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About the Journal

The University of Illinois at Urbana-Champaign School of Social Work's annual publication, *Journal of Undergraduate Social Work Research (JUSWR)*, showcases peer reviewed undergraduate research from social work and related disciplines that contribute to the advancement of social and economic justice.

Acknowledgements

We would like to express our gratitude to Dean Steven Anderson for supporting our efforts to continue publishing undergraduate student's original work in the Journal of Undergraduate Social Work Research (JUSWR). We also thank the School of Social Work faculty for the encouragement they extended to the authors of the JUSWR 4th issue. We further wish to acknowledge and extend a very special thanks to Dr. Janet Carter-Black, Dr. Kelly Clary, Dr. Gina Fedock, Dr. Rachel Garthe, Dr. Jacob Goffnett, Shongha Kim, Carol Mauck, Dr. Kevin Tan, and Dr. Kate Wegmann for their extraordinary mentoring, guidance, and support on behalf of the student authors.

Dr. Rachel Garthe took over the helm as Undergraduate Research Program Coordinator for the 2019-20 academic year. She brought her enthusiasm and her extensive knowledge of research to our advisory board. We are grateful for her expertise and guidance, and also for her steady support as we made the shift from in-person training to virtual training.

Last, but far from least, the JUSWR Advisory Board and Senior Editor wish to express our pride and gratitude for the tremendous efforts made by our JUSWR peer editors. These stellar students understood they were making a commitment: to participate in mandatory training, to review materials, and to offer viable, supportive recommendations to the student authors. We especially are grateful for your flexibility and dedication as we transitioned to an all-virtual format. Well done!

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Dear Reader:

I am thrilled to welcome you to the fourth volume of the Journal of Undergraduate Social Work Research (JUSWR). The JUSWR is a result of a highly collaborative effort between students, faculty, and staff. Undergraduate peer editors were instrumental in the selecting, editing, and submitting recommendations for research and creative pieces to be accepted for publication. These undergraduate peer editors worked closely with the Senior Editor, Rebecca Dohleman Hawley, who did an outstanding job providing feedback, guidance, and prowess throughout the entire publication process. This journal would not be possible without Rebecca and her instrumental leadership. In addition to the work of the undergraduate peer editors and senior editor, faculty members also generously mentored their students in the writing and publication processes, of which we are grateful for their time and energy. Fellow Advisory Board Member, Dr. Jan Carter-Black, provided the team with exceptional guidance and feedback. As the Undergraduate Research Program Coordinator for the School of Social Work and Advisory Board Member of the JUSWR, I approached my role with commitment and enthusiasm, assisting with the peer editor training and editing process. Together, this collaborative team proudly brings you the fourth volume of the JUSWR.

The JUSWR was published for the first time in the spring of 2017 and each year sees an increase in submissions, pieces, and readers. Last year, JUSWR Volume 3 was split into two issues to accommodate the number of excellent pieces submitted. We are proud to announce that this year, Volume 4 will also consist of two issues. Volume 4 Issue 1, was available in September, and this issue, Volume 4 Issue 2, will be available in November. Issue 2 includes pieces from Social Work, Psychology, and Education undergraduate students. Topics range from the history of the birth control pill; mental health of incarcerated womxn; the mental health, safety, and social-emotional needs among middle school students; and social engagement of those living with dementia. These pieces include research posters and papers, opinion pieces, and poetry pieces.

As the new Undergraduate Research Program Coordinator for the School of Social Work, I am honored to join such a remarkable editorial team and direct undergraduate research efforts. The JUSWR originated with the aim of supporting undergraduate research and scholarly work, becoming a platform for students to disseminate their findings and work. Some of the ways students can become involved in research at the School of Social Work include: 1) participating as a Research Assistant to a faculty-directed research project, or 2) leading their own area of research with an Independent Study or Project. Students can find more information about these opportunities in the Course Catalog (SOCW 310, 418, and 480). It is from these projects that many students submit posters and papers to the JUSWR or present at the University of Illinois Undergraduate Research Symposium. Other research opportunities include authoring or co-authoring research papers and presentations for peer-reviewed journals and academic conferences, serving as a peer editor for the JUSWR, or pursuing the Undergraduate Research Certificate Program offered by the Office of Undergraduate Research.

In addition to research, the JUSWR also accepts original creative pieces for publication. These creative pieces may reflect aspects of students' cultural backgrounds, experiences, or perspectives. The JUSWR also considers an array of pieces in addition to research, including policy briefs, class papers, and opinion pieces. As you flip through the current and previous issues of the JUSWR, you will see a glimpse into the knowledge, creativity, critical thinking, and thoughtfulness of the authors across these diverse platforms. Students make contributions that advance social and economic justice, further enhancing their own and their readers' appreciation toward our diverse and constantly evolving social world.

I am pleased to announce the first issue of the fourth volume of the JUSWR. This publication provides clear and compelling evidence of the high quality of undergraduate social work research and creative works that contribute to knowledge permeating the School of Social Work and the University of Illinois at Urbana-Champaign.

Sincerely,
Rachel Garthe, PhD
Assistant Professor & Undergraduate Research Program Coordinator
School of Social Work



Ready...Set...Score! A World Without Rape

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Abstract

An acclaimed documentary referred to a college campus as a "hunting ground"—a place where sexual predators come to "hunt" for their next victims. Why would this be? Oftentimes, perpetrators on college campuses are not held accountable for their actions, allowing the crime of rape to continue. In this op-ed, I explore how college athletes can be held more accountable for their actions through improved regulations. By holding athletes more accountable with the Tracy Rule—which will require them to self-report any acts of sexual misconduct—athletic departments will be able to demonstrate their commitment to ending rape. Regardless of if this change will lead to anyone truthfully self-reporting, it will clearly state college campuses' solid stance on supporting survivors. Because college institutions exist to instill values of education, ensuring the safety of each student should take priority over assuming the eligibility of each athlete. Thus, campuses taking action is a step toward a world without rape.

Keywords: NCAA, Sexual Assault, Rape, Tracy Rule

Opinion

Don't worry, friends, if a college athlete accepts bribes or takes performance-enhancing drugs, this will be a National Collegiate Athletic Association (NCAA) violation (Vcortez, 2019).

Justice will be served!

And if a student-athlete rapes someone? Well, that's not an NCAA violation. Justice? Not so much. Athletic teams should bring pride to the school not only by being star athletes, but also by being star humans who respect the consent of another human being.

To emphasize the value of morality in athleticism, athletic teams could adopt the Tracy Rule. The Tracy Rule prevents a current or prospective athlete from receiving athletically related financial aid, practicing, or competing at the relevant university if they have been "convicted of, pleaded guilty or no contest to a felony or misdemeanor involving Serious Misconduct," as well

as if they have previously "been disciplined by the university or athletic department at any time during enrollment at any collegiate institution" (Tracy, 2019). As a part of the Tracy Rule, the student-athletes must complete the serious-misconduct questionnaire every year to self-report both pending and closed cases against them. Examples of serious misconduct are sexual violence, domestic violence, stalking, and hate crimes (Tracy, 2019).

Responding to this questionnaire would enable institutions to keep their athletes accountable. This is substantial because today, it is ironically survivors of sexual misconduct who are often held accountable for being harassed. Referred to as "victim-blaming," this includes comments such as the following directed toward survivors: "Were you drinking?" "What were you wearing?" "Did you flirt with them?" Questions like these unfortunately imply a person should not *get* raped, rather than a person should not *rape*.

According to an investigation by a USA TODAY Network, since 2014, at least 33 student-athletes have gone on to play at NCAA schools, regardless of alleged sexual offenses at a previous institution (Jacoby, 2019). Why do academic institutions downplay any sexual assault allegations against their athletes? Maybe because someone's privilege to play sports is more important than someone's right to say no. Maybe because bringing money into the university through sports is more important than the reason the university even exists: to provide a safe educational experience.

Somewhere along the lines, profit overthrew purpose. Many student-athletes accused of sexual assault either continue playing at their school, or they simply transfer schools to continue playing. While they walk the path of stardom and victory for the rest of their lives, they leave a trail of shame and fear in the survivors' lives. We live in a society that rewards the perpetrator

and blames the victim. This much change, and the best way to enforce accountability is through the Tracy Rule.

The University of Texas at San Antonio (UTSA) is the only university to show its support for a safe campus by wholeheartedly accepting the Tracy Rule ("UTSA," 2019). What does that mean for the other 1,199+ schools that are part of the NCAA? By not requiring their student-athletes to report any pending and current investigations, the schools are violating Title IX of the Civil Rights Act of 1964. Title IX is a civil rights law that "prohibits discrimination on the basis of sex in any federally funded education program" ("Overview of Title IX," 2015). Sexual harassment is listed as a violation of Title IX, and letting rapists walk freely around campus is a hindrance to those who attend college for a quality education ("Ventura College," n.d.).

Additionally, requiring student-athletes to report any prior disciplinary actions against them allows them to respect the Clery Act. The Clery Act respects a consumer's right to be informed; thus, the Clery Act requires universities to report campus crime statistics ("Clery Center," n.d.). Overlooking college athletes' crimes as a factor in these statistics demonstrates not only the disregard for humanity—that rape is not important enough to be reported—but also a disregard for the Clery Act.

Thus, it is vital to gather reports regarding sexual misconduct among college athletes.

Admittedly, doing so is not infallible. Because the aforementioned Tracy Rule's seriousmisconduct questionnaire requires student-athletes to self-report, one may argue dishonesty is
still an option. While it is true athletes who have been accused of sexual assault will be
disincentivized to tell the truth, out of fear that it will jeopardize their athletic career, it still sends
the message that athletes should not commit rape. Thus, student-athletes who do have an

unflattering background will think twice about their actions, even if they choose to lie on the questionnaire (Jacoby, 2019). Although it is not foolproof, it is a strong move for athletic departments to show they stand with rape survivors and not rapists. It's a step in the right direction. It is—paraphrasing Neil Armstrong—one small step for human, one giant leap for humankind. Thus, if a university truly wants to bring in money to their institution through sports, they should ensure they are doing it through glorifying only student-athletes who will bring honor to their university.

By valuing student-athletes' freedom more than their responsibility, we are saying we value sports and freedom over the law, humanity, and rights. For each student-athlete who commits rape and walks free, another human carries the burden and walks chained. Is this what we mean by "America—the land of the free and the home of the brave?" So sorry, I did not realize that "free" and "brave" equated to rapists, but those are the people who our academic institutions tend to give priority to. The NCAA has the power to redefine what "freedom" means to America by requiring the Tracy Rule in all their schools and conferences.

We can win this together. The goal is a world without rape. Now, it's time to score.

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Creative Expressions



Critical Thinking Forum Creative Expressions

From the editor:

Critical Thinking Forums give students the opportunity to consider and process rather dense course content through creative expression. Family trees, collages, analysis of existing or creating original song lyrics, poetry, videos, and various other art forms are welcomed. The one caveat is the creative piece must reflect some aspect of the student's lived experience as a member of a particular or combination of their multiple intersecting identities. Students are also required to submit a written description or reflection that addresses the relationship between their chosen creative piece and topics covered in a specific course. Some descriptions discuss the evolution of a student's thought processes, factors that have influenced their core beliefs, and values about how the world *should* be and what they *should* expect from said world, as well as issues they are still striving to reconcile that are related to the specific issues conveyed in their creative work.

