Running head: IMPROVING NC PUBERTY AND DEVELOPMENT CURRICULUM

IMPROVING THE NORTH CAROLINA PUBERTY AND DEVELOPMENT
EDUCATION CURRICULUM FOR GRADES K-6

by

Bailey N. Sparks

Honors Thesis
Appalachian State University
Submitted to The Honors College
in partial fulfillment of the requirements for the degree of
Bachelor of Science in Elementary Education

May 2021

Approved by:

______________________________
Greg McClure, Ph. D., Thesis Director

______________________________
Terri Mitchell, Ph. D., Second Reader

______________________________
Jefford Vahlbusch, Ph. D., Dean, The Honors College
Abstract

Students in North Carolina deserve a thorough, inclusive puberty and development education experience so that they can become empowered to make informed decisions about their bodies and their relationships. This study aims to evaluate the current North Carolina puberty and development education curriculum and relate this to national gaps in puberty and development and sexuality education in order to suggest a proposal for bettering the curriculum. The study is composed of both a literature review that examines trends in gaps in puberty and development and sexuality education on a national scale and a survey of puberty and development educators within the United States. The study found that trends on a national level were consistent with educator experiences in the survey, and a proposal for change was offered to combat gaps in puberty and development education within North Carolina.

Keywords: puberty and development education, elementary education, North Carolina Department of Public Instruction, state curriculum
Improving the NC Puberty and Development Education Curriculum for Grades K-6

The purpose of this study is to review the current North Carolina puberty and development education curriculum, compose a literature review on themes of national gaps in puberty and development and sexuality education, and conduct a survey to gain insight from educators with experience teaching puberty and development education in grades kindergarten through sixth. These items will be used to create a proposal for improving the North Carolina puberty and development education curriculum. While the study is open to gaining information about all elementary grade levels, there is a focus on grades fourth through sixth because this is when puberty and development education is required to be taught in North Carolina.

National Gaps in Puberty and Development and Sexuality Education

When beginning this research, the original title of the study included the phrase “A Study of International Sex Education Models.” My hopes when beginning this study were that I would find one or two inclusive, thorough models without significant gaps in curriculum that would contain elements that could be easily integrated into the North Carolina puberty and development education curriculum. Upon further investigation, there was no such “holy grail” of a puberty and development education or sexuality education model. Rather, many of the same gaps in puberty and development and sexuality education that were discovered on a national level also occurred in Western European countries, where my international studies began. As research continued, the decision was made to find common themes amongst recognized gaps in puberty and development and sexuality education on a national level and compile them to gather a fuller understanding of what North Carolina may be missing. In addition, a few intriguing studies from my initial research
from other countries were included in the literature review for support. The results of the literature review concluded that the major gaps found on a national level are as follows: the lack of representation of the Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual, and related communities (LGBTQIA+) in puberty and development and sexuality education, the lack of equal access to education for students with disabilities in puberty and development and sexuality education, the lack of information about pleasure and sexual satisfaction, and the lack of information and resources regarding sexual functioning and dysfunction.

For the purposes of this study, this review of literature only contains studies published within the last five years. Because this study is a study on curriculum, which changes over time, I wanted to include the most recent information about curriculum across the United States. I also wanted to include updated, accurate information about the needs of minority groups who are included in this study. In addition, the majority of the studies were published in the United States because I am studying curriculum across the country, but a handful of intriguing studies from my initial research are included for support.

This literature review found that students in the LGBTQIA+ community demonstrate a greater need for inclusive, accurate, and thorough puberty and development and sexuality education programs. A 2019 study on the sexual health of lesbian, bisexual, and heterosexual women found that women of a sexual minority were more likely to engage in sexual activities at an earlier age than their heterosexual peers, and that they were more likely to engage in sexual activities prior to receiving any form of sexual education (Bodnar & Tornello). This was consistent with a 2019 study on anti-gay education, which declared that
“The LGBT youth community is more likely to have sex at an early age, more likely to have sex under the influence of alcohol or drugs, more likely to experience dating violence, less likely to use protective measures, and more likely to contract STIs” (Crowell, p. 53). Furthermore, because students in the LGBTQIA+ community demonstrate a greater need for puberty and development and sexuality education than even their heterosexual peers, excluding this community from representation in curricula materials altogether can be damaging. The studies within this literature review evidence that the LGBTQIA+ community is often not represented in puberty and development and sexuality education. Further, some states within the United States of America promote anti-gay puberty and development and sexuality education.

Anti-gay education can prove more toxic than exclusion. According to Crowell (2019), there are multiple forms of anti-gay education, including “don’t say gay” education in South Carolina and Louisiana, “anti-homo” education in Arizona, Alabama, and Texas, “heterosexual-centric” education in Florida, and, prior to the Obergefell v. Hodges Supreme Court case that legalized gay marriage, “abstinence until marriage” education, which is taught in states like North Carolina. “Don’t say gay” education prohibits discussions of any sexual behavior that is not heterosexual and bans sexual images of people within the LGBTQIA+ community. “Anti-homo” education prevents schools from speaking of non-heterosexual relationships as relationships that are valid or acceptable, and even sometimes requires reference that homosexuality was at one time illegal. “Heterosexual-centric education” emphasizes safe sex only in heterosexual marriages. Finally, “abstinence until marriage” education prior to Obergefell v. Hodges indicated that sexual activity between
people that were not in heterosexual marriages was unacceptable, and that students who were not heterosexual were not entitled to information about engaging in safe sexual intercourse. Anti-gay education further isolates students of a sexual minority, and can damage their mental and emotional health, even causing some students to drop out of school rather than facing discrimination (Crowell, 2019).

