324. doi:10.2337/dc16-1729

Garvey, K. C., Wolpert, H. A., Laffel, L. M., Rhodes, E. T., Wolfsdorf, J. I., & Finkelstein, J. A. (2013). Health Care Transition in Young Adults with Type 1

Diabetes: Barriers to Timely Establishment of Adult Diabetes Care. *Endocrine Practice, 19*(6), 946-952. doi:10.4158/EP13109.OR

George, S., Duran, N., & Norris, K. (2014). A Systematic Review of Barriers and Facilitators to Minority Research Participation Among African Americans, Latinos, Asian Americans, and Pacific Islanders. *American Journal of Public Health*, *104*(2), e16–e31. doi:10.2105/AJPH.2013.301706

Ghaddar, S. F., Valerio, M. A., Garcia, C. M., & Hansen, L. (2012). Adolescent health literacy: the importance of credible sources for online health information. *Journal of School Health, 82*(1):28-36. doi:10.1111/j.1746-1561.2011.00664.x.

Giuse, N. B., Koonce, T. Y., Storrow, A. B., Kusnoor, S. V., & Ye, F. (2012). Using Health Literacy and Learning Style Preferences to Optimize the Delivery of Health Information. *Journal of Health Communication*, *17*(Sup3), 122-140. doi:10.1080/10810730.2012.712610

Glanz, K., & Bishop, D. B. (2010). The Role of Behavioral Science Theory in Development and Implementation of Public Health Interventions. *Annual Review of Public Health*. *31*, 399-418. doi:10.1146/annurev.publhealth.012809.103604

Goodman, M. S., Gaskin, D. J., Si, X., Stafford, J. D., Lachance, C., & Kaphingst, K. A. (2012). Self-reported segregation experience throughout the life course and its association with adequate health literacy. *Health Place*, *18*(5), 1115-1121. doi: 10.1016/j.healthplace.2012.04.010

Grace-Leitch, L., & Shneyderman, Y. (2016). Using the Health Belief Model to Examine the Link between HPV Knowledge and Self-Efficacy for Preventive Behaviors of

Male Students at a Two-Year College in New York City. *Behavioral Medicine*, *42*(3), 205-210. doi:10.1080/08964289.2015.1121131

Griffey, R., Kennedy, S., McGownan, L., Goodman, M., & Kaphingst, K. (2014). Is low health literacy associated with increased emergency department utilization and recidivism? *Academic Emergency Medicine*, *21*, 1109-1115. doi:10.1111/acem.12476

Guilamo-Ramos, V., Jaccard, J., Dittus, P., Gonzalez, B., Bouris, A., & Banspach, S. (2010). The Linking Lives Health Education Program: A Randomized Clinical Trial of a Parent-Based Tobacco Use Prevention Program for African American and Latino Youths. *American Journal Of Public Health*, *100*(9), 1641-1647. doi:10.2105/AJPH.2009.171637

Guo, S., Nguyen, H., Weiss, B., Ngo, V. K., & Lau, A. S. (2015). Linkages Between Mental Health Need and Help-Seeking Behavior Among Adolescents: Moderating Role of Ethnicity and Cultural Values. *Journal of Counseling Psychology*, *64*(2), 682-693. doi:10.1037/cou0000094

Gupta, R. S., Lau, C. H., Warren C. M., Lelchuk, A., Alencar, A,. Springston, E. E., & Holl, J. L. (2013). The Impact of Student-Directed Videos on Community Asthma Knowledge. *Journal of Community Health*, *38*, 463–470. Doi:10.1007/s10900-012-9630-4

Hahn, E. H., Burns, J. L., Jacobs, E. A., Ganschow, P. S., Garcia, S. F., Rutsohn, J. P., Baker, D. W. (2015). Health Literacy and Patient-Reported Outcomes: A Cross-Sectional Study of Underserved English- and Spanish-Speaking Patients with

Type 2 Diabetes. *Journal of Health Communication*, *20*(S2), 4-15. doi:10.1080/10810730.2015.1061071

Hargreaves, D. S., Elliott, M. N., Viner, R. M., Richmond, T. K., & Schuster, M. A. (2015). Unmet Health Care Need in US Adolescents and Adult Health Outcomes. *Pediatrics*, *136*(3), 513-520. doi: 10.1542/peds.2015-0237

Healthy People 2020. (2018). Social Determinants of Health. Retrieved from https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

Healthy People 2020. (2015). Adolescent Health. Retrieved from http://www.healthypeople.gov/2020/topics-objectives/topic/Adolescent-Health

Heron, M. (2017). *National Vital Statistics Reports Deaths: Leading Causes for 2015*, Hyattsville, MD: National Center for Health Statistics. Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_05.pdf

Higgins, J. W., Begoray, D., & MacDonald, M. (2009). A social ecological conceptual framework for understanding adolescent health literacy in the health education classroom. *American Journal of Community Psychology*, *44*(3-4), 350-362. doi:10.1007/s10464-009-9270-8

Huang, J. S., Tobin, A., & Tompane, T. (2012). Clinicians Poorly Assess Health Literacy–Related Readiness for Transition to Adult Care in Adolescents with Inflammatory Bowel Disease. *Clinical Gastroenterology and Hepatology*, *10*(6), 626–632. doi:10.1016/j.cgh.2012.02.017

Hubbard, B., & Rainey, J. (2007). Health Literacy Instruction and Evaluation among

Secondary School Students. *American Journal of Health Education*, *38*(6), 332-337. doi:10.1080/19325037.2007.10598991

Hunter, J., & Franken, M. (2012). Health Literacy as a Complex Practice. *Literacy & Numeracy Studies*, *20*(1), 25-44. doi: 10.5130/lns.v20i1.2618