Note to the reader: Expletives associated with a particular identity group are included. However, such words must have an expressive and substantive purpose. The inclusion of potentially offensive words for entertainment or mere shock value is forbidden.

LOST

Krista M. Taylor

University of Illinois at Urbana-Champaign

Reflections from the author:

I wrote this poem based on my life experiences and feelings I have faced being a black woman from a predominately white community. Although I had a blessed childhood and upbringing, there was always this nagging construct of being an outsider. When I was able to step out on my own, I moved to areas with more diversity and quickly discovered that I was viewed as an outsider from other people of color. For many years, this label plagued me. I felt as if my sense of identity would forever remain unreachable. It took a long time to work through the self-love process and to re-establish my identity on my own terms. I had to learn to refrain from placing myself in a box and quit allowing labels to carry weight in my life. It took time, but I finally found my way. This poem represents a piece of that journey.

Keywords: Diversity, Enculturation, African-American, Empowerment

LOST

Little black girl, little black girl... why do you look so sad?

Is it that you're tired of proving to people you're not bad?

Your melanin speaks volumes, and your gender does too.

What does the world expect you to do?

You're torn between two worlds,

Being black and being a girl;

Respect is not a given virtue.

Through all the name calling,

And all the hate crimes;

The world just wants to hurt you.

Your history is unknown and wiped out through the years.

You manage to wear a smile to hide away the tears.

As a victim of generational assimilation;

You are viewed as a product of hate in this nation.

Where is my birthright, where is my orientation?

Am I forever doomed to feel like a soldier out of formation?

Growing up with faces that looked nothing like me,

Was complete hell on my esteem and identity.



To white people, I don't belong- and I've always known;
But it is a whole different feeling when denied by your own.

Too black to be white, too white to be black;

Never in a million years could I imagine that.

Drawing by: Anneline Janse Van Renaburg

It cut me to the core, it hurts deep in my soul;

The weight of all this burden is taking a huge toll.

It's time to reclaim myself; find a brand-new station.

I want to find my roots through the art of enculturation.

My journey is long, but I will persevere.

I'll keep on looking forward, and never to the rear.

Little black girl, you matter, no matter the cost.

Continue to always love yourself and you'll never be lost.



The History of the Birth Control Pill

Allison Keating

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Abstract

From banned condoms and spermicide to today's pills everyone has a right to, birth control has faced ample criticism and politicization. The development of a pill was not any less criticized or politicized. Poor, uneducated women faced exploitation and disregard of their suffering throughout the development of a birth control pill. Having a pill also was not originally for the sexual and reproductive liberation of women, but scientist Gregory C. Pincus and a physician named John C. Rock were desperate to develop a pill that would temporarily stop women from ovulating, in the hopes of achieving population control and preventing poverty. Margaret Sanger advocated for a simpler birth control that could be as easy as taking a pill. She supported Pincus and Rock, whose work was almost completely funded by Katherine McCormick, a wealthy feminist. Following trials, it has continued to develop, and today the pill is on its way to providing people of all genders sexual and reproductive freedom. From testing in mental health hospitals in Boston to the slums of Puerto Rico, eugenics has lingered behind the motivation of this celebrated pill and its history is often brushed away with celebrations of the reproductive freedom it offers. While the pill has liberated women since the 1960s, thousands of women were stolen of their liberty during its development.

Keywords: Birth Control, Pill Trials, Eugenics, Contraception

Introduction

Single or married, younger or older, women can now enjoy the luxury to family plan and prevent unplanned pregnancy. Preventing pregnancy did not always come this easily and was not always an option. Birth control has completely revolutionized relationships, the workplace, education, the economy, and life overall within the past 60 years. Now, women can choose when to have children and plan their families, allowing women more control over their lives and motherhood. This luxury, however, encompasses a long, controversial history.

The Ban and Beginnings

In 1873, existing birth control methods, which included spermicide, pessaries, condoms, and vaginal suppositories, were banned. This was due to Anthony Comstock, the founder of the New York Society for the Suppression of Vice (NYSSV.) According to MacIvor, The NYSSV was an institution that aimed to monitor public morality by participating in politics and working with courts to make sure people were punished. They were against immoral concepts such as sexual freedom and sexuality in media such as advertisement, movies, or literature (Anthony Comstock's, n.d., MacIvor, 2017).

Comstock felt disgusted by the introduction of birth control devices and called upon congress to ban them. This became known as the Comstock Act (Thompson, 2013). The act, which passed, prohibited marketing and discussing birth control as well as transporting it across state lines. Twenty-four states took New York's laws further and made their own legislation to regulate the trade of those products, with Connecticut's Barnum Act being the strictest. The Barnum Act mandated even in the privacy of one's own bedroom, using birth control was illegal and could result in arrest and imprisonment. Luckily, Connecticut's law lacked effective enforcement and birth control methods remained largely but quietly in use (Anthony Comstock's "Chastity" Laws, n.d.).

Margaret Sanger, a strong advocate for birth control who also dreamed of a "magic pill" allowing women to more effectively plan their families, decided to challenge the Comstock Act. She opened the first birth control clinic, but authorities caught her quickly. They shut down the clinic and arrested Sanger in 1916 (Thompson, 2013). The next day, she was let free, and she re-opened the clinic a month later. She was arrested again. Sanger appealed her case and won

with the 1918 Crane Decision, allowing women to use birth control only for "therapeutic purposes," although women and their doctors both knew what women were actually using it for, as Thompson states.

The Idea

Gregory C. Pincus, an assistant professor from Harvard, studied conception and fertility. As stated in the article "Margaret Sanger and the Pill," knowing that when progesterone was released in the body during pregnancy, ovulation halted, Pincus decided to inject progesterone and estrogen into female rabbits and rats in order to examine the effects on their fertility.

Margaret Sanger was searching for a scientist to develop this "magic pill," as she called it, that would help women temporarily stop ovulating so they could plan families. Around 1951, she met Pincsu. She learned of Pincus' work on ovulation, foresaw its potential, and proposed the idea of the birth control pill to him. He agreed. However, rather than having an intention of sexual freedom, Pincus was against the sexual liberation of women and instead intended to address population growth with this pill (Margaret Sanger and the Pill, 2012).

The Development

To fund Pincus's research, Sanger introduced him to Katharine Dexter McCormick, a wealthy supporter of the idea of birth control. She donated nearly \$2 million dollars to the research, funding what would alter the role of sex in our society and individuals' lives forever (Margaret Sanger and the Pill, 2012).

Meanwhile, John Rock, a gynecologist, was also testing progesterone in addition to estrogen on infertile patients. Rock thought perhaps if a woman could stop her ovulation, it

would allow her body to recuperate and "rebound" to become more fertile once it begins ovulating again. "Margaret Sanger and the Pill" continues to say that at a scientific conference in 1952, the doctor and the scientist met and realized they were down the same path of using progesterone to halt ovulation. They wanted to test on humans, but a large-scale test of humans would be difficult.

Boston Pill Trials

Pincus and Rock knew they needed to begin testing on humans but doing so would be very controversial. In 1954 and 1955, using psychiatric patients at Worcester State Hospital with only consent from the patients' relatives and not the patients themselves, Pincus tested the oral pill on 12 female and 16 male patients. Meanwhile, Rock continued his focus on infertile women and tested on a group of 50 consenting patients at his gynecology practice (Pendergrass and Raji, 2017; The Boston Pill Trials, n.d.).

Pincus and Rock reached their goal of stopping ovulation. While taking the pill with the hormone progesterone, none of the women had ovulated, and whenever they did not take the pill, the effects were temporary, and they could ovulate again. While the *Boston Pill Trials* proved there may be a pill solution to preventing pregnancy, the two researchers needed large-scale human trials to gain FDA approval. Rock and Pincus moved their studies to Puerto Rico for further human trials (The Boston Pill Trials, n.d.)

Puerto Rican Pill Trials

Between 1954 and 1955, the island of Puerto Rico's slums served as a perfect location for Pincus. According to *The Puerto Rican Pill Trials*, Pincus viewed the impoverished population

as easy to manipulate since they lacked education, and justifiable to test on because impoverished populations needed birth control. Pincus also was concerned with eugenics. Additionally, Puerto Rico did not have any anti-birth control laws unlike in the States that would make the trials legally difficult to conduct. The scientist also hoped to demonstrate how easy the pill was to use. He believed that if a poor, uneducated woman could successfully use the pill, any woman could. Pincus took advantage of the population and failed to inform them of the pill's status—that it was an experiment with potential, unknown side effects. He simply notified them it would prevent pregnancy, taking advantage of a less educated population desperate to prevent pregnancy (The Puerto Rican Pill Trials, n.d.).

The scientist chose El Fanguito, a slum of San Juan, Puerto Rico. There, the concept of having birth control was popular despite Catholic values. Dr. Endris Rice-Wray oversaw the trials and checked up on the women. When women reported negative side effects such as nausea, blood clots, vomiting, stomach pain, or headaches, Rice-Wray would notify Pincus of her safety concerns. However, Rock and Pincus were determined to release this pill and dismissed the dangers of the side effects. *The Puerto Rican Pill Trials* continues to mention how the two researchers believed the ability to prevent pregnancy outweighed the side effects. In addition, they took advantage of a less educated population who was desperate to prevent pregnancy. Additionally, Pincus and Rock also dismissed something else important. Three women died during the trial, and no autopsies were completed to determine if the pill played a role in the death. These women's deaths were left unjustified. By the end, 1,500 Puerto Rican women had taken the pill, and more than 22% had dropped out due to the unbearable side effects which Pincus disregarded. (The Puerto Rican Pill Trials, n.d.).

Birth Control is Approved

In May 9, 1960, the FDA approved Enovid, the first birth control pill, and the pill became legal (Thompson, 2013). In June of 1960, the pill hit the market with much lower doses of hormones. However, states still upheld their own laws regarding birth control. While people in the States could now access birth control, the poor women of Puerto Rico could not. They were not offered compensation for the side effects, nor could they afford the pill that they helped to create while other women were now able to enjoy it (Pendergrass, Raji, 2017; The Puerto Rican Pill Trials, n.d.).

Today's birth control pill contains much less estrogen, which can be contributed to Barbara Seaman. Horwitz discusses how she was an avid advocate for women's health care. She published The Doctor's Case Against the Pill in the late 1960s to contest the safety of such high doses of estrogen and to comment on the injustices done by scientists and doctors who had dismissed the risk of birth control pills (eg. stroke, blood clots). Seaman claimed while medical experts knew about the tie between estrogen and cancer in the uterus since the 1930s, they proceeded to prescribe such high doses of estrogen, putting women at risk, as women were often not educated on the pill's risks. Many pharmaceutical companies worked to prevent the publication of her book, yet she persisted. Horwitz continues to say that the publication led to the United States Senate holding hearings on the pill's safety. The combination of hearings, public outcry, and letters that women wrote to the senate eventually persuaded the FDA to require an insert describing the potential risks to be included in every package of pills. The American Medical Association pushed back, arguing an insert obstructed a doctor's authority with their patients. It was not until 1978 that the FDA officially required information to be included with the package of pills (The Birth Control Pill: A History, 2015; Horwitz, 2018). The arguments presented in *The Doctor's Case Against the Pill* can be credited for why an informative insert can be found inside the packaging of birth control pills today.