Another minority group that is often left out of puberty and development and sexuality education are students with disabilities. This literature review found that people with disabilities are often excluded from access to puberty and development and sexuality education. A 2018 study of the efficacy of sexuality education for people with intellectual disabilities offered a disconcerting explanation for this: “fears persist regarding the capacity of sexual activity and reproduction of these individuals” (Gonzálvez et. al, 2018, p. 332). The study claimed that people with disabilities who did not receive sexuality education had negative impacts such as “manifestation of inappropriate sexual behaviors and the development of low self-esteem… the practice of unsafe sex and the involvement in experiences of sexual abuse” (Gonzálvez et. al, 2018, p. 332). However, the study found that people with disabilities who did receive sexuality education had less instances of inappropriate behaviors and better decision-making skills (Gonzálvez et. al, 2018). In order to combat the lack of representation that people with disabilities face in sexuality education and ensure that people with intellectual disabilities receive an effective sexual education, a group in Australia had success using peer education where people with intellectual disabilities teach other people with intellectual disabilities about sexuality education (Frawley & O’Shea, 2020). One reason for the program’s success was attributed to the fact that the students were able to connect with the content better because of the ability to identify
closely with the educators. Peer education may be one solution for groups that are excluded from puberty and development and sexuality education.

Pleasure and sexual satisfaction are two topics often overlooked within sexuality education programs worldwide because the topic of sexual intercourse is taboo in many countries throughout the world. A 2020 study of pleasure and sexuality education in the United States of America found that, “the United States focuses almost exclusively on avoiding unintended pregnancy and sexually transmitted diseases, overlooking other critical topics such as the information and skills needed to form healthy relationships and content related to sexual pleasure” (Kantor & Lindberg, 2020, p. 145). This study examined three major data sets, the School Health Profiles, the School Health Policies and Practices Study, and the National Survey of Family Growth to better understand the incorporation or, more frequently, the lack of incorporation of pleasure into sexuality education in the United States. The study claimed that youth are frustrated with the lack of information provided in sexuality education about sexuality and healthy relationships. In addition, the study suggested that teaching about pleasure does not equate to teaching about concepts that are not grade-level appropriate. For example, for students participating in puberty and development education prior to participating in sexuality education can explore the standard, “describe ways that human beings feel pleasure from physical contact (e.g. kissing, touching, caressing, sexual contact) throughout their life” (Kantor & Lindberg, 2020, p. 146). There is no doubt that pleasure and sexual satisfaction are essential components to a thorough sexuality education experience. The study found that

“ignoring pleasure not only leaves out a salient component of sexual health but may also put young people at risk for reduced use of contraception and condoms…” [and]
failing to address pleasure may have implications for sexual coercion, as sex education may be one of the only places that young people learn that sex should be pleasurable and not used in manipulative and harmful ways” (Kantor & Lindberg, 2020, p. 146).

In addition, a 2020 study in the role adolescent sex education has on sexual satisfaction in LGBTQIA+ adults found that a more comprehensive sexual education program during youth equated to greater sexual communication and satisfaction amongst those in young adulthood (Evans & Goldey). The study examined the relationship between adolescent sexuality education, either comprehensive or abstinence-only, and young adult sexual satisfaction by studying a population of American young adults, including young adults from minority sexuality groups. From these studies, it is evident that pleasure and sexual satisfaction are key topics to include in any effective sexuality education program, and standards for students in upper elementary participating in puberty and development education can be included at a grade-appropriate level to start these conversations.

Sexual functioning and dysfunction were also two themes commonly left out of or merely lightly touched on in puberty and development and sexuality education programs. According to Foshay and O’Sullivan (2020), new definitions of sexual functioning include the psychological facet of distress in addition to physiological aspects of functioning aligned with the human sexual response cycle. Their study of sexual functioning and its relationship to sexuality education and home-based sex communication found that youth experience sexual dysfunction at high rates, and that sexuality education can reduce risk of potential negative outcomes (Foshay and O’Sullivan, 2020). Therefore, it is important that young students have a full understanding of sexual functioning. This is introduced in puberty and
development education in North Carolina when students learn in the fourth grade about male and female anatomy and in fifth grade about how that anatomy interacts in a reproductive manner. However, a 2019 study of sexuality education and transgender youth found that missing information, especially in terms of sexual functioning, was widespread amongst those surveyed (Bradford et. al). This study involved an online questionnaire and group interview of fourteen transgender youth in the upper-Midwest United States of America. The study found that several participants described understanding the mechanical aspects of sexuality or reproduction but still lacked knowledge of how to engage in sexual activity. For example, one participant (genderqueer/gender fluid and trans-masculine (FtM), bisexual, age 14) described not knowing how ‘. . . sex is supposed to “work” and what’s supposed to hurt and what isn’t’ (Bradford et. al, 2019, p. 93). The most basic goal of a comprehensive sexuality education program should be that, once complete, students are able to understand sexual functioning and know where to go with questions about sexual dysfunction.

Lack of representation and lack of information were the most common issues within puberty and development and sexuality education programs on a national scale. While not all of the topics mentioned in this literature review are grade-appropriate as-is for students participating in puberty and development education, they do provide a foundation for conversations that can be sparked in a grade-appropriate manner at the elementary level. These conversations can then be transferred and further developed in sexuality education programs in upper middle school and early high school. In this way, these common themes can serve as a foundation for topics that can be added to the North Carolina curriculum for puberty and development education.

Current North Carolina Puberty and Development Curriculum
The North Carolina Department of Public Instruction incorporates puberty and development curriculum into both its Healthful Living standards and Reproductive Health and Safety Education instruction. In North Carolina, puberty and development education begins in either the fourth or fifth grade and is completed in the sixth grade before students transition to sexuality education beginning in the seventh grade.

