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Anthropology • Business • Criminology • Economics • History
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Objectives of the Indiana Academy of the Social Sciences

The objectives of the Academy shall be to facilitate a more effective cooperation among social scientists, to promote the interests of the several social sciences, and to increase the usefulness and advance the effectiveness of both teaching and research in the several social sciences in Indiana.

Established in 1929 and incorporated in 1937, the Academy exists to foster communication and collaboration among social scientists across the public and private colleges and universities of Indiana. The Academy is dedicated to the objectives of supporting social science research and dialogue and to promoting the value and visibility of the social sciences in Indiana while providing an environment in which social scientists across the state can interact in cooperation and friendship. The Academy holds an annual meeting and produces *Endnotes* (IASS Newsletter) and publishes the *Midwest Social Sciences Journal*. The Academy recognizes all areas of scholarship in the social sciences.

BOARD OF DIRECTORS

EDITORS' NOTE

The academic landscape, like so many other areas of life, has not been left untouched by the pandemic that began in 2020. The quick spread of the disease, public reaction, our personal apprehensions and struggles, and the heroic sacrifices of public health, medical, and frontline workers have been unprecedented in our lifetimes. Academia has faced its own unique struggles through this crisis, and yet, we are pleased to note, social scientists in our region and elsewhere have been busy asking interesting questions, conducting research, reviewing peer research, and sharing findings with the community.

The papers published in the 25th volume of the *Midwest Social Sciences Journal* (MSSJ) are evidence of a breadth of topics that we had the opportunity to review during the year. We are thankful to the authors for submitting manuscripts to MSSJ, and to the multitude of reviewers who took the time to iteratively provide authors thorough and insightful feedback, to produce work that maintains the highest standards of scholarly work.

This year's volume includes research on how federal bureaucracy can act as a disproportionate barrier to student financial assistance, how incarcerated men perceive prison environments, parenting style and power relationships, performance of individuals experiencing attention-deficit disorder, institutional practices regarding screening for sex trafficking, and the definition of a geographic region along the Mississippi River.

Mungo and Klonowski conduct a discourse analysis of a perceptibly neutral socioeconomic instrument (i.e., the FAFSA form) to demonstrate that the criminal disclosure question in the form acts as a disproportionate barrier to entry to college especially for students of color. They find that, although college completion allows minority youth to leave behind their entanglements with the criminal justice system, access to higher education could be impeded by a single question on a form. Another paper, by Melissa Stacer, investigates the rehabilitative potential of the criminal justice system by surveying male inmates on their perceptions of the prison environment. The findings recommend promoting a prosocial prison environment for effective rehabilitation and positive post-release outcomes.

Kathy Ritchie's research examines the power-assertiveness response of mothers with varying parenting styles. The work advances understanding of maternal response that is conditional upon parenting style, and implications for child behavior. The second paper focusing on behavior, by Rodriguez and Stauffacher, investigates the neural bases of ADHD by conducting performance tests on college students. The study highlights the heterogeneity of neurophysical and behavioral responses across individuals with ADHD and provides a deeper understanding of such individuals' ability to perform at optimal levels.

Elwood et al. make the case for a change in training programs for social workers, to equip them with increased knowledge and confidence to screen young adult victims of sex trafficking, and Telle and Perkins conduct spatial analysis of socioeconomic county-level census data to define a formal geographic region based around the Great River Road in Missouri.

We are also privileged to publish Omar McRoberts's keynote address, "Of Movements and Markets: Religious Competition and the Problem of Black Church Relevance," from the 93rd annual meeting of the Indiana Academy of the Social Sciences, hosted by Indiana University Northwest in October 2022. Roberts makes a compelling case that even in the midst of market competition—from secular institutions and largely White megachurches and from churches that preach a gospel of individual material attainment—the "Black church" has coalesced at moments of political opportunity into "unified public religious action" on behalf of "the people."