Hussain, R., Guppy, M., Robertson, S., & Temple, E. (2013). Physical and mental health perspectives of first year undergraduate rural university students. *BMC Public Health*, *13*, 848. doi:10.1186/1471-2458-13-848

Institute of Medicine, Board on Neuroscience and Behavioral Health. (2004). *Health literacy: A prescription to end confusion*. Washington, DC: National Academies Press. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK216032/

Isler, M. R., Brown, A. L., Eley, N., Mathews, A., Batten, K., Rogers, R., … MacQueen, K. M. (2014). Curriculum Development to Increase Minority Research Literacy for HIV Prevention Research: A CBPR Approach. *Progress in Community Health Partnerships: Research, Education, and Action*, *8*(4), 511–521. doi:10.1353/cpr.2014.0059

Jacobson, H. E., Hund, L., & Soto Mas, F. (2016). Predictors of English Health Literacy among U.S. Hispanic Immigrants: The importance of language, bilingualism and sociolinguistic environment. *Literacy & Numeracy Studies: An International Journal in the Education and Training of Adults, 24*(1), 43–64. doi:10.5130/lns.v24i1.4900

Jacque, B., Koch-Weser, S., Faux, R., & Meiri, K. (2015). Addressing Health Literacy Challenges with a Cutting-Edge Infectious Disease Curriculum for the High

School Biology Classroom. *Health Education & Behavior*, *43*(1), 43-53. doi:10.1177/1090198115596163

Jacquez, F., Lisa M. Vaughn, L. M., & Wagner, E. (2013). Youth as Partners, Participants or Passive Recipients: A Review of Children and Adolescents in Community-Based Participatory Research (CBPR). *American Journal of Community Psychology*, *51*(1-2), 176-189. doi:10.1007/s10464-012-9533-7

Jane Marshall, E. (2014). Adolescent Alcohol Use: Risks and Consequences. *Alcohol and Alcoholism, 49*(2), 160–164, doi:10.1093/alcalc/agt180

Javalkar, K., Johnson, M., Kshirsagar, A. V., Ocegueda, S., Detwiler, R. K., & Ferris, M. (2016). *Journal of Adolescent Health*, *58*(1), 40-46. doi:10.1016/j.jadohealth.2015.09.013

Jonassaint , C. R., Beach, M. C., Haythornthwaite, J. A., Bediako, S. M., Diener-West, M., Strouse, J. J…, Haywood Jr. C. (2016). The Association between Educational Attainment and Patterns of Emergency Department Utilization among Adults with Sickle Cell Disease. *International Journal of Behavioral Medicine*, *23*(3), 300-309. doi: 10.1007/s12529-016-9538-y

Kafle, N. P. (2011). Hermeneutic phenomenological research method simplified. *Bodhi: An Interdisciplinary Journal*, *5*(1), 181-200. doi:10.3126/bodhi.v5i1.8053

Kalichman, S. C., Pellowski, J., & Chen, Y. (2013). Requesting help to understand medical information among people living with HIV and poor health literacy. *AIDS Patient Care STDS, 27*(6), 326-332. doi:10.1089/apc.2013.0056.

Kann, L., McManus, T., Harris, W. A., Shanklin, S. L., Flint, K. H., Queen, B., … Ethier,

K. A. (2018). Youth Risk Behavior Surveillance — United States, 2017. Retrieved from https://www.cdc.gov/healthyyouth/data/yrbs/pdf/2017/ss6708.pdf

Kann, L., Kinchen, S., Shanklin, S. L., Flint, K. H., Hawkins, J., Harris, W. A., … & Zaza, S. (2014). Youth Risk Behavior Surveillance — United States, 2013. Retrieved from http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6304a1.htm

Karimy, M. & Zareban, I. (2018). Predictors of HIV-Preventive Behavior Changes Among HIV-Infected Patients in Iran: Application of the Extended Health Belief Model. *International Journal High Risk Behavior Addiction.* Advance online publication. doi:10.5812/ijhrba.58145.

Kim, H., & Xie, B. (2017). Health literacy in the eHealth era: A systematic review of the literature. *Patient Education and Counseling, 100*(6), 1073-1082. doi:10.1016/j.pec.2017.01.015

Kim, Y. (2011). The Pilot Study in Qualitative Inquiry Identifying Issues and Learning Lessons for Culturally Competent Research. *Qualitative Social Work*, *10*(2), 190–206. doi:10.1177/1473325010362001

Koh, H. K., Berwick, D. M., Clancy, C. M., Baur, C., Brach, C., Harris, L. M., & Zerhusen, E. G. (2012). New federal policy initiatives to boost health literacy can help the nation move beyond the cycle of costly "crisis care." *Health Affairs (Millwood), 31*, 434-443. doi:10.1377/hlthaff.2011.1169

Kolarcik, P., Geckova, A. M., Reijneveld, S. A., & Van Dijk, J. P. (2015). The mediating effect of discrimination, social support and hopelessness on self-rated health of Roma adolescents in Slovakia. *International Journal for Equity in Health*, *14*,

137. doi:10.1186/s12939-015-0270-z

Kong, A. S., Sussman, A. L., Yahne, C., Skipper, B. J., Burge, M. R., & Davis, S. M. (2013). School-Based Health Center Intervention Improves Body Mass Index in Overweight and Obese Adolescents. *Journal of Obesity, 2013,* 575016. doi:10.1155/2013/575016

Kutner, M., Greenberg, E., Jin, Y., & Paulsen, C. (2006). The Health Literacy of America's Adults Results from the 2003 National Assessment of Adult Literacy. Retrieved from http://nces.ed.gov/pubs2006/2006483_1.pdf

Labouliere, C. D., Kleinman, M., & Gould, M. S. (2015). When Self-Reliance Is Not Safe: Associations between Reduced Help-Seeking and Subsequent Mental Health Symptoms in Suicidal Adolescents. *International Journal of Environmental Research and Public Health*, *12*(4), 3741–3755. doi:10.3390/ijerph120403741

Lee, Y. M., Cintron, A., & Kocher, S. (2014). Factors Related to Risky Sexual Behaviors and Effective STI/ HIV and Pregnancy Intervention Programs for African American Adolescents. *Public Health Nursing, 31*(5), 414-427. doi:10.1111/phn.