In the fourth grade, Healthful Living includes standards for anatomy, relationships, and changes during puberty. It should be noted that the clarifying objectives for the anatomy standard 4.PCH.2 “Understand body systems and organs, functions, and their care” focus on the respiratory system and skincare, not reproductive organs (Healthful Living Essential Standards, n.d.). In the fourth grade, students begin to learn about relationships in terms of contrasting healthy and unhealthy relationships, as outlined by clarifying objective 4.ICR.1.6 (Healthful Living Essential Standards, n.d.). Finally, in the fourth grade, students are supposed to be able to “Understand the changes that occur during puberty and adolescence,” especially physical and emotional changes that occur at different rates, as outlined by standard 4.ICR.2 (Healthful Living Essential Standards, n.d.).

In the fifth grade, Healthful Living standards for puberty and development education include relationships and changes and influences during puberty. It should be noted that standard 5.ICR.1 “Understand healthy and effective interpersonal communication and relationships” does not include clarifying objectives specific to either platonic friendships or romantic relationships (Healthful Living Essential Standards, n.d.). Rather, this standard is meant to focus on stranger danger, conflict avoidance, and discrimination. Finally, fifth grade standards go more into depth about puberty changes and influences in standard 5.ICR.2 “Analyze the changes and influences that occur during puberty and adolescence” (Healthful
Living Essential Standards, n.d.). This standard features clarifying objectives that focus on secondary sex characteristics in relation to puberty, determining accuracy of sources of information about puberty, the functions of male and female reproductive systems, societal influences on behavioral choices and reproductive health, and the media’s effect on perceptions of desirable body sizes and shapes.

In the sixth grade, Healthful Living standards are also focused on relationships and changes during puberty. Standard 6.ICR.2 “Apply strategies and skills for developing and maintaining healthy relationships” specifically focuses on sexual activities and abusive relationships in the clarifying objectives (Healthful Living Essential Standards, n.d.). The clarifying objectives ask students to consider the impact of sexual activity outside of marriage on health, responsibilities of parenthood, refusal skills to avoid negative peer pressure, sexual behaviors, and sexual harassment, reporting sexual harassment and bullying, and signs and resources for abusive relationships.

Passed in 2009 House Bill 88, or the Healthy Youth Act, was implemented in North Carolina public schools in 2010. Reproductive Health and Safety Education (RHSE) instruction was meant to be guide sexuality education for grades seven through nine. North Carolina Reproductive Health and Safety Education utilize both the North Carolina Teen Pregnancy Prevention Initiative and the National Campaign to Prevent Teen Pregnancy as resources to guide curriculum. The North Carolina Teen Pregnancy Prevention Initiative created programs to “prevent teen pregnancy and support teen parents,” and the National Campaign to Prevent Teen Pregnancy works to prevent unplanned pregnancy by “increasing information, access, and opportunity” (Reproductive Health and Safety Education, n.d.).
The Title V State Sexual Risk Avoidance provides grants to states and, in North Carolina, can fund education under Reproductive Health and Safety Education. According to the North Carolina Department of Public Instruction website, Sexual Risk Avoidance grants are designed to “develop, implement and evaluate sexual risk avoidance education programs” (Reproductive Health and Safety Education, n.d.). Sexual Risk Avoidance is” designed to teach youth the benefits of avoiding sexual activity by centralizing personal responsibility, self-regulation, goal setting, healthy decision-making, focusing on the future, and preventing youth risk behaviors” with a focus on “youth who are most likely to bear children out of wedlock” (Reproductive Health and Safety Education, n.d.). About a third of the 115 education agencies qualify for funding for the Sexual Risk Avoidance Program, and these agencies were identified “based on high teen pregnancy and birth rates, high rates of children aged 0-17 in foster care, high free and reduced lunch eligibility and academic risk factors (e.g. poor attendance and low graduation rates)” (Reproductive Health and Safety Education, n.d.). Therefore, not all North Carolina school districts receive funding from the federal Sexual Risk Avoidance Program.

Table 1

North Carolina School Districts That Qualify for Sexual Risk Avoidance Program Funding

<table>
<thead>
<tr>
<th>School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allegheny County Schools</td>
</tr>
<tr>
<td>Anson County Schools</td>
</tr>
<tr>
<td>Ashe County Schools</td>
</tr>
</tbody>
</table>
Bertie County Schools
Bladen County Schools
Caldwell County Schools
Cumberland County Schools
Duplin County Schools
Edenton/Chowan County Schools
Edgecombe County Schools
Granville County Schools
Greene County Schools
Halifax County Schools
Hertford County Schools
Jones County Schools
Lee County Schools
Lenoir County Schools
Martin County Schools
Montgomery County Schools
Northampton County Schools
Randolph County Schools
Robeson County Schools
Rockingham County Schools
Sampson County Schools
Scotland County Schools
Swain County Schools
Vance County Schools
Warren County Schools
Washington County Schools
Wilson County Schools

Note. This is an all-encompassing list of school districts in North Carolina that are eligible for Sexual Risk Avoidance Program funding (Reproductive Health and Safety Education, n.d.).

Another portion of the required RHSE guidelines is HIV/ STD Prevention. According to the North Carolina Department of Public Instruction website, the goal of this instruction is to “provide age appropriate, medically accurate HIV/STD and teen pregnancy prevention education to all school-age children with an emphasis on minority populations whom are disproportional impacted” (Reproductive Health and Safety Education, n.d.). While this instruction was designed with seventh, eighth, and ninth grade students, it is important to note that this instruction includes the following requirement: “teaches that the expected standard for all school age children is Abstinence Until Marriage” (Reproductive Health and Safety Education, n.d.). However, the guidelines also include instruction on the effectiveness and failure rates of condoms and other birth control methods. It is also important to note that legal guardians also have the right to withhold their consent for their child to participate in any puberty and development or Reproductive Health and Safety Education instruction.