Challenging Connecticut's Ban

The Barnum Act in Connecticut meant using birth control at all was illegal and could result in arrest and imprisonment (Anthony Comstock's "Chastity" Laws, n.d.). According to Finlay and Thompson, Elizabeth Griswold, the president of Planned Parenthood League of Connecticut, and C. Lee Buxton, Chair of the Yale Medical School's Department of Obstetrics and Gynecology teamed up to challenge birth control laws in an act of civil disobedience. The duo opened a birth control clinic in 1961, which they knew would be illegal due to strict Connecticut laws prohibiting the use of birth control. The clinic's immediate and large popularity hinted at the need for birth control education and distribution, but authorities quickly took action to shut it down. Days after opening, the state arrested Griswold and Buxton, but the duo appealed to the Connecticut Supreme Court in Griswold vs. Connecticut. They lost the case. The two appealed again to the United States Supreme Court. Using the right to privacy in the First Amendment, the Supreme Court ruled in favor of Griswold and Buxton. In 1965, Griswold won the Supreme Court case for the right to use birth control, but only to an extent. The right to privacy to use birth control was only given to married couples (Finlay, 2016; Thompson, 2013). While this was a step toward increasing accessibility of birth control, it was still not enough.

Everyone Has the Right to Use Birth Control

There was still more work to do to ensure *everyone* had the right to use birth control. The 1972 Supreme Court case *Eisenstadt vs. Baird* was the next step in the legal fight. According to

Thompson, William Baird was an instructor for a course on birth control and contraceptives at Boston University. He gave away Emko Vaginal Foam to a student of his at the end of class, but Massachusetts charged Baird with a felony for violating two circumstances: 1) only a doctor or pharmacist could provide birth control, and 2) birth control could only be provided to married men or women. Baird appealed his case and won. The right to use birth control was now extended to everyone (Thompson, 2013). Reflecting off the 14th amendment's "rational basis test," which says laws must apply to everyone equally, the court decided anyone should be able to use contraceptives, regardless of if they were married or not (Eisenstadt v. Baird, n.d.).

The Birth Control Pill Evolves More

The risks and side effects of high doses of estrogen were widely known by now, and in 1988, birth control pills with lower estrogen doses hit the market. The new pill became a more comfortable option for women since lower doses meant decreased side effects of nausea and headaches, less risk of pelvic inflammatory disease and ovarian cancer, and more effective pregnancy prevention. In fact, *The Economist* named birth control one of The Seven Wonders of the Modern World in 1993 (The Birth Control Pill: A History, 2015).

Further evolved, the birth control pill became even more of a wonder. Why have periods if women do not need them? If a period is part of the ovulation cycle and women do not need to ovulate, can they be eliminated? Seasonale, approved by the FDA in 2003, gave women only four periods a year. Women had their first chance to opt out of periods. Four years later, Lybrel allowed women to completely skip their period. While the name-brand has been discontinued for financial reasons, generic versions remain on the market (Davis, n.d.).

Future Advancements

Male contraceptives, such as RISUG and Adjudin, are currently in development and testing with a promising future on the market. RISUG injects into the testicles and partially blocks the vas deferens so any sperm that gets past it are damaged and cannot fertilize an egg. It lasts for up to 13 years. RISUG has completed clinical trials in India and has been submitted for legal approval. A chemical developed in the 1990s, Adjudin is another male contraceptive that prevents sperm from maturing and would likely take the form of a patch or implant. It is currently being tested in rats (Rettner, 2019; Cheng et al., 2015).

With the advancement of sexual and reproductive freedom granted to women, attention is now being turned to granting males more control over their own reproduction, which will further strengthen society's ability to family plan and grant individuals of all genders the autonomy to control their own reproduction and have a say in family planning.

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Research-Based Poster Presentations

Adverse Childhood Experiences and Mental Health Among Incarcerated Womxn

Mariah Maldonado

University of Illinois at Urbana-Champaign

Abstract

Introduction:

This study uses the term "womxn" instead of "women." This alternative spelling to women is inclusive of trans and non-binary womxn. Once womxn are incarcerated, they are often forgotten and do not receive adequate support to deal with any pre-existing trauma or mental health conditions. Mental health services in prisons can be inadequate or non-existent. There is a lack of research on incarcerated womxn. Research has failed to [adequately] study the mental health of those incarcerated, their pathways to prison, their Adverse Childhood Experiences (ACEs) and how those experiences affect their long-term mental health. Specifically, the author looks at ACES and mental health of the womxn and how that can vary by race (specifically Black/African American and White womxn).

Method:

832 womxn (49.2% White, 35% African American) who were currently serving a sentence at Logan Correctional Center in 2017 and 2018 were interviewed. Womxn were asked about their ACES using the Patient Health Questionnaire-Depression to assess depression and anxiety and the Patient Health Questionnaire- Anxiety for Post Traumatic Stress Disorder (PTSD). The writer conducted multiple regressions using SPSS software.

Result:

42.8% of womxn experienced clinical levels of depression, 64.5% experienced clinical levels of PTSD, and 28.7% of womxn experienced clinical levels of anxiety. On average, womxn experienced 4.54 ACEs. Womxn's ACE scores were significantly associated with depressive symptoms (B=0.47, p<0.001), PTSD (B=0.522, p<0.001), and anxiety (B=0.631, p<0.001). In these models, race was not significantly related to mental health symptoms.

Discussion:

These results illustrate womxn's correctional facilities should consider providing more mental health services that are trauma informed and cognizant of past adversity. By integrating such services in womxn's correctional facilities, it would allow the incarcerated womxn to understand their mental health and find ways to cope, destress, and heal from past trauma. Previous lack of access to mental health services could have played a vital role in their pathway to prison.

Adverse Childhood Experiences and Mental Health Among Incarcerated Womxn

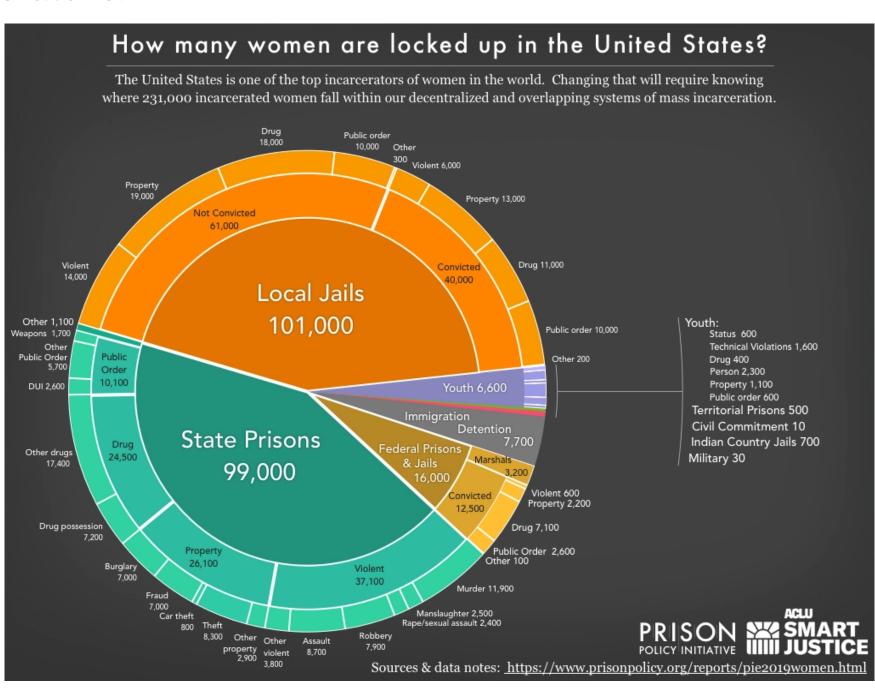
Mariah Maldonado

School of Social Work, University of Illinois at Urbana-Champaign

Faculty Mentor: Rachel Garthe, Ph.D.

INTRODUCTION

According to "Women's Mass Incarceration: The Whole Pie 2019" from October 2019, there were 200,000 womxn incarcerated in the United States. However, this remains an under-researched population in the empirical literature.



Most womxn who are incarcerated in the United States have experienced psychological, sexual, and physical abuse in their childhood. (Jones, et al., 2018) Negative life events and traumatic experiences have been linked to depression, PTSD, and anxiety disorder. (Dehart, 2008)

Theoretical models highlight sexual victimization and traumatic experiences pre-incarceration are considered a pathway to prison, though research needs to be developed further to incorporate trauma-informed practices into interventions for womxn who are incarcerated. (Karlsson, et al., 2018; Dehart, 2008) For example, there needs to be more evidence-based gender-specific treatment about how to support incarcerated womxn instead of using the same treatment as men. (Golladay, et al., 2014; Rossegger, et al., 2009)

Adverse Childhood Experiences (ACES) are an important variable to consider in relation to forms of negative mental health outcomes. ACES can increase the risk for trauma and triggers that are left unresolved, which can be a catalyst for mental health disorders or heightened symptomatology.

The Current Study

This study investigates ACES of womxn who have been incarcerated in relation to their mental health symptoms, including Post Traumatic Stress Disorder, Depression, and Anxiety.

Based on the previous literature, it is hypothesized ACES do affect mental health outcomes of womxn who are incarcerated, such as having clinical levels of depression, PTSD, and anxiety. Moreover, their ACEs may act as a pathway to prison, which are experiences and actions that collectively can push them closer to the criminal justice system.

METHOD

Participants

832 women (49.2% White, 35% African American, 15% Latina, Asian American, multiracial, or another race) who were currently serving a sentence at Logan Correctional Center in 2017 and 2018 were interviewed

Procedure

Secondary data analyses were conducted using a dataset of womxn who were incarcerated at a multiple-level security prison in Illinois.

Measures

Variable	Measure	Scoring
Adverse Childhood Experiences	10-item ACES questionnaire that measures specific forms of adversity	Yes/No to 10 ACE questions
PTSD	7-item Short Screening Scale for DSM-IV Post Traumatic Stress Disorder (citation) to assess for PTSD symptoms in the last four weeks	Likert-type scale ranging from 0 (not at all) to 3 (nearly everyday
Depression	9-item depression sub-scale that reviews their current depressive symptoms they experienced in the past two weeks	4-point Likert Scale
Anxiety	7-item sub-scale that measured anxiety symptoms felt over the last 4 weeks	4-point Likert Scale

Measures used in the current study.

Data Analyses

The current study's hypothesis was tested using multiple regression analysis in SPSS. ACES (independent variable) was examined in relation to PTSD, Depression, and Anxiety (Dependent variables), controlling for race (1 = African American). Analyses were conducted separately for each mental health outcome.