We continue our efforts to expand the readership and authorship of the MSSJ across the Midwest region and globally while maintaining the highest standards of scholarly work. The journal continues to maintain an acceptance rate of approximately 35%. Authors from across the Midwest are contributors to half of the papers in the forthcoming volume. Reviewers for the current volume are drawn from institutions across the country and internationally. During the past year, 992 papers from MSSJ have been downloaded by more than 500 institutions. The following are the two most downloaded papers (in order):

1. Monteiro, Delmira, and Mixalis Poulakis. 2019. "Effects of Cisnormative Beauty Standards on Transgender Women's Perceptions and Expressions of Beauty." *Midwest Social Sciences Journal* 22(1):10. http://scholar.valpo.edu/mssj/vol22/iss1/10.
2. Clark, Kevin M. 2021. "Double Loop Learning and Productive Reasoning: Chris Argyris's Contributions to a Framework for Lifelong Learning and Inquiry." *Midwest Social Sciences Journal* 24(1):6. https://scholar.valpo.edu/mssj/vol24/iss1/6/.

The George C. Roberts Award for best paper published in the MSSJ was awarded to Chae Young Chang for his paper "Effects of States' Laws on Youth Physical Activity Participation and Obesity Prevalence" for Vol. 24 (2021). It can be found at https://scholar.valpo.edu/mssj/vol24/iss1/5.

This year, 2022, marks the 75th anniversary of the journal, and we propose to publish a commemorative issue with the theme "Emerging Themes and Perspectives in the Social Sciences." The interconnectedness of the world requires research that is not confined within disciplinary silos, and in publishing this special issue, our goal is to reinforce the mission of the journal to embrace that interconnectedness. We also hope to highlight work that tackles the complexity of contemporary social problems using innovative methodologies and analytical tools. We welcome proposals and recommendations of scholars who can make a significant contribution to this theme and special issue. Authors intending to contribute to the special issue are asked to provide an abstract of the proposed work to the editorial team by January 15, 2023. The following scholars will be the editors of the special issue:

Aimee Adam, Associate Professor of Psychology, Indiana University Southeast

Selena Sanderfer Doss, Associate Professor of History, Western
    Kentucky University
Melissa J. Stacer, Professor of Criminal Justice, University of
    Southern Indiana
Rajiv Thakur, Associate Professor of Geography, Missouri State
    University
Laura Merrifield Wilson, Associate Professor of Political Science,
    University of Indianapolis

Nirupama Devaraj and Bharath Ganesh Babu
Coeditors
Midwest Social Sciences Journal

MISSION AND EDITORIAL POLICY

The purpose of the *Midwest Social Sciences Journal* is to promote and advance the social sciences in Indiana by publishing the highest quality social science theory and research papers available. *MSSJ* recognizes and supports the many diverse perspectives and methods across the several social sciences; it neither espouses nor champions any specific ideological, theoretical, methodological, or political commitments.

MSSJ is committed to intellectual integrity, rigorous standards of scholarship, and rational and civil discourse. It encourages the presentation and free exchange of diverse viewpoints and seeks to foster open and critical inquiry that privileges no particular standpoint while operating within the limits of a standard of discourse and reason that distinguishes between the pursuit of knowledge and truth versus mere assertions of dogma.

Although every effort will be made to publish issues that represent a fair balance of scholarship across the entire spectrum of social science disciplines, the journal's first priority will always be to publish the best social science research available at any given time, regardless of disciplinary representation. Toward this end, papers will be accepted for editorial review and publication in the annual issue of the journal at any time of year, whether or not they were presented at the Annual Conference. Persons who submit articles for review are expected to adhere to Author Submission Guidelines detailed elsewhere in this journal and online at https://scholar.valpo.edu/mssj/.