Gaps in the Current North Carolina Puberty and Development Curriculum
A review of the current North Carolina puberty and development curriculum presents gaps, especially gaps that are consistent with what was found in the literature review.

Although relationships are touched on within the Healthful Living standards, no standard or clarifying objective suggests that teachers should teach how to navigate various types of relationships, both platonic and romantic, in a healthy manner. While students are required to learn how to compare and contrast healthy and unhealthy relationships in the fourth grade, this standard merely enables students to spot red flags and does not provide necessary tools for navigating a relationship that has become unhealthy. As students will likely have had experience with platonic relationships in the past, the idea of pursuing romantic relationships is oftentimes new in the fourth grade, and tools for navigating various types of healthy relationships will help empower students to confidently and safely do so. Therefore, this is a critical gap in the curriculum for the empowered upper elementary student.

In addition, the curriculum does not present much room for discussion about positive sexual experiences. Sexual experiences outside of marriage are presented in a negative light, with emphasis on sexual risks, as outlined in both sixth grade Healthful Living standards and the Sexual Risk Avoidance program, and the abstinence until marriage approach (Healthful Living Essential Standards, n.d.). For students who are or who will become sexually active before marriage, this does not leave room for exploration of topics such as a thorough amount of information about safe sex, sexual pleasure and satisfaction, or even sexual functioning or problems with dysfunction. Again, these concepts are critical gaps because not all students will wait for marriage to participate in sexual activities, and these students have a right to information that will empower them to navigate sexual experiences safely and
healthfully. In addition, the literature review provided evidence that the abstinence before marriage approach can be dangerous for the LGBTQIA+ community because, until recently, gay marriage or gay sexual activities were outlawed in some states, and the abstinence before marriage approach presented any LGBTQIA+ sexual activity (because it had to occur outside of a legal marriage) as unacceptable.

Finally, because parents have the right to choose whether or not students will participate in puberty and development education in their North Carolina public school, not all students will have access to pertinent information that will support their ability to make safe, healthy choices about their body and their relationships. This information also has the capacity to empower students in confidently navigating friendships, romantic relationships, puberty, and sexual experiences. While these kinds of relationships and experiences may occur at different times throughout each student’s life, learning this information as they enter puberty will provide a foundation of knowledge that they can tap into when they are ready for these experiences. For example, some students may choose to wait until marriage years after their upper elementary educational experiences to have any sexual experiences. However, if they learned accurate, thorough, inclusive information and skills about sexual activities and sexuality prior to experiencing puberty, they will have the tools they need to choose to wait until marriage and the tools they need as they enter marriage to navigate their marriage and their sex life. For those that don’t choose to wait until marriage and choose to experience sexual activities in their youth, they will also have the tools they need to do this safely and healthfully. Therefore, the North Carolina option of allowing parents to decide whether students receive an education in puberty and development prevents some students from learning information that can empower them to make positive, healthy choices.
Survey

For the purposes of gaining insight from educators with experience teaching puberty and development education in grades kindergarten through sixth, a ten-minute, anonymous survey was created on secure Qualtrics software and distributed to educators through groups on Facebook. These groups included North Carolina Teachers United, North Carolina Teachers for Change, Teachers helping Teachers, Teachers, Teacher’s Association, TEACHERS, Appalachian Community of Education Scholars (ACES), and Appalachian State University Teaching Fellows & ACES Alumni. These Facebook groups were selected for this survey because they include teachers within the United States, specifically teachers within North Carolina, and allow the posting of surveys as a part of the group rules. The survey was able for responses for approximately one week. Survey questions can be found in the appendix of this paper.

Unfortunately, due to time constraints and a small accessible population of teachers both qualified and willing to take the survey, the survey response total was 22. Because teaching puberty and development education to young students is considered taboo by some teachers, there were few teachers out of the thousands in the Facebook groups that had access to the survey who were willing to provide their input. Therefore, because the population surveyed was so small, there is limited data. It should also be mentioned that the teachers who were willing to take the survey may initially have a more progressive bias towards the subject of puberty and development education; teachers who find the subject taboo are less likely to take the time to complete a survey about a topic that they are uncomfortable with. Therefore, there is a need for additional research of this nature to gain a more complete understanding of the thoughts of a variety of educators in this field.
Before exploring survey findings, it is important to note the demographics of those who participated in the survey. One hundred percent of respondents identify as female, and 75% identify as either white or Caucasian. Eight percent identified as Hispanic, and the rest of respondents did not respond to the question about race.

**Figure 1**

*Race of Survey Respondents*

![Race of Survey Respondents](image)

*Note.* This figure displays the race of survey respondents. 75% of respondents were white or Caucasian, 8% were Hispanic, and 17% chose not to respond to the question.

Half of respondents were between the age group of 41 years to 50 years, 33% were between the age group of 31 years to 40 years, and 17% were between the age group of 21 years to 30 years. One hundred percent of respondents were from the United States, and 58% percent of respondents specified that they were from North Carolina, while 8% specified that they were
from Virginia. Out of the respondents, 67% have a religious affiliation. While 75% of respondents had at least 11 years of teaching experience, 83% had ten or less years of experience teaching puberty and development education. In addition, 100% of respondents indicated that they had experience teaching puberty and development education in at least one grade level from fourth grade to sixth grade, but no respondent indicated that they had experience teaching puberty and development education to any student below the fourth grade. This corresponds with the fact that the North Carolina curriculum for puberty and development education does not begin until the fourth grade.