RESULTS

Womxn were asked multiple questions about their childhood experiences and indicated whether or not they experienced certain adverse experiences. Womxn, on average, had experienced 4.54 of the ACES (range: 0-10 experiences).

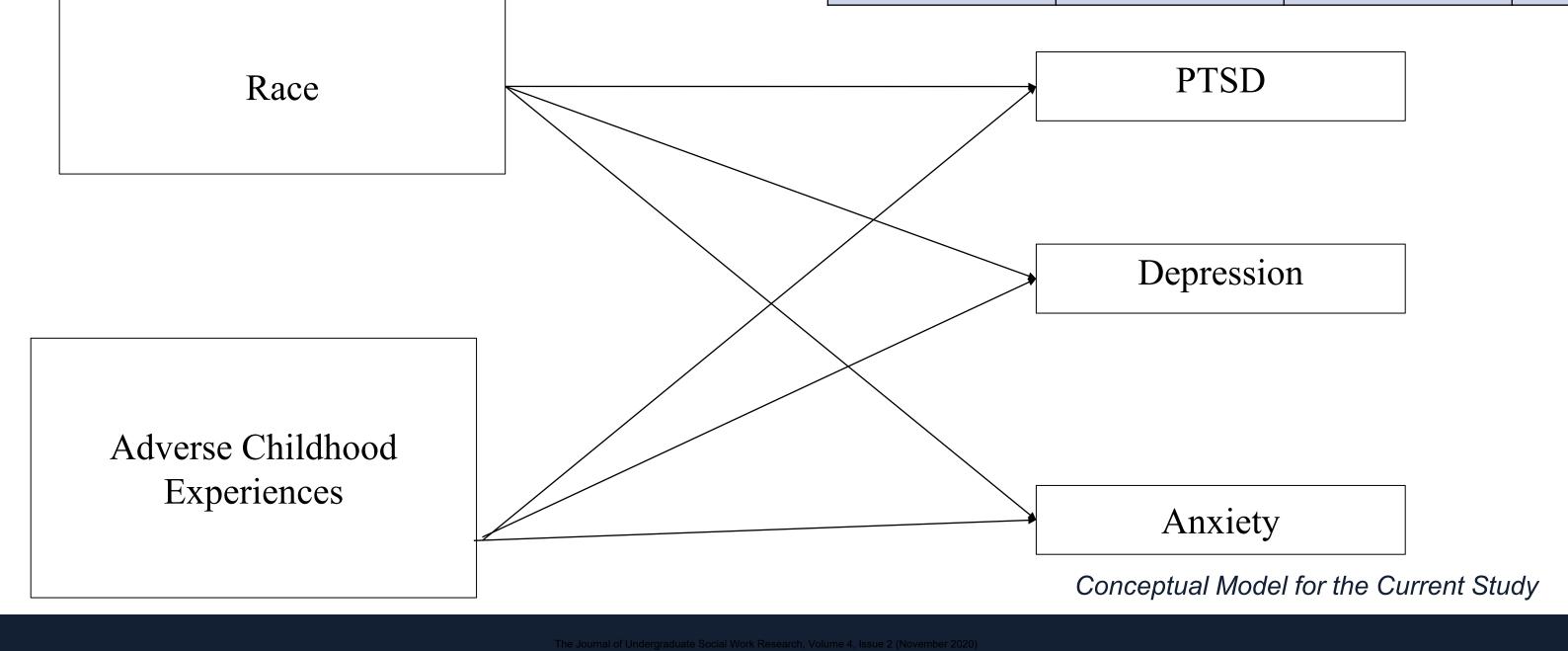
Across models, ACES were significantly associated with higher mental health symptoms. Moreover, in this study there was no correlation with race and mental health outcomes.

	PTSD		
	В	β	p
Race	-0.08	-0.01	.82
ACES	0.52**	0.28	<.001

Tables display the results for the multiple regression analyses
Asterisks are used to indicate significant findings

	Depression		
	В	β	p
Race	0.094	0.008	0.817
ACES	0.47**	-0.229	<.001

	Anxiety		
	В	β	p
Race	0.344	0.031	0.347
ACES	0.631**	0.329	<.001



CONCLUSIONS

There is a significant relationship between ACEs and mental health outcomes such as anxiety, depression, and PTSD. However, there was not a significant correlation between race and mental health outcomes.

The findings from this study can help social workers better understand how to support their clients who are currently in prison and any clients who may seem like they are on the "pathway" to prison. It can also help social workers support different policies and practices they may have not been inclined to before.

After conducting this study, researchers should continue to further study gender-specific pathways for womxn - especially womxn from underrepresented backgrounds. Continuously, there can be further research done on race and ethnicity and how that can affect their experiences with ACEs and interactions with the criminal justice system.

Another variable that should be taken into consideration is cultural differences. Cultural differences may affect the incarcerated womxn's experiences in childhood or how they perceive mental health and barriers making resources inaccessible to them. When considering other variables, one may find those from marginalized communities face many barriers that can also affect their pathways to prison.

The biggest take away from this research is how these womxn's health, stories, and experiences are consistently being silenced and overlooked.

REFLECTIONS

Since this is my first experience with research, I have learned a great deal about what it looks like to gather literature to support my hypothesis and analysis, how to apply statistics to research, and the lack of research done on certain populations.

By having the opportunity to do research work in my undergraduate career, it also allowed me to consider if I would like to be involved in research in the future. This will affect my future practice by acting as a possible starting point. There is still a great deal of work to be done in this specific area, so this can help bring awareness to this issue and promote more studies and large-scale change, such as policies.

ACKNOWLEDGEMENTS

I would like to thank snd acknowledge Dr. Rachel Garthe and Dr. Gina Fedock. As well as the womxn who participated in the collection of data. May their stories and experiences never go unknown or overlooked.



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An Examination of the Associations between Positive and Negative Friendship Qualities and Cyber-victimization from Friends during Early Adolescence

Ashley Ruebling, Amanda Yeazel

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Abstract:

During early adolescence, youth begin to rely more on their peers and friends for emotional support and acceptance. Youth are learning about positive (e.g., emotional support) and negative (e.g., criticism) aspects within the friendships they are developing. However, as youth are developing friendships, they also may be experiencing cyber-victimization from these friends. The current study explored how positive and negative aspects of friendships were associated with cybervictimization from friends. Sixth grade students (N = 281; 50.2% male; 42% African American) from a large urban middle school completed cyber-victimization and friendship quality questionnaires. Multiple regression analysis was used to examine the associations between friendship qualities and cyber-victimization from friends. Results indicated that 38.8% of youth experienced cyber-victimization from a friend. First, positive friendship qualities (i.e., disclosure, satisfaction, emotional support, approval), were examined in relation to friend cyber-victimization. Analyses showed there was a significant relationship between cyber-victimization and friendship satisfaction (B = -.40, p = <.05) and emotional support (B = .81, p <.001). Second, negative friendship qualities (i.e., pressure, conflict, criticism, dominance, exclusion) were examined. There was a significant relationship between criticism (B = .82, p = .02) and friend cyber-victimization. These results highlight specific friendship qualities may impact the cyber-victimization youth experience. More satisfaction within friendships was associated with less cyber-victimization, while emotional support and criticism placed youth at greater risk for cyber-victimization. By understanding how these relationship qualities impact friend cyber-victimization, we can begin to formulate ways to reduce cyber-victimization among friends in early adolescents.

> Key Words: Cyber Victimization, Cyber Victimized by Friends, Friendship Qualities and Cyber Victimization

An Examination of the Associations between Positive and Negative Friendship Qualities and Cyber-victimization from Friends during Early Adolescence

Ashley Ruebling and Amanda Yeazel

Faculty Mentor: Dr. Rachel Garthe, Ph.D. | School of Social Work, University of Illinois at Urbana-Champaign

Introduction

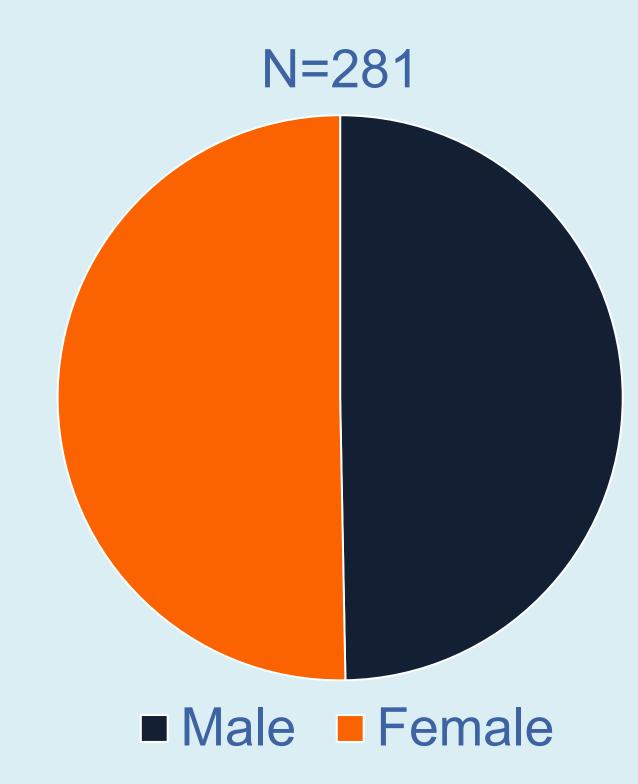
- During early adolescence children begin to heavily rely on peers for emotional support and acceptance, learning about positive and negative friendship qualities, (Bond, Lusher, Williams, & Butler, 2014).
- However, during this time, adolescents also may be experiencing *cyber-victimization*, which is defined as victimizing others using electronic means, such as social media and communication technologies, from their friends.
- To date, researchers have focused on cyber-victimization more broadly, finding that 17% of youth have experienced cyber-victimization from peers at school (Felmlee & Faris, 2016).
- One study has examined cyber-victimization from friends, finding these higher rates of victimization among close personal relationships happens due to competition, revenge, or to fend off romantic rivals (Felmlee, D., & Faris, R. (2016).
- However, studies show cyber-victimization from friends can lead to increased anxiety and higher rates of depression among early adolescents (Bond, Lusher, Williams & Butler, 2014).
- Research has yet to look at the direct associations between friendship qualities and cyber-victimization from friends.

Current Study

The current study is unique by helping understand the friendship contexts that place early adolescents at a greater risk for cybervictimization from their friends. The current study examined positive (approval, emotional support, intimate disclosure, and satisfaction) and negative (conflict, criticism, dominance, exclusion, and pressure) friendship qualities in relation to cyber-victimization from friends.

Method

• Participants included sixth grade students (N = 281; 50.2% male; 42% African American) from a large urban middle school who completed cyber-victimization and friendship quality questionnaires.



Procedure

- Students completed mental and behavioral health assessments on tablets
- An institutional review board approved all study procedures, including obtaining passive parental consent and active student assent.

Data Analysis

Multiple regression analysis was used to examine the associations between friendship qualities and cyber-victimization from friends, using SPSS software.

Results

Results indicated that 38.8% of youth experienced cybervictimization from a friend.

Results, cont.