Levitt, H. M., Bamberg, M., Creswell, J. W., Frost, D. M., Josselson, R., & Suárez-Orozco, C. (2018). Journal article reporting standards for qualitative primary, qualitative meta-analytic, and mixed methods research in psychology: The APA Publications and Communications Board task force report. *American Psychologist, 73*(1), 26-46. doi:10.1037/amp0000151

Levy, M. (2011). Migrant Laptops: Extending the Academic Day for the Children of

Farm Workers and Their Credit Recovery via Laptops. *Computers in The Schools*, *28*(2), 140-157. doi:10.1080/07380569.2011.577396

Lobstein, T., Jackson-Leach, R., Moodie, M. L., Hall, K. D., Gortmaker, S. L., Swinburn, B. A., … McPherson, K. (2015). Child and adolescent obesity: part of a bigger picture. *The Lancet*, *385*(9986), 2510–2520. doi:10.1016/S0140-6736(14)61746-3

Locke, M. R., Shiyanbola, O. O., & Gripentrog, E. (2014). Improving prescription auxiliary labels to increase patient understanding. *Journal of The American Pharmacists Association: Japha*, *54*(3), 267-274. doi:10.1331/JAPhA.2014.13163

Lorini, C., Santomauro, F., Donzellini, M., Capecchi, L., Bechini, A., Boccalini, S., … Bonaccorsi, G. (2018). Health literacy and vaccination: A systematic review. Human Vaccines & Immunotherapeutics, *14*(2), 478–488. doi:10.1080/21645515.2017.1392423

Lotstein, D. S., Kuo, A. A., Strickland, B., & Tait, F. (2010). The Transition to Adult Health Care for Youth with Special Health Care Needs: Do Racial and Ethnic Disparities Exist? *Pediatrics*, *126*(S3), 129–136. doi:10.1542/peds.2010-1466F

Macek, M. D., Manski, M. C., Schneiderman, M. T., Meakin, S. J., Haynes, D., Wells, W., & ... Parker, R. M. (2011). Knowledge of oral health issues among low-income Baltimore adults: a pilot study. *The Journal of Dental Hygiene*, *85*(1), 49-56. Retrieved from http://jdh.adha.org/content/jdenthyg/85/1/49.full.pdf

Manganello, J. (2008). Health literacy and adolescents: a framework and agenda for future research. *Health Education Research*, *23*(5), 840-847. doi:10.1093/her/cym069

Manganello, J. A., DeVellis, R. F., Davis, T. C., & Schottler-Thal, C. (2015). Development of the Health Literacy Assessment Scale for Adolescents (HAS-A). *Journal of Communication in Healthcare, 8*(3), 172–184. doi:10.1179/1753807615Y.0000000016

Manganello, J., Gerstner, G., Pergolino, K., Graham, Y., Falisi, A., Strogatz, D. (2017). The Relationship of Health Literacy with Use of Digital Technology for Health Information: Implications for Public Health Practice. *Journal of Public Health Management and Practice*, *23*(4), 380–387. doi:10.1097/PHH.0000000000000366

Manganello, J. & Shone, L, P. (2013). Health Literacy Research Facts and Findings, May 2013. Retrieved from http://www.actforyouth.net/resources/rf/rf_health-literacy_0513.cfm

Manganello, J. A., & Sojka, C. J. (2016). An Exploratory Study of Health Literacy and African American Adolescents. *Comprehensive Child & Adolescent Nursing*, *39*(3), 221-239. doi:10.1080/24694193.2016.1196264

Manlove, J., Steward-Streng, N., Peterson, K., Scott, M., & Wildsmith, E. (2013). Racial and Ethnic Differences in the Transition to a Teenage Birth in the United States. *Perspectives on Sexual & Reproductive Health*, *45*(2), 89-100. doi:10.1363/4508913

Massey, P. M., Prelip, M., Calimlim, B. M., Quiter, E. S., & Glik, D. C. (2012). Contextualizing an expanded definition of health literacy among adolescents in the health care setting. *Health Education Research*, *27*(6): 961-974. doi:

10.1093/her/cys054

Massey, P., Prelip, M., Calimlim, B., Afifi, A., Quiter, E., Nessim, S., & ... Glik, D. (2013). Findings Toward a Multidimensional Measure of Adolescent Health Literacy. *American Journal of Health Behavior*, *37*(3), 342-350. doi:10.5993/AJHB.37.3.7

Matthews, N., Kilgour, L., Christian, P., Mori, K., & Hill, D. M. (2015). Understanding, Evidencing, and Promoting Adolescent Well-Being: An Emerging Agenda for Schools. *Youth & Society*, *47*(5), 659-683. doi:10.1177/0044118X13513590

Mays, N. & Pope, C. (2001). Assessing quality in qualitative research. *British Medical Journal, 320*(7226), 50–52. doi:10.1136/bmj.320.7226.50

McCambridge, J., McAlaney, J., & Rowe, R. (2011). Adult Consequences of Late Adolescent Alcohol Consumption: A Systematic Review of Cohort Studies. *PLoS Medicine*, *8*(2), e1000413. doi:10.1371/journal.pmed.1000413