**Figure 2**

*Teaching Experience of Survey Respondents*

*Note.* This figure displays the teaching experience of survey respondents. Most respondents had 11 to 24 years of total teaching experience and, separately, most respondents had four to ten years of teaching experience of puberty and development education.
Survey Findings

Respondents described how puberty education and development is taught within their classroom at their school. Only one respondent stated that puberty and development education was taught throughout the year. The rest of respondents indicated a shorter time period of instruction, with the longest time period being three to four weeks. In fact, 30% of respondents indicated that the content is only taught in a single session. There were also a wide range of educators that were listed as responsible for teaching puberty and development education to students. These educators included classroom teachers and teacher assistants, gym or physical education teachers, the school nurse, and guest speakers. One teacher responded that, “Staff reps met and carefully chose information within the curriculum they believed would be most acceptable by the community. Each school has an annual parent meeting before the first lesson in order for parents to look at materials and ask questions.” Another listed topics that they were explicitly told that they aren’t allowed to teach, including, “abortion, birth control, and masturbation.” This response was particularly interesting considering North Carolina provides curriculum for the effectiveness and failure rates of condoms and other birth control methods and instruction in the use of or a demonstration in how to use condoms within the HIV/STD Prevention program that is a part of the RHSE guidelines. Based on these responses, it is easy to conclude that students receive vastly different puberty and development education experiences. The time period in which they are taught, who provides the instruction, the curriculum they are taught, and how they are taught are vastly different depending on the community, school, and classroom that they are in.
Respondents answered a series of questions about whether or not and how students are divided when being taught puberty and development content. Eighty-nine percent of respondents indicated that students were divided by sex or gender, specifically into two groups, boys and girls, while being taught this content, and 100% of respondents that indicated this division in their school stated that there was no policy for placing transgender students or students who identify as non-binary into a group. In regard to the creation of a policy, one teacher even stated, “My principal is extremely uncomfortable with the concept.” While 44% of respondents indicated that they disagreed or strongly disagreed that dividing students by sex or gender is the most effective way to teach puberty and development education, only 22% of respondents agreed with this statement, and no respondent strongly agreed.

Respondents answered questions about students with disabilities in self-contained classrooms at their school. Forty-three percent of respondents indicated that students with disabilities in self-contained classrooms received no puberty and development education whatsoever. Half of those who responded that students with disabilities in self-contained classrooms did receive puberty and development education indicated that they received it outside of their self-contained classrooms with the general population of students.

Respondents answered several questions about what is taught in their classroom during puberty and development education. Sixty percent of respondents indicated that they do not teach any topics provided in the current North Carolina curriculum, and no respondents indicated that they cover all topics in the current North Carolina curriculum. Respondents that indicated that they do teach some of the North Carolina curriculum topics checked the following topics as topics that they teach: teen pregnancy prevention, sexual risk
avoidance, effectiveness and failure rates of condoms, effectiveness and failure rates of birth control methods other than condoms, prevention of HIV, and/or prevention of sexually transmitted diseases.

For those that include content within their teachings that is outside of or an extension of North Carolina required curricula, topics that they stated that they choose to teach include how to prevent unwanted sexual attention, hygiene, deodorant use, sexual pleasure and consent, sexual self-pleasure, and resources to go to with questions about sexual pleasure or functioning.

Only one respondent indicated that she teaches about anatomy other than just male or female, and the remaining respondents that teach about anatomy indicated that they only teach male and female anatomy.

Not every survey respondent teaches about relationships. In fact, only 14% of respondents indicated that they teach about relationships. Only one teacher taught about both platonic relationships and romantic relationships containing people of all sexes and genders. One teacher taught only about platonic friendships, and the other taught romantic relationships in addition to this, but only heterosexual relationships.

Again, only 14% of respondents indicated that they teach about sexual encounters. All 14% teaches about male/female sexual encounters and penetrative vaginal sex, but only one respondent teaches about sexual encounters that include people of other sexualities and genders, and only two respondents teach about types of sexual experiences other than penetrative vaginal sex.

Respondents were asked a question about resources that students are provided outside of the classroom to go to if they have questions after learning about puberty and
development. Sixty-three percent of respondents offer parents as the only resource outside of class for students to go to with questions, and 13% of respondents offer the school counselor as a resource. Twenty-six percent of respondents indicated that they do not provide resources outside of what is offered in school. No respondent provided students with the option of contacting a doctor, sex therapist, or another expert to address their questions.

Respondents were asked about topics within the current North Carolina curriculum for puberty and development education. They were given the option to eliminate as many topics from the curriculum as they desired, and one hundred percent of respondents to this question selected the “Abstinence Before Marriage” approach to eliminate.

When asked what they would add to the North Carolina curriculum for puberty development and education, all topics offered were selected at some point by at least one respondent. These topics included: healthy friendships, healthy romantic relationships between people of different genders, healthy romantic relationships between people of the same gender, the sex and gender spectrums, sexual anatomy and puberty of students non-identifying as male nor female, sexual pleasure as an aspect of healthy intimacy, how to discuss sexual pleasure with a partner, consent, sexual self-pleasure, sexual encounters between people of different genders, sexual encounters between people of the same gender, types of sexual encounters other than penetrative vaginal sex, in addition to birth control, sexual protection against HIV and STDs (such as dental dams), sexual functioning and dysfunction. In fact, 22% of respondent selected all topics as topics that should be added to the curriculum. The most frequently selected topic to be added to North Carolina curriculum was consent, as 89% of respondents selected this option. The three most frequently selected topics, after consent, were healthy friendships, sexual self-pleasure, and in addition to birth
control, sexual protection against HIV and STDs (such as dental dams); all selected by 56% of respondents. Overall, 75% of respondents selected at least one topic to be added to the curriculum, indicating that the majority of respondents desire a more extensive curriculum than what is currently offered.