The journal was published annually both in print and online in the autumn from Volume 14 to Volume 19. Beginning with Volume 20, the journal is available only digitally. Papers submitted for possible publication are subject to a double-blind review process using BePress. The coeditors alone are responsible for making the final decision on all manuscripts and content for publication in the journal. Their decision on publication content is not subject to review by any other member, officer, or body of the Indiana Academy of the Social Sciences.

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Keynote Address at the 93rd Annual Meeting of the Indiana Academy of the Social Sciences

Of Movements and Markets: Religious Competition and the Problem of Black Church Relevance*

OMAR M. MCROBERTS
University of Chicago

ABSTRACT

Why do cross-denominational public religious movements such as the Southern Christian Leadership Conference appear, despite the market-like competitive behavior of churches? Religious economy theory offers one set of explanations, based on a supply-side approach to the dynamics of numeric religious growth and decline. Namely, ecumenical movements are engaged by denominations, or religious firms, in membership decline. The history of national Black ecumenical movements, however, points to ways that religious economic theorizing fails to account for the multiple modes of social consciousness regarding church survival that motivate institutional religious activity. Black churches have existed not merely as a market but as a field where market consciousness transforms into movement consciousness at historic moments of perceived political opportunity. At such moments, unified public religious action on behalf of "the people" is understood as more important than the competitive dominance of individual firms in a private religious market.

KEY WORDS Black Church; African American Religion; Ecumenical Movements; Public Religion; Religious Economies

On February 12, 2010, the National Council of Churches released its annual compendium of statistics on 227 religious denominations in the United States and Canada. Seven of the eight major African American denominations were listed among the top 25 religious bodies by membership. Together, the top seven historically Black denominations claimed 22,899,875 members. Statistics on these denominations have been notoriously unreliable. As of 2010, some of the denominations had not produced updated membership data in many years; others appear to have reported the same number every year. The National

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Baptist Convention, USA, Inc. was reported to have 8,200,000 members in 2000, although it had not updated its count since 1992. By 2005, it claimed 5,000,000—a nearly 40% loss. This indicated not that membership had fallen so dramatically but that previously exaggerated numbers had been tempered.

Despite the irregularity of Black church statistics, it was clear that these bodies were persisting well, especially relative to majority-White mainline denominations, whose decline Yearbook editors remarked upon annually, yet on February 24, 2010, just two weeks after the National Council of Churches released these statistics, the Black church was declared dead—not declining, but dead. In a Huffington Post article, Princeton religion scholar Eddie Glaude began by citing the most recent survey from the Pew Research Center Forum on Religion and Public Life, which revealed that 87% of African Americans identified with some religious group and 79% claimed religion was highly important in their lives. He then went on to note the death of the Black church, presenting the triptych of circumstances surrounding its demise. First, the prophetic, progressive, socially concerned and engaged tradition of Black *public religion* was being overpowered by theologically and socially conservative currents and by "prosperity" oriented churches, where a gospel of individual material attainment, rather than social transformation, prevailed. In the sociology of religion, public religion is understood as all of the civic activity engaged by religious bodies in societies where institutional religion and state are formally distinct. It is the socially and politically concerned activity of religious institutions trying to impact the world (Casanova 1994; see also McRoberts 2015). The idea of public religion presumes a contrary *private religion* that includes the sectarian ritual and spiritual activities of individuals and faith communities. Second, secular institutions and diversions, along with majority-White megachurches, challenged the Black church's storied place as the center of Black life. Last, instead of working to make the church the prophetic center of Black life in the contemporaneous moment, Black religion increasingly resorted to a fierce veneration of the church's prophetic past. What, Glaude asked, "will be the role of the prophetic black churches *on the national stage* under these conditions?" Where, he asked, "are the press conferences and impassioned efforts around black children living in poverty, and commercials and organizing around jobs and healthcare reform?"