McKee, M. M., & Paasche-Orlow, M. K. (2012). Health Literacy and the Disenfranchised: The Importance of Collaboration Between Limited English Proficiency and Health Literacy Researchers. *Journal of Health Communication*, *17*, 7-12. doi:10.1080/10810730.2012.712627

McLaughlin, J. E., Dean, M. J., Mumper, R. J., Blouin, R. A., & Roth, M. T. (2013). A Roadmap for Educational Research in Pharmacy. *American Journal of Pharmaceutical Education, 77*(10), Article 218. doi:10.5688/ajpe7710218

Metzger, M. J., Flanagin, A. J., Markov, A., Grossman, R., & Bulger. M. (2015). Believing the Unbelievable: Understanding Young People's Information Literacy Beliefs and Practices in the United States. *Journal of Children and Media, 9*(3), 325-348. doi:10.1080/17482798.2015.1056817

Miller, T. A. (2016). Health literacy and adherence to medical treatment in chronic and acute illness: A met-analysis. Patient Education and Counseling, *99*(7), 1079-1086. doi:10.1016/j.pec.2016.01.020

Miles, M. B., Huberman, M. A., & Saldaña, J. (2014). *Qualitative Data Analysis A Methods Sourcebook (3rd ed.).* Thousand Oaks, CA: Sage Publications

Ministry of Health. (2010). Kōrero Mārama Health Literacy and Māori: Results from the 2006 Adult Literacy and Life Skills Survey. Retrieved from http://www.moh.govt.nz/moh.nsf/pagesmh/9932/$File/korero- marama.pdf

Mogford, E., Gould, L., & DeVoght, A. (2011). Teaching critical health literacy as a means to action on the social determinants of health. *Health Promotion International, 26*(1), 4-13. doi: 10.1093/heapro/daq049

Muylaert, C. J., Sarubbi Jr., V., Gallo, P. R., & Neto, M. L. R., (2014). Narrative interviews: an important resource in qualitative research. *Revista Da Escola De Enfermagem Da USP, 48*(2), 184-189. doi:10.1590/S0080-623420140000800027

National Center for Health Statistics. (2017). *Health, United States, 2016: With Chartbook on Long-term Trends in Health.* Hyattsville, MD. Author

National Center for Education Statistics [NCES]. (2012). Digest of Education Statistics 2011. Retrieved from https://nces.ed.gov/programs/digest/d11/

NCES. (2018). Public High School Graduation Rates. Retrieved from https://nces.ed.gov/programs/coe/indicator_coi.asp

National Institute for Health Care Management [NIHCM]. (2011). The Case for Investing in Youth Health Literacy: One Step on the Path to Achieving Health Equity for Adolescents. Retrieved from http://www.nihcm.org/images/stories/NIHCM-YouthLiteracy-FINAL_WEB.pdf

National Network of Libraries of Medicine. (n.d.). Health Literacy. Retrieved from https://nnlm.gov/initiatives/topics/health-literacy#toc-1

Nair M., Baltag, V., Bose, K., Boschi-Pinto, C., Lambrechts, T., & Mathai, M. (2015). Improving the Quality of Health Care Services for Adolescents, Globally: A Standards-Driven Approach. *Journal of Adolescent Health*, *57*(3), 288-98. doi:10.1016/j.jadohealth.2015.05.011.

Navarra, A. M., Neu, N., Toussi, S., Nelson, J., & Larson, E. L. (2013). Health literacy and adherence to antiretroviral therapy among HIV-infected youth. *Journal of the Association Nurses in AIDS Care*. 25(3), 203-213. doi:10.1016/j.jana.2012.11.003.

Nutbeam, D. (2015). Defining, measuring, and improving health literacy. *Health Education and Promotion*, *42*(4), 450-455. doi:10.7143/jhep.42.450

Nutbeam, D. (2000). Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promotion International*, 15, 259-267. Doi:10.1093/heapro/15.3.259

O'Conor, R., Wolf, M. S., Smith, S. G., Martynenko, M., Vicencio, D. P., Sano, M., … &

Federman, A. D. (2014). Health Literacy, Cognitive Function, Proper Use and Adherence to Inhaled Asthma Controller Medications among Older Adults with Asthma. *Chest. 147*(5), 1307-1315. doi:10.1378/chest.14-0914

Okan, O., Pinheiro, P., Zamora, P., & Bauer, U. (2015). Health literacy in childhood and adolescence: An overview and current state of research. *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz*, *58*(9), 930-941. doi:10.1007/s00103-015-2199-1.

Oliveira, A. C. M. de, Leonard, T. C. M., Shuval, K., Skinner, C. S., Eckel, C., & Murdoch, J. C. (2015). Economic Preferences and Obesity among a Low-Income African American Community. *Journal of Economic Behavior & Organization*. *131*(B), 196-208. doi:10.1016/j.jebo.2015.11.002

Oltmann, S. (2016). Qualitative Interviews: A Methodological Discussion of the Interviewer and Respondent Contexts. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, *17*(2). doi:10.17169/fqs-17.2.2551.