Finally, the last question asked respondents if they felt that the current curriculum that they are required to teach is effective. An overwhelming 75% of respondents stated, in one way or another, no, that their current curriculum is ineffective. Twenty-five percent of respondents stated that they felt that the curriculum is effective as-is, but all of these respondents also stated that their reasoning behind this was because they felt it was appropriate for the grade level being taught. Reasons provided for the curriculum being ineffective included that schools do not go into detail about puberty and development, healthy relationships are not addressed, student needs are not addressed, community influence has caused the majority of vital information to be removed by the district, students don’t get needed information, the curriculum needs updating, parents have the option to pull students from engaging with the curriculum, educators are uncomfortable or feel unprotected from conflicts with parents, and educators feel there is not enough curriculum to follow.

Survey Conclusion

In conclusion, respondents believe that the current North Carolina curriculum for puberty and development education is ineffective because the education that students receive between school districts, schools themselves, and even between classrooms is widely different and inconsistent, as evidenced by this survey. The time educators spend teaching puberty and development education is often abbreviated compared to other content areas, with 30% of respondents indicating that the content was offered within a single session. The
educator designated to teach the curriculum varies greatly between schools, with anyone from the classroom teacher, the teacher assistant, the physical education teacher, the school nurse, or a guest speaker taking responsibility to teach the content. The type of expertise and training each of these educators has to teach puberty and development education differs greatly, so what students learn and how they learn it will differ with each type of educator. The topics covered in each classroom also vary widely, as 60% of respondents do not teach any of the North Carolina curriculum, even though 58% of respondents specified that they teach in North Carolina. Many teachers went off-script and taught additional topics, but the topics they chose and what they covered within each topic varied greatly respondent-to-respondent. Many respondents even indicated that the community, not state standards, had the biggest impact on what they are allowed to teach. Finally, 75% of respondents indicated that the curriculum they are required to teach is ineffective, with suggestions for eliminating “abstinence before marriage” as the required state approach and suggestions for adding additional topics to the curriculum.

**Connections Between the Literature Review and the Survey**

According to the experiences of the survey respondents, their responses suggest that North Carolina may experience the same gaps in puberty and development education that are consistent with national trends.

Because 100% of respondents who indicated that students are divided by sex or gender when learning about puberty and development also indicated that their school did not have a clear policy on where to place non-binary or transgender students, with one respondent even commenting that the idea of creating a policy made their principal uncomfortable, it is clear that puberty and development education is not consistently
inclusive for all students across the sex and gender spectrums. In addition, when teaching anatomy, only one respondent indicated that they teach anatomy other than just male or female, so students on the sex spectrum who are not biologically male nor female are consistently without representation in the puberty and development education classroom. As mentioned previously, the 2019 study by Bodnar and Tornello on the sexual health of lesbian, bisexual, and heterosexual women and the 2019 study by Crowell on anti-gay education both concluded that people in the LGBTQIA+ community are in stronger need of thorough, inclusive, accurate sexuality education because they are more likely to participate in sexual activities at a younger age than their heterosexual, cisgender peers. Therefore, it is vital that students across sex and gender spectrums not only feel safe and welcome to participate in puberty and development education, but that they are represented within the curriculum so that they can become empowered to make safe, healthy choices about their bodies and relationships. Policies that discriminate against non-binary, genderqueer, and transgender people, such as dividing students into two binary sex or gender groups, forcing students to conform to a binary gender identity for the purpose of receiving puberty and development education, do not create a safe, welcoming environment where students feel comfortable participating and asking questions. This excludes these students from receiving a proper education, and even invites harassment of these students by peers because it emphasizes their difference.

In addition, it is clear that some classrooms may incorporate heterosexual-centric education. Only one respondent indicated that they taught about romantic relationships between people that are not just male and female, and only one respondent indicated that they taught about sexual encounters between people that are not just heterosexual. The North
Carolina curriculum promotes abstinence before marriage, which up until recently when gay marriage was declared legal across the nation by the Supreme Court, was harmful to LGBTQIA+ students because it insinuated that any sex outside of a heterosexual marriage was unacceptable. Fortunately, 100% of respondents selected this approach to eliminate from state curriculum.

Finally, it is evident that students with disabilities in self-contained classrooms do not receive the same opportunities for puberty and development education that their peers without disabilities receive. Forty-three percent of respondents indicated that students with disabilities in self-contained classrooms at their school do not receive any puberty and development education. This education is central to all students’ competence to become empowered to make safe, healthy choices about their relationships and their bodies, and therefore it is unacceptable when students, disability or no disability, do not have the opportunity to receive this education.

There is evident desire among respondents for change within the curriculum they are required to teach. Seventy-five percent of respondents claimed that they felt, for one reason or another, that the curriculum they teach is ineffective. In addition, there is a preference for an expanded curriculum, as 75% of respondents selected at least one topic to be added to the existing curriculum. Twenty-two percent of respondents selected all topics on the given list to be added, and consent, healthy friendships, sexual self-pleasure, and in addition to birth control, sexual protection against HIV and STDs (such as dental dams) were the most selected topics to be added to curriculum. Survey respondents have overwhelmingly indicated a preference for an updated North Carolina curriculum for puberty and
development education, and the gaps found as a result of the survey consistent with gaps found on national and international levels also require change.

**Proposal for Change**

In order to create a more effective puberty and development education experience for all North Carolina students, changes need to be made to the curriculum.