The article provoked a storm of responses from a wide range of commentators from the religious field and the academy. In an electronic response, Reverend Dr. J. Alfred Smith confessed, "I am sick and tired of black academics who are paid by rich, powerful Ivy league schools, who have access to the microphone and the ear of the press, pontificating about the health of black churches that they themselves have outgrown, posing as experts on us when all they know about us is what they read and what they see on Word television. They do not know the majority of underfunded black churches who weekly give hope to the unemployed, the underemployed, the sick and the struggling, are led by pastors poor in material resources but rich in faith." Lawrence Mamiya, a protégé and scholarly partner of the late illustrious Black religion scholar C. Eric Lincoln, echoed Smith's sentiment, called Glaude's portrait a "sweeping generalization," and elaborated a litany of pastors, churches, and organizations that represented a thriving Black public religious agenda. "As Eric Lincoln and I knew from experience," Mamiya chided, "you have to talk to the pastors in the trenches before you can make any valid statements about black churches."

A public panel discussion entitled "Is the Black Church Dead?" including Glaude and several other academic and church figures was held at Atlanta's Ebenezer Baptist church, the pastoral home of Drs. Martin Luther King Sr. and Jr., and the iconographic home of the Black church as the cradle of prophetic insurgency for social justice. It was from Ebenezer's pulpit that Dr. King Jr. himself, speaking some 47 years earlier as the chief organizer of the Southern Christian Leadership Conference (SCLC), fiercely decried the social and political apathy, *the irrelevance*, of Black clergy concerned mainly with growing their own churches. "I'm sick and tired," he proclaimed that morning,

> of seeing Negro preachers riding around in big cars and living in big houses and not concerned about the problems of the people who made it possible for them to get these things. It seems that I can hear the almighty God say, "stop preaching your loud sermons and whooping your irrelevant mess in my face, for your hands are full of tar. For the people that I send you to serve are in need, and you are doing nothing but being concerned about yourself." Seems that I can hear God saying that it's time to rise up now and make it clear that the evils of the universe must be removed. And that God isn't going to do all of it by himself. The church that overlooks this is a dangerously irrelevant church. (Ebenezer sermon, March 4, 1963 [Branch 1989:695–96])

The danger, as King would preach at Ebenezer three years later, was not only that Black people's suffering would increase and that America would drift even further from its call to justice but also that the church would die. Numerical die-off was not at issue here; instead, the very favor of God was at stake. Black churches might or might not survive in great numbers as something akin to social clubs competing for members, but, "[y]ou see, the church is not a social club, although some people think it is. They get caught up in their exclusivism, and they feel that it's a kind of social club with a thin veneer of religiosity, but the church is not a social club. The church is not an entertainment center, although some people think it is. You can tell in many churches how they act in church, which demonstrates that they think it's an entertainment center. The church is not an entertainment center."

The people of the church needed fully to realize its activist, world-mending function, because "we don't want the funds of grace cut off from the divine treasury," King declared. Without these funds of grace, without the ongoing investment of God's living spirit, the social-club churches might live, even thrive, but the Church as the divine instrument of God's will to justice would surely die.

Perhaps it is peculiar to Black religion that the survival, *the very life* of the church should, in certain quarters and at particular historical junctures, so strongly be identified not with the number of members and congregations or the size of denominational budgets but with its aggregate relevance to social concerns on a national scale. Historian Barbara

Dianne Savage reasoned that this dynamic had led to a rather unfair characterization of Black churches as ideologically and organizationally unified, ever ready to mobilize for some political cause. She attributed this characterization to the memory of the civil rights movement. Against the backdrop of the civil rights mythos, the day-to-day round of churchly activities oriented toward private religion—ritual production, member recruitment and retention, and congregational survival more generally—appears banal, but historically, Savage argued, the very diversity of churches, not to mention their common want for material resources, had led them generally to resist national unification around theological, ecclesiastic, and public religious goals. Coordinated church movements like the SCLC have been glaring exceptions to a much broader historical pattern of resistance—resistance not to social injustice but to movement coordination itself. From this perspective, the history of Black public religion is a stream of quotidian activities and disappointed movement expectations dotted with rare glowing feats of political mobilization, the civil rights movement of the 1950s and 1960s being perhaps the most dazzling dot of all, but a dot nonetheless.