Multiple regression analyses showed there was a significant relationship between cybervictimization and positive friendship qualities, including friendship satisfaction (B = -.40, p = < .05) and emotional support (B = .81, p < .001). Interestingly, this association with cybervictimization was negative for friendship satisfaction, and positive for emotional support.

In examining cyber-victimization from friends and negative friendship qualities, there was a significant relationship between criticism (B = .82, p = .02) and friend cyber-victimization.

	Cyber-Victimization from Friends		
Positive Friendship Qualities	В	β	p
Approval	27	 11	.23
Emotional Support	.81	.38	.00
Intimate Disclosure	06	03	.75
Satisfaction	40	21	.04

	Cyber-Victimization From Friends		
Negative Friendship Qualities	B	β	p
Conflict	.47	.18	.06
Criticism	0.82	.27	.02
Dominance	34	12	.17
Exclusion	.12	.042	.64
Pressure	.12	.04	.64

Discussion

Addressing the need to research cybervictimization among early adolescents, these results highlight that specific friendship qualities were associated with cybervictimization youth experience from their friends.

Higher friendship satisfaction has less of a risk factor for cyber-victimization. However, the emotional support provided by friends leads to a higher risk of being victimized by knowing intimate details about this person.

Limitations of the current study include the generalization of findings among 6th graders across the United States. These are also cross-sectional findings.

By following the 6th grade cohort into 7th and 8th grade, we can better understand how friendship qualities affect victimization from friends and mental health symptoms of victims across time.

By understanding how these relationship qualities impact friend cyber-victimization, we can begin to formulate ways to reduce cyber-victimization among friends in early adolescence.

Contact Information

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Gender Differences in Growth Mindset, Group Identity, and Social Skills Jacklyn Schlender, Research Assistant; Kevin Tan, PhD; Kate Wegmann, PhD University of Illinois at Urbana-Champaign

Abstract

Promoting a growth academic mindset among high school students is associated with numerous positive life outcomes including overcoming obstacles, cultivating grit, taking risks, celebrating personal growth, and so on. This study specifically focuses on understanding the ways social skills and social identity relate to mindsets. Additionally, it is not known if these relations differ between male and female students. Gender differences may exist because of their different socialization process, resulting in varying levels of academic mindsets. Based on a cohort of students from one high school in urban New Jersey (n=285), gender differences in the relations among social skills, sense of social identity, and their levels of academic mindsets were examined. Preliminary analysis indicates female students report a marginally significant higher levels of growth mindsets than males (mean = 2.69, sd = 0.28 vs. mean = 2.61, sd = 0.30; p \leq .10). For female students, the level of social skills is significantly correlated with their social group identity (r = 0.23, p < .05). Group identity is significantly correlated with their mindset (r = 0.23, p < .05). = 0.24, p \leq .05). For male students, only the level of social skills is correlated with their group identity (r = 0.36, $p \le .01$). Additional work is ongoing to understand the relations among mindsets, social skills and social identity. Implications for educators in promoting student's growth mindsets will be discussed.

Keywords: gender differences, growth mindset, group membership, social skills, high schoolers.

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INTRODUCTION AND OVERALL MODEL

Research highlights the importance of young people's growth mindsets, social skills, and group identity in promoting positive youth development. However, to date, no study has looked at the interrelations among these factors among urban 9th grade students and how it may differ by gender.

- **Growth Mindset:** Belief that abilities can be nurtured through dedication and hard work, originated from psychologist Carol Dweck (Dweck 2006).
- **Social skills** can promote a growth mindset and are likely associated with a positive group identity with peers.
- However, based on **gender intensification theory**, the relations between social skills, group membership and growth mindset may differ between males and females.

RESEARCH QUESTION

Do gender differences exist among the interrelations between growth mindset, social skills, and group identity? If so, how does it differ between males and females?

DATA

Effective language that paints an understandable and detailed portrayal of the demographics of the population:

One cohort of 9th grade students in an urban New Jersey high school. In this school, 72% of the students are Latinx and 27% African American. A total of 292 students completed the survey which represents 92.1% of the freshman class. There were more male (58.2%) than female (41.8%) participants.

MEASURES

To measure students' social skills, they completed the Social Skills Improvement Survey, which is based on the Social Skills Improvement System (Gresham and Elliott).

The survey consists of 75 questions, measuring different aspects of social skills such as communication, cooperation and self-control. This measure has been empirically validated among high school students and is a widely used measure of students' social emotional needs.

- Group membership is based on 13 questions.
- E.g. "I can trust group members"
- Growth mindset is based on 20 questions from Carol Dweck's scale.
- E.g. "You are a certain kind of person, and there is not much that can be done to really change that"

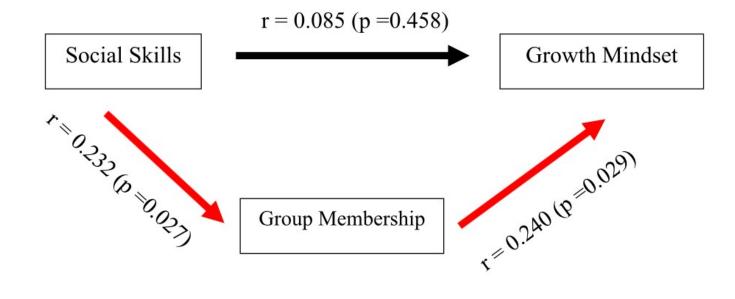
METHOD

For each of these domains in the survey, the sum score was first calculated. Subsequently, we applied Pearson correlation on the overall sample to examine the relationships among the three variables. Next, we separated the analyses by males and females.

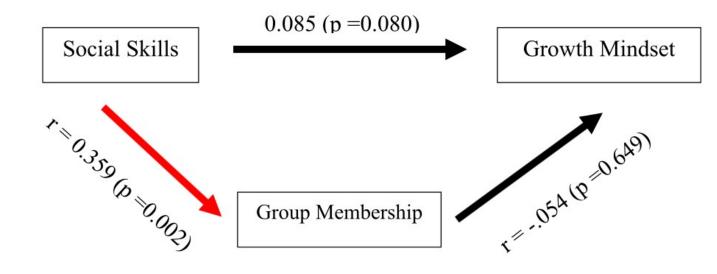
RESULTS AND FINDINGS

Pearson Correlation Separated by Females and Males

Females:



Males:



- Gender differences can exist between social skills, group membership and growth mindset.
- For **male students**, social skills is positively correlated with a growth mindset (r = 0.361, p = 0.003). Social skills is not correlated with group membership. Group membership is not correlated with having a growth mindset.
- For **female students**, all hypothesized relationships are correlated with each other. Social skills is positively correlated with a growth mindset (r = 0.254, p = 0.023). Social skills are also positively correlated with group membership (r = 0.223, p = 0.034). Group membership is also positively correlated with a growth mindset (r = 0.240, p = 0.029).

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LIMITATIONS

Student self-reports, students could have answered the questions with socially driven answers.

Generalizability, results are based on one cohort of freshmen students and from one urban high school. Findings might not be generalizable to different

Missing some student responses, a portion of students may have been absent on the days the survey was distributed.

cohorts of students or in other urban schools.

CONCLUSIONS

Overall findings suggest **gender differences can exist** in the relations between group membership, social skills, and growth mindset. It is interesting that **group membership**, **or that sense of belonging**, **was found to be more important for females.** There are a variety of reasons as to why this might be, such as women may feel more confident when they are liked by their peers. Women also may be happier and more content when they feel included in their group.

Women overall may find more value in having good social skills, which leads to better involvement in their group.

AREA FOR FUTURE RESEARCH

Continued testing: Mediational analysis using structural equation modeling to understand the direct effects of growth mindset, group membership, and social skills on males and females.

Other student outcomes: More work can be done to examine how growth mindsets, social skills, and group membership impact outcomes such as grades, attendance, and disciplinary referrals.

Longitudinal study: More research could look at how the relationships evolve from 9th through 12th grade. It is important that continued support be provided for students beyond their freshmen year.

ACKNOWLEDGEMENTS

I would like to thank my advisors Dr. Kevin Tan and Dr. Kate Wegmann for their guidance, encouragement, and support throughout the course of this project. I am beyond grateful for this opportunity and I look forward to see what comes from this research in the future.



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Scholarly Research

Using Art Conversations as Social Engagement Through Defined Art Categories to Stimulate Responses from People Living with Dementia

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Abstract

Dementia is a very isolating disease, and social engagement is crucial to increase quality of life and cognitive stimulation. This study aims to investigate how art museum interventions can be used as a method of social engagement. Additionally, this study seeks to identify which categories of art are most engaging for people with dementia. Art museum sessions were conducted in 2014 and 2015 at the University of Illinois Urbana-Champaign Krannert Art Museum, and in 2016, they took place in a dementia-specific facility. The mood of the participants was assessed before and after each session using the "Smiley Face Assessment" (Yang, 2004). Participants engaged in discussions surrounding various categories of art. Both verbal and non-verbal responses were recorded. All conversations were transcribed and coded for later analysis. The different types of art were organized and coded by subject matter, style, and dimensionality. Figurative, contemporary, and two-dimensional pieces were shown to stimulate the most social engagement with 16.76% of comments, followed by figurative, realistic and two-dimensional pieces with 16.26% of comments. Interpretive comments and creating questions were the most prevalent type of comments within figurative, contemporary, and twodimensional pieces, with percentages 12.83% and 1.89% respectively. The results indicate which types of art created the most social engagement and are consistent with existing literature regarding the benefits of art museum interventions for people with dementia.

Keywords: Social Engagement, Dementia, Alzheimer's, Art Museum.

Introduction

Dementia can be defined in several ways. For the purpose of this study, dementia can be described as a variety of neurological conditions characterized by decline in cognition and communication skills. Dementia is progressive and can have significant effects on mood,

behavior, and the ability to carry out activities of daily living (Camic et al., 2015). Pharmacological interventions are used to manage symptoms of dementia; however, many nonpharmacological interventions exist to improve quality of life, maintain levels of cognition, and elicit social engagement as well. Social engagement can be characterized as the involvement in social activities and the establishment and maintenance of social relationships (Zhou et al., 2018). For example, in a memory care setting, social engagement may take form in activities such as exercise classes, board games, listening to and making music, and through stafffacilitated discussions with residents. Art engagement is a common non-pharmacological intervention, and existing literature suggests art engagement has many benefits for people with dementia. While cognitive functions are lost as dementia progresses, "aesthetic responses" or the ability to observe and comment on artistic pieces is maintained for a longer period (Camic et al., 2015, p. 1,034). Therefore, participating in art viewing and art discussions offers opportunities for ongoing exploration for people with dementia (Camic et al., 2015). Additionally, individuals with dementia have been shown to be valuable participants when viewing art. Halpern and O'Connor's research evaluating frontotemporal dementia found the process of dementia did not impact individuals' ability to analyze and evaluate art pieces (2013). People with dementia can execute "symbolic processing" (Halpern & O'Connor, 2013, p. 98). Even though a brain may be affected by dementia, it is still able to meaningfully gather information and an understanding of the art being shown in an art museum intervention (Halpern & O'Connor, 2013).