The LGBTQIA+ community requires both representation and information relevant to their sexuality and gender. Studies show that they are more likely to participate in sexual activities at an earlier age, so representation in the curricula and accurate, thorough information is even more pertinent to these students than their heterosexual peers (Bodnar & Tornello, 2019 and Crowell, 2019). Therefore, curriculum should include standards that address the sex, gender, and sexuality spectrums. When teaching anatomy, students should learn that there are biological karyotype combinations that result in more than just the typical male and female reproductive systems and genitalia. In addition, it should be acknowledged that there is a gender spectrum, and that male and female are just two common points on that spectrum. When teaching about healthy relationships, healthy relationships between non-heterosexual couples should be worked into curriculum. In fourth grade, that can be as simple as acknowledging the sexuality spectrum. When scenarios of healthy relationships are discussed, non-heterosexual couples should be worked into examples. This will ensure that there is representation for the LGBTQIA+ population in a way that doesn’t further isolate them from heterosexual students.

The LGBTQIA+ community should obtain information through puberty and development education relevant to having safe sex because they are more likely to engage in sexual activities at an earlier age (Bodnar & Tornello, 2019 and Crowell, 2019).
learning about HIV/STD and teen pregnancy prevention in grades seven through nine, forms of prevention beyond condoms and birth control should be explained. For example, students should learn about dental dams as a safer way to have oral sex.

In addition, all forms of anti-gay education should be publicly and explicitly banned by the North Carolina Department of Public Instruction, and the approach of abstinence before marriage should be eliminated from the required curriculum. According to Crowell (2019) these forms of education can be toxic to LGBTQIA+ students, even causing them to drop out of school to avoid the persecution that anti-gay education creates. Finally, if schools choose to divide students by sex or gender to teach puberty and development education, they must have a clear policy for students who are genderqueer. Discomfort is not an acceptable excuse for not being inclusive of all students, especially LGBTQIA+ students that require a safe, welcoming environment in order to receive the education that they need at an earlier age than their heterosexual peers (Bodnar & Tornello, 2019 and Crowell, 2019). Ideally, students would not be divided into binary groups at any time during their educational experiences because this forces students on a spectrum of sex and gender to conform to a binary idea of sex or gender, erasing their identity and subjecting them to harassment from peers by pointing out their difference.

Another minority group that requires more from North Carolina are students with disabilities. Students with disabilities have the right to equal opportunity to all forms of education, including puberty and development education, and measures should be taken to ensure that these students are included. Students with disabilities in self-contained classrooms should have the opportunity to participate in puberty and development education in a setting where all supports required for their general curriculum are also offered for this
form of education. Puberty and development education is essential to their empowerment as young adults in terms of the choices they will make about their bodies and their relationships, therefore, inclusive education for students with disabilities is key to their growth as they approach puberty.

Because pleasure and sexual satisfaction are often left out of sexuality education curriculum, these topics should begin to be introduced in a grade-appropriate manner in puberty and development education curriculum. These topics connect to healthy romantic relationships, which students are beginning to navigate for the first time in the fourth grade. For example, standards could acknowledge forms of human touch between consenting partners (in both friendships and romantic relationships) as pleasurable, such as hugs, holding hands, and kisses. Speaking of consent, this would be an excellent topic in which to work consent into the curriculum, as all forms of touching between people, even in forms as appropriate as high-fives or handshakes, require consent. This was the most-frequently selected topic by survey respondents to add to curriculum, and an important tool for empowering young students to make decisions about their bodies. In addition, discussing pleasure in a grade-appropriate manner in upper elementary school as a part of healthy relationships leaves room in the future as students enter sexuality education in the seventh and eighth grades for discussion about navigating healthy sexual experiences as a part of some romantic relationships. It sets the foundation for the ability for students to ask questions and gain information about healthy sexual experiences pertinent to making healthy choices as they grow older without judgement from an abstinence-only approach.

When studying anatomy, because, according to Foshay and O’Sullivan (2020) sexual dysfunction is a common issue for youth, students should learn that sexual dysfunction is
common, and they should be directed to effective resources for any personal questions they have about this topic, including their doctor and other experts such as counselors and sex therapists.

The goal of making changes to the current North Carolina puberty and development education curriculum is to provide a more inclusive, thorough educational experience that provides all students with access to information that prepares them for choices they will make in the world outside the classroom. If the goal of public education is to create well-rounded individuals that have the tools they need to become good citizens, then a successful puberty and development educational experience is a key aspect of public education. While further qualitative research is required to gather input from a variety of educators in the field, creating these proposed changes to the curriculum based on current findings will serve as a foundation for a more thorough, inclusive experience for all students in North Carolina studying puberty and development education. Puberty and development education is essential to ensuring that students are empowered to make informed decisions about their bodies and relationships. It will also provide teachers with a more detailed, inclusive curriculum that will increase consistency and confidence in knowing how to approach the curriculum. North Carolina students deserve the best possible education so that they can be successful citizens, and the constant study and revision of state curriculum will ensure that our students are able to receive just that. In addition, the survey shows that teachers don’t always have the desire or even the ability to teach to the state curriculum. Therefore, the issue of creating a better puberty and development educational experience for all North Carolina students is greater than merely improving the curriculum. The cultural ideology that topics related to puberty or sex are inappropriate for children to learn about must be
eliminated in order for teachers to be able to comfortably teach more inclusively and thoroughly with the support of their school systems and their communities. Then and only then will students receive the puberty and development education that they deserve.
References


Jiang, W., & Ha, L. (2020). Smartphones or computers for online sex education? A contraception information seeking model for Chinese college students. *Sex


Appendix

Survey Questions

We are interested in studying puberty and development education in grades kindergarten through sixth grade. For this survey, you will be presented with questions relevant to puberty and development education in grades kindergarten through sixth grade. Your responses will be kept completely confidential.

Any risk involved in taking this survey is in regards to discomfort reading or responding to questions about puberty and development education. While there are no individual benefits, incentives, or compensations for taking the survey, the survey will be used for an undergraduate thesis proposal in bettering the North Carolina puberty and development education curriculum.