Dr. King's homiletic references to "the funds of grace," "the divine treasury," and the "investment of God's living spirit" evoke a Divine economy, where the church "died" only when it failed to rise to the public religious demands of the time. That Divine economy implied by contrast an earthly religious economy, even a market, where churches worried about actual money and membership, and actively competed for these assets by producing the right private religious goods. King dismissed as "social clubs" those churches preoccupied with the vicissitudes of the market. The purpose here, of course, is not to dismiss any religious activity but to point out that the ordinary, private religious life of churches can be described in terms of the competitive, survival-oriented activity of a diverse set of organizations in a market.

THE RELIGIOUS MARKET

Why, then, do cross-denominational public religious movements like the SCLC appear, despite the market-like competitive behavior of churches? Religious economy theories as developed by Roger Finke, Rodney Stark, and William Sims Bainbridge offer one set of explanations, based on a supply-side approach to the dynamics of numeric religious growth and decline. According to Finke and Stark in their book *The Churching of America,* ecumenical movements invariably are engaged by denominations, or religious firms, in numerical decline. Churches that have ceased making demands upon the lives of members, have stopped asserting their uniqueness vis-à-vis other organizations, have released their tension against the world, and have subsequently lost market share will band together to bolster themselves. Thriving denominations, by contrast, will avoid any gesture at merger or collaboration. Finke and Stark use the Federal Council of Churches of Christ in America (FCCC) *cum* National Council of Churches (NCC) as the primary example. Thriving evangelical and sect-like denominations were excluded or had no interest in joining, anyhow. Finke and Stark conclude that "1. growing churches perceive substantial religious differences between themselves and others (which justifies their efforts to bring in new

members). 2. Growing churches do not want to merge. 3. Churches that are shrinking see merit in mergers" (p. 233).

While it is true that the mainstream White denominations that formed the FCCC and the NCC were shrinking, especially relative to the growing evangelical churches, religious economic explanations for their ecumenism do not adequately account for what they seemed to think they were doing. Rather than banding together against the cold reality of decline, they were, at the possible risk of losing more members, joining forces to guide a secular social order toward principles that they sincerely took to be just. Finke and Stark dismiss as irrelevant the ideological and political purpose of the FCCC, and they ignore altogether the purposeful interaction between this ecumenical body and the federal government, which is where much of its activism was brought to bear.[1] The NCC was instrumental in mobilizing White churches behind the civil rights movement and other progressive causes; such mobilization took place in full knowledge that it might disaffect portions of the White religious market of shares (Findlay 1997; Hollinger 2013).

"GET THE STICKS TOGETHER!" THE SHIFT FROM MARKET TO MOVEMENT

The religious economic perspective is helpful in describing what churches do when they are behaving as a market. When they behave as a market, the organizational survival of particular churches and particular denominations is paramount. Black religious discourse foregrounds competition between denominations, within denominations (which has produced many schismatic moments), with majority-White denominations, and with secular entities that might drain membership from organized religion. Thus, from the first decade of the 20th century onward, the annual conferences of the African Methodist Episcopal (AME) and National Baptist churches featured the reports of official church statisticians, who tracked the relative numeric fates of the different denominations and stimulated debate about alternative paths to church growth. Some warned that if churches failed to meet people's material and political needs, they would lose members to competing denominations or non-church institutions. Others argued that if their churches became too socially relevant, too "worldly," they would ultimately lose the private, sacral textures that distinguish churches from secular associations.

The market metaphor is less helpful when the churches are behaving as ecumenical movements. When churches band together to behave as a social movement, African Americans appear in churchly discourses not as a source of market shares but as a singular people whose survival is at stake. The Black church then appears as a single entity, whose primary function is to be relevant to that survival, lest the church and the people as a whole suffer. The death of the Black church would then not represent a market failure but a failure of public relevance.