Paakkari, L., & George, S. (2018). Ethical underpinnings for the development of health literacy in schools: ethical premises ("why"), orientations ("what") and tone ("how"). *BMC Public Health, 18*, 326. doi:10.1186/s12889-018-5224-0

Paek, H., & Hove, T. (2012). Social cognitive factors and perceived social influences that improve adolescent eHealth literacy. *Health Communication*, *27*(8), 727-737. doi:10.1080/10410236.2011.616627

Palardy, G. J., Rumberger, R. W., & Butler, T. (2015). The Effect of High School Socioeconomic, Racial, and Linguistic Segregation on Academic Performance

and School Behaviors. *Teachers College Record, 117*(12), 1-52. Retrieved from http://www.tcrecord.org/library ID Number: 18151

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health*, *42*(5), 533–544. doi:10.1007/s10488-013-0528-y

Panahi, R., Ramezankhani, A., Tavousi, M., & Niknami, S. (2018). Adding Health Literacy to the Health Belief Model: Effectiveness of an Educational Intervention on Smoking Preventive Behaviors Among University Students. *Iranian Red Crescent Medical Journal, 20*(2), 1-12. doi:10.5812/ircmj.13773

Park, J. M., Scott, J. T., Adams, S. H., Brindis, C. B., Irwin Jr. C. E. (2014). Adolescent and Young Adult Health in the United States in the Past Decade: Little Improvement and Young Adults Remain Worse Off Than Adolescents. *Journal of Adolescent Health. 55*(1), 3-16. doi:10.1016/j.jadohealth.2014.04.003

Parker, R. M., & Ratzan, S. (2010). Health literacy: A second decade of distinction for Americans. *Journal of Health Communications*, *15*(1), 20-33. doi:10.1080/10810730.2010.501094

Patton, G. C., Ross, D. A., Santelli, J. S., Sawyer, S. M., Viner, R. M., & Kleinert, S. (2015). Next steps for adolescent health: A Lancet Commission. *The Lancet*, *383*(9915), 385–386. doi:10.1016/S0140-6736(14)60039-8

Patton, G. C., Sawyer, S. M., Santelli, J. S., Ross, D. A., Afifi, R., Allen, N. B., … Viner, R. M. (2016). Our Future: A Lancet Commission on Adolescent Health and

Wellbeing. *The Lancet 387*(10036), 2423–2478*,* 1-19. doi:10.1016/ S0140-6736(16)00579-1

Perrin, A. & Duggan, M. (2015). American's Internet Access:2000-2015. Retrieved from http://www.pewinternet.org/2015/06/26/americans-internet-access-2000-2015

Price, J. H., McKinney, M. A., & Braun, R. E. (2011). Social Determinants of Racial/Ethnic Health Disparities in Children and Adolescents. *The Health Educator*, *43*(1), 2-12. Retrieved from https://files.eric.ed.gov/fulltext/EJ942548.pdf

Primack, B. A., Fine, D., Yang, C. K., Wickett, D., & Zickmund, S. (2009). Adolescents' impressions of antismoking media literacy education: qualitative results from a randomized controlled trial. *Health Education Research*, *24*(4), 608–621. doi:10.1093/her/cyn062

Primack, B. A., Douglas, E. L., Land, S. R., Miller, E., & Fine, M. J. (2014). Comparison of media literacy and usual education to prevent tobacco use: a cluster randomized trial. *The Journal of School Health, 84*(2), 106–115. doi:10.1111/josh.12130

Raphael, D. (2013). Adolescence as a gateway to adult health outcomes. *Maturitas, 75*(2), 137-141. doi:10.1016/j.maturitas.2013.03.013

Rask, M., Uusiautti, S., & Määttä, K. (2014). The Fourth Level of Health Literacy. *International Quarterly of Community Health Education***,** *34*(1), 51-71. doi:10.2190/IQ.34.1.e

Rasmussen, B., Ward, G., Jenkins, A., King, S. J., & Dunning, T. (2011) Young adults'

management of Type 1 diabetes during life transitions. *Journal of Clinical Nursing*, *20*(13/14), 1981-1992. doi: 10.1111/j.1365-2702.2010.03657.x

Richardson, L. D., & Norris, M. (2010). Access to health and health care: how race and ethnicity matter. *The Mount Sinai Journal Of Medicine, New York*, *77*(2), 166-177. doi:10.1002/msj.20174

Rikard, R. V., Head, R., & Thompson, M. S. (2016). Know Your Status: Health Literacy, Self-efficacy & HIV Testing Attitudes. *Journal of Behavioral and Social Sciences, 3*, 52–62. Retrieved from https://www.researchgate.net/publication/303382990_Know_Your_Status_Health_Literacy_Self-Efficacy_HIV_Testing_Attitudes

Rikard, R. V., Thompson, M. S., Head, R., McNeil, C., & White, C. (2012). Problem Posing and Cultural Tailoring: Developing an HIV/AIDS Health Literacy Toolkit with the African American Community. *Health Promotion Practice*, *13*(5), 626-636. doi:10.1177/1524839911416649

Rikard, R. V., Thompson, M. S., McKinney, J., & Beauchamp, A. (2016). Examining health literacy disparities in the United States: a third look at the National Assessment of Adult Literacy [NAAL]. *BMC Public Health, 16*(1), 975. doi:10.1186/s12889-016-3621-9

Rogers, E. A., Fine. S., Handley, M. A., Davis, H., Kass, J., & Schillinger, D. (2014). Development and early implementation of the bigger picture, a youth-targeted public health literacy campaign to prevent type 2 diabetes. *Journal of Health Communication*, *19*(S2), 144-160. doi:10.1080/10810730.2014.940476.

Rosario, C., Modeste, N., Dos Santos, H., Handysides, D., Gamboa-Maldonado, T., & Boyd, K. (2017). An Examination of Ecological Predictors of Health Literacy in Black College Students. *Journal of American College Health*, *65*(6), 423-431. doi:10.1080/07448481.2017.1341894

Rowlands, G., Shaw, A., Jaswal, S., Smith, S., & Harpham, T. (2015). Health literacy and the social determinants of health: a qualitative model from adult learners. *Health Promotion International, 32(1),* 130–138. doi:10.1093/heapro/dav093

Rudd, R. E. (2015). The evolving concept of Health literacy: New directions for health literacy studies. *Journal of Communication in Healthcare, 8*(1), 7-9. doi:10.1179/1753806815Z.000000000105

Rudd, R. E., Rosenfeld, L., & Simonds, V. W. (2012). Health Literacy: A New Area of Research with Links to Communication. *Atlantic Journal of Communication*, *20*(1), 16-30. doi:10.1080/15456870.2012.637025