The survey should take you no more than ten minutes to complete. Your participation in this research is voluntary. You have the right to withdraw at any point during the survey, and there will be no penalty for doing so. The Principal Investigator of this study, Bailey Sparks, can be contacted at sparksbn@appstate.edu. The Faculty Advisor of this study, Dr. Greg McClure, can be contacted at mccluregs@appstate.edu.

By clicking the button below that indicates your informed consent, you acknowledge:

* Your participation in the study is voluntary.

* You are at least 18 years of age.

* You are aware that you may choose to terminate your participation at any time.
for any reason.

- I consent; begin the survey.
- I do not consent; I do not wish to participate.

Are you an educator that has experience teaching puberty and development education to students within the grade range kindergarten through sixth grade?

- Yes
- No

With what race do you identify?

With what gender do you identify?

- Male
- Female
- Non-binary
- Genderqueer
- Other

In what age group do you belong?

- 18-20
- 21-30
- 31-40
- 41-50
• 51-60
• 61+

Do you have a religious affiliation?

• Yes
• No
• Unsure/ No response

How many years of experience do you have teaching?

• 0
• 1-3
• 4-10
• 11-24
• 25+

How many years of experience do you have teaching puberty and development education?

• 0
• 1-3
• 4-10
• 11-24
• 25+
In what country do you have experience teaching puberty and development education? If the answer is the United States of America, please also include the states in which you have experience teaching puberty and development education.

What grade levels do you have experience teaching puberty and development education in?

Check all that apply.

- Kindergarten
- 1st
- 2nd
- 3rd
- 4th
- 5th
- 6th
- None of the above

How is puberty and development education taught in your school? Is it taught throughout the year, over the course of a few weeks, by teachers, by guest speakers, etc.? Is there a certain model that your school uses to teach puberty and development education?

The following questions are in regards to how puberty and development education is taught in your classroom at your school.

When teaching puberty and development education, are students divided by sex or gender?
• Yes
• No

If so, please explain how students are divided.

If students are divided by sex or gender when learning about puberty and development education at your school, what is the policy about placing transgender students or students who identify as non-binary in a group?

Select a response based on your beliefs regarding this statement: Dividing students by sex or gender is the most effective way to teach puberty and development education.

• Strongly Disagree
• Disagree
• Undecided/ Neutral
• Agree
• Strongly Agree

Do students with disabilities in self-contained classrooms receive puberty and development education?

• Yes
• No

If so, what is the format?
Which of the following biological karyotype sexes are discussed in your classroom in regards to sexual anatomy and puberty? Check all that apply.

- X
- XX (Female)
- XXY
- XY (Male)
- XYY
- XXXY
- Other

Which of the following topics are covered during puberty and development education in your classroom? Check all that apply.

- The importance of sexual pleasure as an aspect of healthy intimacy.
- The role sexual pleasure may play in healthy relationships.
- How to discuss sexual pleasure with a partner.
- Sexual pleasure and consent.
- Sexual self-pleasure.
- Resources to go to with questions about sexual pleasure or functioning (such as a doctor, sex therapist, etc.)
- None of the above.
When teaching about healthy relationships, which of the following types of healthy relationships are covered? Check all that apply.

- Platonic friendships between people of the same gender
- Platonic friendships between people of different genders
- Male/ female romantic relationships
- Male/ male romantic relationships
- Female/ female romantic relationships
- Romantic relationships involving partners who identify on the gender spectrum as neither male nor female
- Other
- None of the above

Which of the following types of sexual encounters are discussed in your classroom? Check all that apply.

- Male/ female sexual encounters
- Male/ male sexual encounters
- Female/ female sexual encounters
- Sexual encounters involving partners who identify on the gender spectrum as neither male nor female
- Penetrative vaginal sex
- Oral sex
- Anal sex
- Sexual activities that are not oral or penetrative
• Other

• None of the above

If students have questions about topics not covered in class, what resources are made available to them so that their questions can be answered in an age-appropriate manner?

Which of the following topics in the current North Carolina Reproductive Health and Safety curriculum do you teach in your classroom? Check all that apply.

• Teen pregnancy prevention

• Sexual risk avoidance

• Abstinence until marriage

• Effectiveness and failure rates of condoms

• Effectiveness and failure rates of birth control methods other than condoms

• Instruction in the use of or demonstration of how to use condoms

• Prevention of HIV

• Prevention of sexually transmitted diseases

• None of the above

• Other

If you checked “Other,” please list any topics that you teach not included in the curriculum above.
If you could eliminate topics in the current North Carolina Reproductive Health and Safety curriculum, which of the following topics would you eliminate? Check all that apply.

- Teen pregnancy prevention
- Sexual risk avoidance
- Abstinence until marriage
- Effectiveness and failure rates of condoms
- Effectiveness and failure rates of birth control methods other than condoms
- Instruction in the use of or demonstration of how to use condoms
- Prevention of HIV
- Prevention of sexually transmitted diseases
- None of the above

If you could add topics to the North Carolina Reproductive Health and Safety curriculum, which of the following topics would you add? Please check all that apply.

- Healthy friendships
- Healthy romantic relationships between people of different genders
- Healthy romantic relationships between people of the same gender
- The sex and gender spectrums
- Sexual anatomy and puberty of students non-identifying as male nor female
- Sexual pleasure as an aspect of healthy intimacy
- How to discuss sexual pleasure with a partner
- Consent
- Sexual self-pleasure
• Sexual encounters between people of different genders
• Sexual encounters between people of the same gender
• Types of sexual encounters other than penetrative vaginal sex
• In addition to birth control, sexual protection against HIV and STDs (such as dental dams)
• Sexual functioning and dysfunction
• None of the above

Do you feel that the current puberty and development education curriculum that you are required to teach is effective? Why/ why not?