Art museums are common settings for people to participate in art engagement. Some museums have designed programs specifically for people with dementia that include both art viewing and art making. An art gallery setting may provide a physically valued environment for people with dementia that is both intellectually stimulating and socially inclusive (Camic et al.,

2015). People with dementia are often perceived as being incompetent, having a disability, an inability to focus and engage for extended periods of time, and inability to participate in activities. These perceptions contribute to a negative stigma of dementia, which may result in low self-esteem and social exclusion for people with dementia (Mukadam & Livingston, 2012). Individuals with dementia often can be given "extra-disabilities," meaning they are underrated for their ability to participate in social engagement activities and the impacts of their dementia are overestimated (Ullán et al., 2013, p. 28).

Art museum-based interventions have the potential to change negative preconceived notions of individuals with dementia in society, as well as building a positive perception of self for those living with dementia. For example, a 2015 study found both caregivers and art gallery docents were surprised and impressed with significant levels of engagement of those with dementia participating in art discussions during a museum-based intervention. Perceptions of those with dementia changed as caregivers and docents saw participants as competent individuals who still possessed creative, social, and intellectual capacities (Camic et al., 2015).

Across the world, art museum-based programs have demonstrated how art engagement benefits people with dementia. Programs such as Meet Me at MoMA- Museum of Modern Art program and the ARTEMIS intervention provide foundational research on how these programs affect social engagement and quality of life of people with dementia. The ARTEMIS intervention yielded positive outcomes for participant quality of life and emotional wellbeing (Schall et al., 2018). The Meet Me at MoMA program has found art engagement can allow those with dementia to participate in meaningful activities, retrieve long-term memories, and participate in social discussions as equal, valued contributors (Rosenberg, 2009). In a foundational study, the incorporation of museum props and other significant objects beneficially

impacted general patients of hospitals in a study by University College London Museum & Collections and University College London Hospitals Arts. Well-being and moods were evaluated on a scale and a list of moods. The research highlighted how social engagement programs established a "person-centered" approach in patient care across all settings (Chatterjee, Vreeland, & Noble, 2009, p. 170). While the props in the study created an educational experience for participants, the incorporation of objects also related personally to the participants and prompted individuals' memories in the research (Chatterjee, Vreeland, & Noble, 2009). The eliciting of memories established another frontier of museum object research and its patient benefits in "reminiscence" interventions (Chatterjee, Vreeland, & Noble, 2009, p. 170).

While current literature goes into great depth regarding the benefits that art-viewing and art-making has for people with dementia, there is an existing gap in terms of how specific types of art influence levels of social engagement in this population. This study seeks to address this gap by exploring the association between type of art and social engagement for people with dementia.

Methods

Participants were not selected based on specific dementia types. In 2014 and 2015, individuals from a medium-sized adult day center in Illinois volunteered to visit Krannert Art Museum. They were transported to the museum in the adult day center's vehicle and accompanied by staff. Participants all had some form of dementia, but they were not selected based on specific dementia types. Because of their form of dementia, participants were unable to be left alone without supervision. In 2016, sessions took place in a 24-hour, dementia-specific residential facility. Participants' gender was considered along with mood in the research; however, factors such as socioeconomic status were not accounted for in the research process.

There were no control groups in the research. The consent process involved co-investigators, the caretakers, and the program participants. The decision-maker on the adult day center's record first gave consent for their loved one to participate in the study. In addition, the IRB consent script was read before and after the art was shown. The investigator would ask these participants individually if they wanted to complete a "Smiley Face Assessment" survey (Yang, 2004). For the dementia-specific facility, consent was given by the facility administrator according to the IRB consent process. Anyone who attended the program and willingly completed the survey was included in the study. The docents were trained to ask open-ended questions to create an open and welcoming environment for participants. The docents in the museum sessions were specifically trained to communicate with people with dementia. The museum sessions and the 24-hour care facility sessions were identical in the process of the art viewing, but individuals in the 24-hour care facility could leave more easily. Most participants at the museum used seated walkers, which were purchased with a grant, in order to prevent tiring and provide safe seating. In the facility, most participants used wheelchairs and other forms of assistive devices. Sessions lasted 45-60 minutes. Since the program was voluntary, there were some participants who only completed one session, while others may have attended and completed several surveys for different sessions.

This study uses a cross-sectional design in order to assess social engagement. Art pieces and props were incorporated into art viewing sessions. A "Smiley Face Assessment" was given to participants before and after each museum session (Yang, 2004). Participants would rate their mood on this scale from being very sad, somewhat sad, neutral, and somewhat happy, to very happy. Social engagement determined the number of comments. During the museum sessions

and facility sessions, participant comments were transcribed and later categorized organizing the comments into several categories. There were 17 comment categories, as noted in Figure 2.

The art pieces observed in the various museum sessions and facility sessions were categorized to analyze the relationship between the art types and different participant responses. For the subject of the pieces, artworks were organized by nature, abstract, figurative, portrait, functional object, or other. Nature landscapes contained subject matter of natural landscapes. Abstract pieces focused on shapes and colors to depict moods and feelings within the specific works of art. Figurative pieces contained people in the art pieces and had narratives of day-today life depicted in their content. Portraits were pieces that included closeup representations of the human face or torso. Functional object pieces were often touchable and from the Krannert Art Museum Education Center. For the second type of art category, the styles of pieces were organized by being contemporary, modern, realistic, or other. Contemporary art pieces reflected some aspects of daily life, but the contemporary art pieces changed this content to make the subject matter unclear. Modern pieces often depicted daily life, but the modern pieces changed the content to share specific moods and feelings with the audience. Realistic pieces depicted scenes from real life. To categorize the different dimensionality of the pieces, the artworks were organized by being two-dimensional or three-dimensional.

All statistical analyses were done in SAS v9.4. Some participants attended several sessions, while others attended only once. To explore the association between art pieces and social engagement, each participant was allotted a unique ID. Wilcoxon signed rank test was conducted to measure the change in mood of the participants before and after art engagement experience at the museum and the facility using the "Smiley Face Assessment" (Yang, 2004) due to non-normality of the data.

Results

Sample sizes were N=53, N=21, and N=14 for the years 2014, 2015, and 2016 respectively. Throughout the different museum and facility sessions, there were a total of 88 participants. In Figure 1, the data explored which combination of art types established the greatest social engagement. The combination that received the highest proportion of comments was figurative, contemporary, and two-dimensional art pieces, with 16.76% of comments. Figurative art types also received the most comments because they were shown the most to participants. The most prevalent comment type in the museum sessions was an interpretive response, as this category comprised 57.14% of comments made. Interpretive responses were responses where participants sharing their on-topic interpretations of artworks. On-topic interpretations of the art pieces showed how the participants were able to meaningfully participate in an art discussion. An interpretive response also was meaningful because it was a more abstract and complex comment type compared to other comments responses, such as descriptive responses.

Descriptive comments were the second most prevalent in the data collected, representing 14.58% of the total comments. Descriptive responses demonstrate participants' perspectives by giving details relating to the art piece. Group responses were an additional common category of comments, accounting for 11.37% of comments collected. This was a crucial result because it depicted how research participants connected to each other while they were partaking in this form of social engagement. Being able to connect to the responses of other participants and respond together collectively highlights a deeper layer of social engagement. Another common type of comment was a "CQ" comment, forming 10.64% of comments total. This comment categorization meant participants created their own art question. The creation of a question

showed how the participants felt engaged in the art museum sessions and wanted to extend their knowledge. Lastly, a response similar to a group response was an "RP" response or a response building off another participant's response. "RP" comments constituted 6.27% of the data. This further established how participants connected to one-another while they explored the art pieces in the different museum sessions. These results show even though a brain with dementia may see things differently due to the disease process, the creative part of the brain is still active.

The participants did not go through a significant change in their moods after art engagement experience across all three years [2014: S=1475, p= 1.0; 2015: S=380, p= 0.3416; 2016: S=189.5, p= 0.5342]. Across all years, there were minimal changes in mood with each before and after survey, deeming these results not statistically significant.

Discussion

The study aimed to explore how art museum interventions are associated with levels of social engagement in people with dementia, as well as which specific types of art elicit the most engagement. Engagement was determined through types of verbal and non-verbal responses; the most prevalent being interpretive, descriptive responses, group responses, creating questions, and responses to others. It is clear social engagement was present during the art discussions.

Participants interacted not only with the docent but also with one another, responding to comments and forming their own interpretations of the various art pieces. These findings are consistent with existing literature in the sense that art museum interventions have the potential to create a social engagement experience in people with dementia. Results of this study also indicate art classified as figurative, contemporary, and two-dimensional may evoke more engagement in people with dementia. Unlike existing literature, this study specifies how different

types of art affect social engagement, which has the potential to set a foundation for future artmuseum and dementia-care-based research.

Limitations of this study are mainly a reflection of the population on which this study focuses: individuals with dementia. However, these limitations should be noted and should guide future research. One limitation is the sample size for each year was dependent on individuals who had the desire to attend the art engagement sessions voluntarily. For example, for data collected at the facility, some people stated they were not feeling well and did not want to participate in the activity anymore. In those cases, they were able to return to their rooms and were not included in the data collection. As a result, there are varying sample sizes for each year. During the year 2015, sessions were cancelled for 3 months, as snow and ice caused unsafe walking conditions at the museum. Consequently, data could not be collected during those months. Additionally, the dementia-specific facility used for this study utilizes the Green House approach to dementia care (The Green House Project). The Green House approach aims to foster a home-like environment, meaning there is only a small number of residents living in each house. Due to the intimate nature of the facility and the voluntary participation, there was a smaller pool of participants available, leaving sample sizes rather small and inconsistent throughout the 3 years of data collection. In future research opportunities, larger sample sizes should be achieved through using a larger dementia-specific facility and obtaining more funding.

While data regarding mood in relation to art engagement was collected, a consistent pattern of improvement or worsening of mood could not be found in this dataset. After further reflection, researchers believe the method in which the assessment was administered to the sample may have been confusing given their dementia diagnosis. Participants were given the "Smiley Face Assessment" scale and were instructed to circle the image best representing their

feelings at the time. However, some markings were unclear. Future research opportunities to explore a possible relationship between mood and art engagement for this population might include using this same scale, but instead capturing responses orally in the form of an interview or conversation.

Another limitation to this study is that, apart from gender, demographic data such as age, race, socioeconomic status, and level of education was not collected. Having demographic information in the future may lead to a deeper analysis of the results. Additionally, as mentioned before, the type of dementia was not specified in this study. Therefore, at this time it is unknown whether types of dementia and demographic factors have a confounding influence on the data collected, and this may affect validity of the results. To further expand the research, data about participants' dementia types and other demographic factors could be collected. Studying these factors could illuminate different findings about how specific demographics respond to different works of art. Collecting more data about the participants could establish a greater impact. Social engagement activities could be altered to suit the needs of diverse dementia populations in society.

The results found in this study have vast implications for social work practice, specifically in the realm of dementia care. Being aware of the positive effects that art has on cognition and social engagement for people with dementia can aid caregivers in the home as well as within facilities when developing art-related interventions. In the same notion, this information offers future art museum potential to direct their dementia-based programming to specific types of art. In both contexts, knowing specific types of art that may elicit the most social engagement will ultimately foster more meaningful discussions and participation in these activities.