Sawyer, S. M., Afifi, R. A., Bearinger, L, H., Blakemore, S-J., Dick, B., Ezeh, A. C., & Patton, G. C. (2012). Adolescence: A Foundation for Future Health. *The Lancet, 379*(9826), 1630-40. doi:10.1016/S0140- 6736(12)60072-5

Schnall, R., John, R. M., & Carballo-Dieguez, A. (2015). Do High-Risk Young Adults Use the HIV Self-Test Appropriately? Observations from a Think-Aloud Study. *AIDS and Behavior*, *20*(4), 1–10. doi:10.1007/s10461-015-1240-6

Schwartz, L. A., Tuchman, L. K., Hobbie, W. L., & Ginsberg, J. P. (2011). A social-ecological model of readiness for transition to adult-oriented care for adolescents and young adults with chronic health conditions. *Child: Care, Health &*

Development, *37*(6), 883–895. doi:10.1111/j.1365-2214.2011.01282.x

Sentell, T & Braun, K. L., (2012). Low Health Literacy, Limited English Proficiency, and Health Status in Asians, Latinos, and Other Racial/Ethnic Groups in California. *Journal of Health Communication: International Perspectives*, *17*(S3), 82-99. doi**:**10.1080/10810730.2012.712621

Shafiei, L., Taymoori, P., Maleki, A., & Sayehmiri, K. (2018). Environmental interventions based on the Health Belief Model and the Ecological-social model in the continuation of consumption of rice, free from toxic metals. *Electronic Physician, 10*(1), 6153-6163. doi:10.19082/6153

Sheridan, S. L., Halpern, D. J., Viera, A. J., Berkman, N. D., Donahue, K. E., & Crotty, K. (2011). Interventions for Individuals with Low Health Literacy: A Systematic Review. *Journal of Health Communication*, *16*(3), 30-54. doi:10.1080/10810730.2011.604391

Siciliano, V., Mezzasalma, L., Lorenzoni, V., Pieroni, S. & Molinaro, S. (2013). Evaluation of drinking patterns and their impact on alcohol-related aggression: a national survey of adolescent behaviours. *BMC Public Health*, *13*, 950. doi:10.1186/1471-2458-13-950

Silk, K. J., Horodynski, M. A., Rienzo, M., Mercer, L., Olson, B., & Aldrich, R. (2010). Strategies to Increase Health Literacy in The Infant Feeding Series (TIFS): A Six-Lesson Curriculum for Low-Income Mothers. *Health Promotion Practice*, *11*(2), 226–234. doi:10.1177/1524839908326380

Singh, G. K., Daus, G. P., Allender, M., Ramey, C. T., Martin, E. K., Perry, C., …

Vedamuthu, I. P. (2017). Social Determinants of Health in the United States: Addressing Major Health Inequality Trends for the Nation, 1935-2016. *International Journal of MCH and AIDS, 6*(2), 139–164. doi:10.21106/ijma.236

Soto Mas, F., Ji, M., Fuentes, B. O., & Tinajero, J. (2015). The Health Literacy and ESL Study: A Community-Based Intervention for Spanish-Speaking Adults. *Journal of Health Communication, 20*(4), 369–376. doi:10.1080/10810730.2014.965368

Sørensen, K., Van den Broucke, S., Fullam, J., Doyle, G., Pelikan, J, Slonska, Z, … (HLS-EU) Consortium Health Literacy Project European. (2012). Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health, 12*, 80. doi:10.1186/1471-2458-12-80

Sørensen, K., Van den Broucke, S., Pelikan, J. M., Fullam, J., Doyle, G., Slonska, Z., … Brand, H. (2013). Measuring health literacy in populations: illuminating the design and development process of the European Health Literacy Survey Questionnaire (HLS-EU-Q). *BMC Public Health*, *13*, 948. doi.org/10.1186/1471-2458-13-948

Stellefson, M., Hanik, B., Chaney, B., Chaney, D., Tennant, B., & Chavarria, E. A. (2011). eHealth Literacy Among College Students: A Systematic Review With Implications for eHealth Education. *Journal of Medical Internet Research, 13*(4), e102. doi:10.2196/jmir.1703

Stewart, D. W., Cano, M. A., Correa-Fernández, V., Spears, C. A., Li, Y., Waters, A. J., ... Vidrine, J. I. (2014). Lower health literacy predicts smoking relapse among racially/ethnically diverse smokers with low socioeconomic status. *BMC Public*

Health, *14*(1)*,* 716. doi:10.1186/1471-2458-14-716

Stinson, J., Kohut, S. A., Spiegel, L., White, M., Gill, N., Colbourne, G., … Kaufman, M. (2014). A systematic review of transition readiness and transfer satisfaction measures for adolescents with chronic illness. *International Journal of Adolescent Medicine and Health, 26*(2), 159-174. doi:10.1515/ijamh-2013-0512

Stollon, N. B., Paine, C. W., Lucas, M. S., Brumley, L. D., Poole, E. S., Peyton, T., … Schwartz, L. A. (2015). Transitioning adolescents and young adults with sickle cell disease from pediatric to adult healthcare: Provider perspectives. *Journal of Pediatric Hematology/oncology*, *37*(8), 577–583. doi:10.1097/MPH.0000000000000427

Stormacq, C., Wosinski, J., & Van den Broucke, S. (2016). The effectiveness of health literacy interventions on health-related outcomes among socioeconomically disadvantaged adults living in the community: a systematic review protocol. *The JBI Database of Systematic Reviews and Implementation Reports, 14(2)*, 49-63. doi:10.11124/jbisrir-2016-2501

Subramaniam, M., St. Jean, B., Greene Taylor, N., Kodama, C., Follman, R., & Casciotti, D. (2015). Bit by Bit: Using Design-Based Research to Improve the Health Literacy of Adolescents. *JMIR Research Protocols*, *4*(2), e62. doi:10.2196/resprot.4058

Sukys, S., Cesnaitiene, V. J., & Ossowsky, Z. M. (2017). Is Health Education at University Associated with Students' Health Literacy? Evidence from Cross-Sectional Study Applying HLS-EU-Q. *BioMed Research International, 2017*(87),

1-9. doi:10.1155/2017/8516843

Sun, X., Shi, Y., Zeng, Q., Wang, Y., Du, W., Wei, N., ... Chang, C. (2013). Determinants of health literacy and health behavior regarding infectious respiratory diseases: A pathway model. *BMC Public Health,* 13, 261. doi:10.1186/1471-2458-13-261.