Acknowledgements

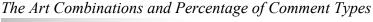
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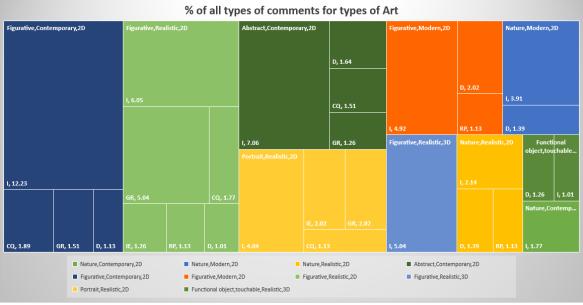
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Figures

Figure 1





Note: To produce this tree map, all comment percentages smaller than 1% were excluded in order to show a clean and concise presentation of the data.

Figure 2

Coding of Comments and Art

Coding of Comments and Art

Coding of Comments

D= Descriptive response, relates to docent's question **Type of Art 1:**

I= Interpretive response, relates to docent's question

IE= Interpretive response with emotion sound

DI= Descriptive or interpretive response, but not sure • 4= Portrait

how it relates to the artwork

RA= Response making a connection between

artwork and personal memory

PK= Response making a connection to prior

knowledge

RP= Response relating to or building from another

participant's response

CQ= Creating own question about art

OQ= Off-topic, creating own question

OR= Off-topic response

NVG= Non-verbal response using gestures

S= Sleeping during docent's question

PR= Prop response

RG= Response using gestures

SR= Non- word response of sound

GR= Group response

SC= Same response

Art Categories

- 1= Nature
- 2= Abstract
- 3= Figurative
- 5= Functional object, touchable
- 6= Other

Type of Art 2:

- 1= Contemporary
- 2= Modern
- 3= Realistic
- 4= Other

Type of Art 3:

- 1=2D
- 2=3D

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Relationships Between Self-Esteem, Mental Health, and Cyber-Victimization Among Middle School Students

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Abstract

Introduction: Cyber-victimization is highly prevalent among middle school students. Research has shown that low self-esteem may place adolescents at risk for victimization. However, research has yet to examine mechanisms in which self-esteem is associated with cyber-victimization. The current study examined the role of mental health symptoms in this relationship between self-esteem and cyber-victimization. It was hypothesized that low self-esteem would be associated with cyber-victimization via heightened mental health.

Method: Participants in this study (N = 316) were sixth graders from a large public middle school. Participants completed self-reported questionnaires on self-esteem, mental health symptoms (i.e., depression and anxiety), and cyber-victimization. The study hypothesis was examined using a mediational path analysis.

Results: Students displayed high rates of cyber-victimization (60.8%), low levels of self-esteem (37.6%), and at-risk or clinical levels of depression (44.6%) and anxiety (46.9%). The analysis showed that lower levels of self-esteem were associated with greater levels of anxiety (B = -.530, p < .001) and depression (B = -.999, p < .001). Greater amounts of depressive symptoms were associated with higher levels of cyber-victimization (B = .108, p < .05). Finally, high levels of depressive symptoms fully mediated the relationship between low levels of self-esteem and high levels of cyber-victimization (B = .014, p < .05).

Discussion: These results illustrate that heightened depressive symptoms may make adolescents with low self-esteem more susceptible to cyber-victimization. Middle school administrators and practitioners can utilize these results to incorporate aspects around the promotion of self-esteem and mental health in cyber-victimization prevention programs.

Keywords: Middle school, Cyber-Victimization, Mental Health, Anxiety, Depression, Self-Esteem

Introduction

Cyber-victimization is gaining increasing attention from researchers, and for good reason. In 2017, 14.9% of high school students experienced cyber victimization (Youth Risk Behavior Surveillance [YRBS], Center for Disease Control and Prevention [CDC], 2018). In 2018, 59% of adolescents age 13-17 had experienced cybervictimization in their lifetime (Pew Research Center, 2018). Studies have demonstrated such a wide gap in reported rates, perhaps due to how cyber-victimization (also referred to as experiencing cyberbullying) is measured. Nevertheless, these rates are cause for concern because of the plethora of negative consequences associated with experiencing cyber-victimization. For example, experiencing cyber-victimization has been found to place youth at risk for somatic symptoms (Vieno et al., 2015), depressive symptoms (Kowalski & Limber, 2013; Perren, Dooley, Shaw, & Cross, 2010) and social anxiety symptoms (Fahy et al., 2016).

Self-esteem and Cyber-victimization

Due to the prevalence and negative outcomes associated with cyber-victimization among adolescents, scholars have been urged to consider factors that place youth at higher or lower risk for cyber-victimization. One such factor is self-esteem; like cyber-victimization, self-esteem has been implicated in negative consequences. Researchers have found that low self-esteem (Steiger, Allemand, Robins, & Fend, 2014) and decreases in self-esteem (Masselink et al., 2018; Steiger et al., 2014) during adolescence are associated with greater depressive symptoms. Additionally, having low self-esteem is associated with an increased susceptibility for cyber-victimization (Kowalski & Limber, 2013). Although the link between self-esteem and cyber-victimization is well-established in the literature, the current study sought to explore mechanisms that explain

why low self-esteem is associated with an increased risk for cyber-victimization among a sample of sixth-grade middle school students.

Self-esteem, Mental Health and Cyber-victimization

The presence of mental health symptoms may be an important mechanism to consider in the association between self-esteem and cyber-victimization, particularly as examining the role of mental health may be specifically pertinent among adolescent populations. For example, 31.5% of high school students have experienced periods of persistent sadness and/or hopelessness (i.e. depressive symptoms; CDC, 2018). Ghandour and colleagues (2019) have illustrated that as of 2018, 3.2% of children, or roughly 1.9 million children, have been clinically diagnosed with depression. These numbers are alarming to many practitioners and researchers as adolescents' depression negatively impacts their emotional, social, and physical well-being (Gámez-Guadix, Orue, Smith, & Calvete, 2013; Ghandour et al., 2019; Graham & Bellmore, 2007; Keenan-Miller, Hammen, & Brennan, 2007). In addition, anxiety is another mental health concern that is prevalent within adolescents. About 7.1% of children ages 3-17 years, approximately 4.4 million children, have been clinically diagnosed with anxiety (Ghandour et al., 2019).

Thus, mental health symptoms may be an important factor to consider in the relationship between self-esteem and cyber-victimization. For example, research has shown adolescents who are more likely to experience cyber-victimization also have high levels of social anxiety and depression (Graham & Bellmore, 2007). It can be hypothesized that the reason for increased susceptibility to cyber-victimization in adolescents with mental health concerns is a lack of social skills and/or the act of self-isolation (Gámez-Guadix et al., 2013). Because adolescents with mental health concerns may not possess proper protective skills (e.g. social skills), they may

be a target to their offending peers. Therefore, individuals who have significant mental health concerns may be at an elevated risk of cyber-victimization.

In addition, researchers have also demonstrated low self-esteem is associated with heightened mental health symptoms among adolescents. For example, scholars have found low self-esteem to be a significant predictor of increased depressive and anxiety symptoms (Masselink et al., 2018; Sowislo & Orth, 2013). In a meta-analysis of longitudinal studies on the relationship between low self-esteem and depression, individuals with low self-esteem may excessively seek reassurance, which strains social relationships, leading to depressive symptoms (Sowislo & Orth, 2013). Individuals with low self-esteem also may seek negative feedback from those around them, which erodes their relationships and increases risk of depression (Sowislo & Orth, 2013). These studies highlight the important link between self-esteem and mental health.

Current Study

Adolescents are at an increased risk for experiencing cyber-victimization, and researchers have found low self-esteem and heightened mental health symptoms, such as symptoms of depression and anxiety, may be factors to consider as risk correlates of cyber-victimization.

Although empirical research has found evidence for these associations, few studies have examined these relationships with adolescents in the United States, a group at high risk for mental health concerns and cyber-victimization (Ghandour et al., 2019; Kowalski & Limber, 2013). Additionally, the current study examined mental health symptoms as potential mediators in the relationship between self-esteem and cyber-victimization, specifically if heightened mental health symptoms explain (or mediate) the relationship between low self-esteem and cyber-victimization. To our knowledge, this relationship has not yet been examined in the empirical literature among early adolescents. Finally, the current study also examines these relationships

among a sample of American middle school students, expanding research in this area to another diverse group of adolescents.

The current study explored hypotheses for the following four research questions: 1) What is the association between self-esteem and experiences of cyber-victimization? It was hypothesized higher levels of self-esteem would be associated with a decrease in experiences of cyber-victimization; 2) Is self-esteem related to mental health outcomes? It was hypothesized self-esteem would be negatively related to anxiety and depressive symptoms; 3) Are mental health symptoms related to experiences of cyber-victimization? It was hypothesized heightened mental health symptoms would be positively associated with experiences of cyber-victimization; and 4) What explains the relationship between self-esteem and cyber-victimization? It was hypothesized low self-esteem would be associated with cyber-victimization via heightened mental health symptoms.

Method

Study Design & Participants

The current study is based on a larger study examining mental health, social-emotional and behavioral needs of middle school students from a large public school. The middle school that participated in the study is located in a semi-urban city in the Midwest United States (Garthe & Klingenberg, 2019). Participants in the current study were 316 sixth-grade students, with an average age of 11.67 years old. Students included 142 males, 163 females, three transgender youth, and eight who did not identify as male, female, or transgender. The current study included a diverse racial and ethnic group of students (34% African American, 24% White, 15% Hispanic, 7% Asian, and 20% identified as other races or ethnicity or multi-racial).

Parents and guardians of the sixth-grade student participants were informed of the study prior to the student survey administration. Passive parental consent was used, meaning parents and guardians signed and returned the form only if they did *not* want their child to participate. All sixth-grade students (during the 2018-2019 school year) were eligible and invited to participate in the study. The survey was taken on electronic tablets and offered in English, French, and Spanish. To administer the survey, the research team went into classrooms and the Principal Investigator or the graduate research assistant explained the purpose of the study. The survey took approximately 20-30 minutes for students to complete. A university institutional review board approved all study procedures.

Measures

Self-esteem, depression, and anxiety. Self-esteem and mental health symptoms (i.e., symptoms of depression and anxiety) were measured using the Behavioral Assessment System for Children Self-Report of Personality Adolescent Version (BASC-3 SRP-A; Reynolds & Kamphaus, 2015). Participants indicated agreement with the items with either "True" or "False," or from a 4-point scale ranging from "Never" to "Almost Always." The BASC-3 is a validated measurement related with other clinical assessments and reviewed by experts for content validity in relation to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013). To measure self-esteem, seven questions were asked (α = .82). For depression, 12 items were asked (α = .84), and 13 items were asked (α = .87) for anxiety. Based on gender and age normed scores, t-scores for self-esteem, anxiety, and depression were used in the study analyses. Higher scores indicated higher levels of self-esteem, anxiety, and depression.