Swenson, R. R., Rizzo, C. J., Brown, L. K., Vanable, P. A., Carey, M. P., Valois, R. F., … Romer, D. (2010). HIV Knowledge and its Contribution to Sexual Health Behaviors of Low-Income African American Adolescents. *Journal of the National Medical Association*, *102*(12), 1173–1182. doi:10.1016/S0027-9684(15)30772-0

Sykes, S., Wills, J., Rowlands, G. & Popple, K. (2013). Understanding critical health literacy: a concept analysis. *BMC Public Health*, *13*, 150. doi:10.1186/1471-2458-13-150

Thomas, E., & Magilvy, J. K. (2011). Qualitative Rigor or Research Validity in Qualitative Research. *Journal For Specialists In Pediatric Nursing*, *16*(2), 151-155. doi:10.1111/j.1744-6155.2011.00283.x

Thorpe, K. E. (2013). Treated disease prevalence and spending per treated case drove most of the growth in health care spending in 1987-2009. *Health Affairs, 32*(5), 851-858. doi:10.1377/hlthaff.2012.0391

Townsend, N., & Foster, C. (2011). Developing and applying a socio-ecological model to the promotion of healthy eating in the school. *Public Health Nutrition, 16*(6), 1101-1108. doi:10.1017/S1368980011002655

Trivedi, I., & Keefer, L. (2015). The Emerging Adult with Inflammatory Bowel Disease: Challenges and Recommendations for the Adult Gastroenterologist. *Gastroenterology Research and Practice*, *2015*, 1-11. doi:10.1155/2015/260807

U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. (2010). *National Action Plan to Improve Health Literacy.* Washington, DC: Author. Retrieved from http://health.gov/communication/hlactionplan/pdf/Health_Literacy_Action_Plan.pdf

United States Census Bureau. (2015). *Miami-Dade County Florida*. Retrieved from http://quickfacts.census.gov/qfd/states/12/12086.html

Valerio, M. A., Peterson, E. L., Wittich, A. R., & Joseph, C. L. (2016). Examining health literacy among urban African-American adolescents with asthma. *The Journal of Asthma: Official Journal of the Association for the Care of Asthma, 53*(10), 1041–1047. http://doi.org/10.1080/02770903.2016.1175473

Vernon, J. A., Trujillo, A., Rosenbaum, S., & DeBuono, B. (2007). *Low health literacy: Implications for national health policy.* Washington, DC: Department of Health Policy, School of Public Health and Health Services, The George Washington University.

Viner, R. M., Ozer, E. M., Denny, S., Marmot, M., Resnick, M., Fatusi, A., & Currieet C. (2012). Adolescence and the social determinants of health. *Lancet*. *379*(9826), 1641–1652. doi:10.1016/S0140-6736(12)60149-4

Vyas, A. N., Landry, M., Schnider, M., Rojas, A. M., & Wood, S. F. (2012). Public

Health Interventions: Reaching Latino Adolescents via Short Message Service and Social Media. *Journal of Medical Internet Research*, *14*(4), e99. doi:10.2196/jmir.2178

World Health Organization [WHO]. (2016a). Adolescent health research priorities: report of a technical consultation. Retrieved from http://www.who.int/maternal_child_adolescent/documents/adolescent-research-priorities-consultation/en/

WHO. (2016b). Obesity and Overweight. Retrieved from http://www.who.int/mediacentre/factsheets/fs311/en/

WHO. (2016c). Health Literacy. Retrieved from http://www.who.int/healthpromotion/conferences/9gchp/health-literacy/en/

Wångdahl, J., Lytsy, P., Mårtensson, L., & Westerling, R. (2015). Health literacy and refugees' experiences of the health examination for asylum seekers - a Swedish cross-sectional study. *BMC Public Health*, *15*(1), 1162. doi:10.1186/s12889-015-2513-8

Weinstein, S., Bixenstine, P., Karlin, D., Saab, F., Schuttner, L., Zen, A., & Kuo, A. A. (2016). Care of the Emerging Adult. In: Pilapil M., DeLaet D., Kuo A., Peacock C., Sharma N. (eds) *Care of Adults with Chronic Childhood Conditions*. Springer, Cham. pp 17-35.

Wong, C. A., Asch, D. A., Vinoya, C. M., Ford, C. A., Baker, T., Town, R., & Merchant, R. M. (2015). Seeing Health Insurance and HealthCare.gov Through the Eyes of Young Adults. *Journal of Adolescent Health*, *57*(2), 137–143.

doi:10.1016/j.jadohealth.2015.04.017

Wong, N. T., Zimmerman, M. A., & Parker, E. A. (2010). A Typology of Youth Participation and Empowerment for Child and Adolescent Health Promotion. *American Journal of Community Psychology, 46*, 100–114. Doi:10.1007/s10464-010-9330-0

Woods, E. R., Bhaumik, U., Sommer, S. J., Chan, E., Tsopelas, L., Fleegler, E. W., … Dulin, R. (2016). Community Asthma Initiative to Improve Health Outcomes and Reduce Disparities Among Children with Asthma. *MMWR Supplements*, *65*(1), 11–20. doi:10.15585/mmwr.su6501a4

Woods-Townsend, K., Bagust, L., Barker, M., Christodoulou, A., Davey, H., Godfrey, K., … Inskip, H. (2015). Engaging teenagers in improving their health behaviours and increasing their interest in science (Evaluation of LifeLab Southampton): study protocol for a cluster randomized controlled trial. *Trials*, *16*, 372. doi:10.1186/s13063-015-0890-z

Wright, P. J., Randall, A. K., & Grace Hayes, J. (2012). Predicting the Condom Assertiveness of Collegiate Females in the United States from the Expanded Health Belief Model. *International Journal of Sexual Health*, *24*(2), 137-153. doi:10.1080/19317611.2012.661396

Xu, X. Y., Leung, A. Y., & Chau, P. H. (2018). Health Literacy, Self-Efficacy, and Associated Factors Among Patients with Diabetes. *HLRP: Health Literacy Research and Practice, 2*(2), e67-e77. doi:10.3928/24748307-20180313-01

Ye, X., Yao, Z., Liu, W., Fan, Y., Xu, Y., & Chen, S. (2014). Path Analysis to Identify

Factors Influencing Health Skills and Behaviors in Adolescents: A Cross-Sectional Survey. *Plos ONE*, *9*(8), 1-5. doi:10.1371/journal.pone.0104406

Yu, S., Lin, S., & Strickland, B, (2015). Disparities in Health Care Quality Indicators among US Children with Special Health Care Needs According to Household Language Use. *International Journal of MCH and AIDS*, *4*(1), 3-12. doi:10.21106/ijma.51

Yin, H. S., Dreyer, B. P., Vivar, K. L., MacFarland, S., van Schaick, L., & Mendelsohn, A. L. (2012). Perceived barriers to care and attitudes toward shared decision making among low socioeconomic status parents: Role of health literacy. *Academic Pediatrics*, *12*(2), 117–24. doi:10.1016/j.acap.2012.01.001.

Zeh, P., Sandhu, H. K., Cannaby, A. M., & Sturt, J. A. (2014). Cultural barriers impeding ethnic minority groups from accessing effective diabetes care services: a systematic review of observational studies. *Diversity & Equality In Health & Care*, *11*(1), 9-33. doi:10.21767/2049-5471.100001

Appendix A: Interview Protocol

Insert appendix here. Interview Protocol: Perspectives of Minority Adolescents on Health Literacy Readiness for Adulthood

Date/Time of Interview: 10/01/2017 Place: Home

Interviewer: Selwyn Carrington Interviewee:

Position of Interviewee: Consent: Completed

Introductions and Description of Study

My name is Selwyn Carrington and I am currently a doctoral student in Public Health at Walden University. For my dissertation I am exploring the perceptions of minority emerging adults on their health literacy readiness for adulthood. Health literacy refers to an individual's capacity to obtain, process, and understand basic health information and services for making appropriate health care decisions. Low health literacy is a major problem in the United States, especially in minority communities, and I want to help improve this disparity. I believe you can help in achieving this goal and I thank you for volunteering. I will be asking you a series of questions and I would like you to answer them as thoroughly as possible. So please relax, try not to rush, and enjoy this experience as much as possible. At the end of the interview you will be given opportunity to add to your answers if desired.

At this time, I want to reconfirm the criteria that has led to your inclusion in the study. You are a member of an ethnic minority community, you are between age 18-22, you are a resident of Miami-Dade County, you are able to communicate fluently in English, you are using a virtual communicating device, and you have been exposed to the U.S health

care system. Am I correct? Finally, I want to remind you that your participation in the study is voluntary and that you can stop this process at any time if you care to do so. On completion of the interview you will receive a $10.00 gift and a copy of the transcript of the interview for review. You will also receive a copy of the study when it is completed. I have received your written consent and will proceed with the interview at this time. If you have any questions before we begin the interview you may ask them at this time.

Questions:

1. As you enter adulthood, please explain to me why being health literate is important to you?

2. What benefits do you expect from being health literate as you enter adulthood?

3. What barriers hamper the process of being health literate as you start adulthood?

4. What information sources have you relied on to improve your health literacy and prepare you for the health care challenges of adulthood? Follow-up: why those choices?

5. What are the driving factors that lead you to seek and maintain health literacy readiness as you enter adulthood?

6. In your experience, what healthcare-related experiences, individual or societal, have prepared you to face the health care challenges of adulthood? F/U How would you describe your health literacy readiness as you prepare to meet the health care challenges of adulthood?

7. Is there any further pertinent information on this topic that I should know that you did not mention during the interview?

Express thanks, assure confidentiality of responses, and confirm the potential for follow-up interviews.

Appendix B: Observation Sheet

Event/Date:	**Field Notes/Observations**
On (date/time) I interviewed and observed participant 12345.	Describe punctuality Posture Attire level of interest knowledge other.

Appendix C: Research Invitation/Flyer

JULY

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ARE YOU READY FOR ADULTHOOD?

MINORITY YOUTH NEEDED FOR HEALTH LITERACY RESEARCH

The transition from adolescence to adulthood presents many challenges. Understanding how young adults deal with healthcare issues during this transition is important. You are invited to participate in this effort. Participants must live in Miami-Dade County, be between age 18-22, be able to communicate fluently in English, have access to a virtual communicating devise (cell phone, tablet, or computer), and have been exposed to the U.S health care system. For this study, a maximum of thirty-five minority participants will be selected for one hour interviews. Your support for this study is deeply appreciated. Please contact me for further information.