Cyber-victimization. A modified version of the Cyber-Victimization Scale (CVS; α = .92; Bennett, Guran, Ramos, & Margolin, 2011) was used to assess cyber-victimization. Seventeen items were used to examine experiences of cyber-victimization by asking: "In the past year, have any of these things happened to you? If yes, check the following: friend, boyfriend/girlfriend, someone at school, other (e.g., stranger or family member)." The CVS was originally validated with a college-aged population; thus, the current study modified the measure into adolescent-age appropriate answer choices (e.g., adding someone at school) and examples (e.g., Snapchat, Instagram). For each item, participants indicated with "Yes" or "No" if they experienced that specific victimization and then reported whom the perpetrator was.

Data Analyses

Data were cleaned and variables were created using IBM SPSS (Version 26; IBM Corporation, 2017) software. Gender identity was dummy-coded (Male = 1, Female and Other = 0) to be included as a covariate in the data analyses. Continuous variables, including self-esteem, anxiety, depression, and cyber-victimization, were all examined for assumptions of normality (e.g., skew, kurtosis). Next, data were analyzed using Mplus (Version 8.3; Muthen & Muthen, 2018) software, which makes corrections for any concerns of non-normality with maximum likelihood estimation with robust standard errors (MLR). Additionally, missing data was handled in Mplus by Full-Information Maximum Likelihood (FIML); the analytic sample size was 316. The data analytic plan consisted of three steps. First, descriptive statistics, including means and standard deviations, were calculated for the continuous variables. Also, bivariate correlations were calculated. Second, regression pathways were tested, including: 1) self-esteem to anxiety and depression, 2) self-esteem to cyber-victimization, and 3) anxiety and depression to cyber-victimization. Third, the indirect pathways (i.e., mediational model) were tested, examining

anxiety and depression as mediators in the relationship between self-esteem and cybervictimization. Gender was included in this model as a covariate.

Results

Descriptive Statistics and Bivariate Correlations

Participants reported high levels of cyber-victimization in the past year (60.8%), and a large number of students had clinically significant levels of depression (27.3%) and anxiety (21.3%). Also, 37.6% of students self-reported low levels of self-esteem (i.e., defined as more than one standard deviation below the mean). As shown in Table 1, means and standard deviations, as well as bivariate correlations are shown. There was a significant correlation between self-esteem and anxiety (r = -.608), depression (r = -.804), and cyber-victimization (r = -.328). Anxiety (r = .343) and depression (r = .408) were positively associated with cyber-victimization.

Regression and Mediation Analyses

As shown in Table 2, higher levels of self-esteem were significantly associated with anxiety (B = -.530, p < .001) and depression (B = -.999, p < .001). Self-esteem was not associated directly with cyber-victimization (B = .014, p = .755). More depressive symptoms (B = .108, p = .004) were significantly associated with higher levels of cyber-victimization, though anxiety was not. Gender was included in these analyses, though it was not associated with any of the study variables. In the examination of indirect pathways for the mediation analyses (see Figure 1), depression symptoms fully mediated the relationship between self-esteem and cyber-victimization (B = -0.108, p = .004). Thus, high self-esteem was associated with lower levels of cyber-victimization through fewer depression symptoms. Anxiety did not mediate the relationship between self-esteem and cyber-victimization.

Discussion

A concerning number of adolescents are experiencing cyber-victimization, all of which can increase their risk for a multitude of negative outcomes. The current study found that 60.8% of sixth-grade students had experienced a form of cyber-victimization in the past year, which highlights the urgency of research examining these experiences among youth. The current study contributed to existing research by examining risk correlates of cyber-victimization among a sample of sixth-grade students, finding significant associations between cyber-victimization, depression, and self-esteem.

Self-esteem and cyber-victimization. Approximately one in three sixth-grade students in this sample reported low levels of self-esteem. Also, consistent with previous research, higher levels of self-esteem were negatively associated with experiences of cyber-victimization (Kowalski & Limber, 2013; Patchin, J. W. & Hinduja, 2010). This finding supports this line of empirical work, suggesting that self-esteem is an important factor to consider when looking at cyber-victimization among middle schoolers. With the rise of social media use, adolescents are becoming more subject to cyber-victimization. For example, research has shown increased social media use within adolescents is related to lower self-esteem (Woods & Scott, 2016). This could be because adolescents may receive negative feedback on social media sites or possibly compare themselves to others on their social media (Woods & Scott, 2016). This negative feedback and social comparison may lead to a lower self-esteem, and ultimately, higher levels of victimization within cyberspace.

Mental health symptoms and cyber-victimization. The current study found that an alarming number of sixth-grade students reported clinically significant levels of depression (27.3%) and anxiety (21.3%) symptoms. Although both mental health symptoms were prevalent

among this sample, only depressive symptoms were significantly associated with cyber-victimization in the current study. This association is in accordance with prior research (e.g., Graham & Bellmore, 2007; Kowalski & Limber, 2013). Ybarra (2004) suggests that this association may be a result of the way youth with depressive symptoms handle the ambiguous nature of online communication. Because of the lack of social cues on the internet, youth with depressive symptoms may be more likely to perceive threats online. This is a possible explanation for the relationship from depressive symptoms to cyber-victimization, which has not been examined as much as the opposite relationship of cyber-victimization to depressive symptoms (Reijntjes, Kamphuis, Prinzie, & Telch, 2010). Furthermore, although anxiety was not significantly associated with cyber-victimization in the current study, future studies may want to tease apart anxiety and examine how forms of anxiety may be associated with cyber-victimization (e.g., social anxiety; Reijntjes et al., 2010).

Self-esteem and mental health. The current study also supports prior research by finding significant associations between self-esteem and depressive symptoms (Masselink et al., 2018; Sowislo & Orth, 2013). Among this sample of sixth-grade students, higher levels of self-esteem were associated with fewer depression symptoms, though not with anxiety symptoms. The majority of research has focused on the link between self-esteem and depression (Masselink et al., 2018; Sowislo & Orth, 2013), suggesting low self-esteem may have a stronger association with depressive symptoms compared to anxiety symptoms. However, since self-esteem can be negatively affected by the transition to middle school, paying attention to self-esteem in middle school may prevent youth from experiencing mental health symptoms (Blyth & Traeger, 1983). This area needs to be continued to be examined, especially as a concerning number were already reporting clinical levels of anxiety and depression.

Depressive symptoms as a mediator. The current study also made a significant contribution to the literature, finding depressive symptoms mediated the relationship between self-esteem and cyber-victimization. Higher levels of self-esteem were associated with lower levels of cyber-victimization via lower levels of depressive symptoms. Previous work suggested self-esteem may increase vulnerability of cyber-victimization (Kowalski & Limber, 2013; Patchin, J. W. & Hinduja, 2010), and the current study found depressive symptoms may help explain this vulnerability. This finding also shows it may not be enough to only target self-esteem in programming during middle school; mental health also needs to be addressed to prevent cyber-victimization. Since depressive symptoms mediated the relationship between self-esteem and cyber-victimization, it may be beneficial to target depressive symptoms, while also considering youths' self-esteem, in order to decrease experiences of cyber-victimization.

Limitations

Although the current study made significant contributions to the empirical literature – highlighting the important associations between self-esteem and depressive symptoms with cyber-victimization experiences among early adolescents – there are several limitations to consider. First is the correlational nature of the study; thus, the current design limits the ability to establish directional or causal relationships between self-esteem, mental health symptoms, and cyber-victimization. Future research should be done with longitudinal designs to better investigate the directions of the associations. For example, one could follow the same students from sixth to eighth grade and assess how self-esteem is associated with changes in mental health symptoms and cyber-victimization across time. Another limitation is the generalizability of the findings. Sixth graders from only one middle school in the Midwest United States participated in the current study. Thus, this sampling is unlikely to be a representative sample of

all sixth-grade students in the United States, so any generalizations should be made with caution. Future researchers should use samples of middle school students from various regions of the United States, including all grade levels across different timepoints to better understand these variables among early adolescents. Furthermore, future research should look at different types of anxiety (e.g., social anxiety) and internalizing problems (e.g., somatic symptoms). This study focused solely on general anxiety symptoms within early adolescents, which limited the specificity of our conclusions. By looking at other types of anxiety and internalizing problems within middle school students, more specific interventions can be created to address those specific needs.

Implications

In addition to the previously stated future research directions, this study also provides important implications for practice. For example, social workers, psychologists, and other health professionals can use these findings to inform their practice, particularly within school settings. The current study's findings have shown it is important for practitioners to acknowledge both the self-esteem and mental health concerns, namely depression, of a student, particularly as problems in these areas may allow practitioners to gauge student's susceptibility for cyber-victimization. Practitioners should consider screening for student's self-esteem and mental health at the beginning of middle school, as low self-esteem and depressive symptoms may heighten their risk for cyber-victimization. Furthermore, these findings suggest to practitioners it may be important to implement self-esteem interventions (e.g. workshops, informationals, etc.), or include aspects of self-esteem development in other existing programming, when working with middle school children.

Conclusion

The current study found a concerning number of sixth-grade students reported low self-esteem, mental health concerns, and experiences with cyber-victimization. Additionally, the current study found high self-esteem was associated with lower levels of cyber-victimization through lower levels of depression symptoms. It is recommended researchers replicate these findings with larger, more diverse samples. However, these results suggest middle school staff should consider implementing violence prevention programs, inclusive of victimization that may occur in cyber spaces, with a focus on self-esteem and depression symptoms.

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Table 1. Descriptive Statistics and Correlations among Primary Study Variables (N = 316)

	1.	2.	3.	4.
1. Cyber-victimization	-			
2. Anxiety	.34*	-		
3. Depression	.41*	.70*	-	
4. Self-Esteem	33*	61*	80*	-
Mean (SD)	3.72	58.77	62.68	41.81
	(6.02)	(13.46)	(18.93)	(15.30)

Note. SD = Standard Deviation.

Table 2. Direct and Indirect Pathway Coefficients of the Mediational Path Analysis (N = 316)

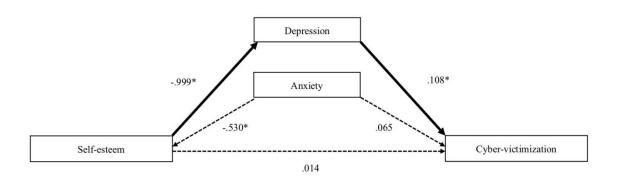
	Γ	DV: Cyber-victimization			
	В	β	p	R ²	
Direct Pathways				.17	
Self-esteem	.01	.04	.755	-	
Anxiety	.07	.15	.076	.37	
Depression	.11	.34*	.004	.65	
Indirect Pathways (Mediation Analyses)					
Self-esteem → Anxiety → Cyber-victimization	04	09	.079	-	
Self-esteem → Depression → Cyber-victimization	11	28*	.004	-	

Note: DV = Dependent Variable

^{*} *p* < .05

^{*} *p* < .05.

Figure 1. Relationships between self-esteem and cyber-victimizations, as mediated by depression and anxiety (N = 316).



Note. Bold lines indicate significant relationships.

*p < .05.