I have already highlighted the tones of this logic in Dr. King's language in the organizing of the SCLC, but this logic also appears in the organizing of both the earliest and the most recent instances of Black ecumenical movement. When Eddie Glaude declared the Black church dead on February 24, 2010, he did not know that only a few weeks prior, the heads of seven major African American denominations had descended

upon Miami to resurrect the movement. Actually, for two years, a number of religious leaders affiliated with the Institute for Church Management and Administration had been working to gather the Black churches into a force capable of confronting Black social ills in the age of President Barack Obama. The Miami meeting, convened under the thematic auspice "Celebrating the Ecumenical Legacy of the Black Church," would incorporate the board of directors for a Conference of National Black Churches, initiate conversations with a variety of secular collaborators in the corporate and nonprofit sectors, and begin planning for December 2010 a major national gathering in Washington, DC. In abundance at the two-day meeting were proclamations of joy and gratitude that the scattered, competitive churches were forming once again, at a pivotal moment in history, a singular wave of movement activity, the power of which could save a race, perhaps even a nation.

"We are reinventing ourselves in the 21st Century," the late AME bishop John Adams remarked in the opening session. "It is an idea whose time has come. I am so delighted. I don't know if we know what God is going to do with us now. We have a Black president but things are as hard as ever. The church is being called to act." The language of calling, of the "idea whose time has come," evokes the force of *Kairos*, the holy moment outside of ordinary time (*Chronos*) when the need for a particular type of action or change obviates a previous pattern of behavior (McRoberts 2020). The action being called forth at this *Kairos* moment was church unity on behalf of, rather than in competition over, a people.

At the December 2010 gathering, entitled "For the Healing of Our People," many of the presentations drew on scripture to frame a movement of churches overcoming their own competition to save a singular people. There were references to Ezekiel 37:1–14, where appears the parable of the dry bones. Here, the churches, rather than banding together to prevent death, were depicted as already dead in their irrelevance; the new banding together, the new movement represented a coming to life out of the dry bones. Also referenced was Ezekiel chapter 36, where the prophet is instructed to write "Judah," "Joseph" on another stick, and then told to bind the sticks together in a gesture of a united Israel. "Maybe I'm not reading this right," preached Dr. James Forbes in his address to the conference, " 'But, Lord, I'm a Baptist! But, Lord, I'm a Methodist!' Get the Baptist stick and link it up with the Methodist stick, and tie it together with the Pentecostal stream, and do it with the independent ecclesiastical organizations. . . . Are we getting the sticks together? Oh, that they might know that I am the One God, although I have allowed denominational demarcation, I have one people. I, in a time of need, will bind the two sticks together!" Forbes also noted how competitiveness had made it difficult to bring the churches together in previous decades. "Some of us," he said, "were not even willing to make our Rolodex available, lest somebody raising an offering for the Conference of National Black Churches (CNBC) would in some way diminish the collections."

Similar framings of ecumenical movement as the revitalization of churchly relevance to a struggling people appear in the formulation of the first Black ecumenical movement, the Fraternal Council of Negro Churchmen (FCNC). Founded in 1934 in the midst of the Great Depression and Franklin Roosevelt's first New Deal, the FCNC set out to address the perception that churches in general were under siege by critical and competitive tendencies at a time of widespread Black desperation. From without, African

American churches faced attack by the forces of secular blackness, which threatened to peel members away from organized religion, especially in the northern cities. Secular Black intellectuals and cultural luminaries such as W. E. B. Dubois,[2] Carter G. Woodson,[3] and Langston Hughes[4] occasionally appeared by name as examples of this self-destructive movement away from God. Meanwhile, Black religious elites were painfully sensitive to criticisms leveled by certain maverick clergy, such as Adam Clayton Powell Sr., pastor of the behemoth Abyssinian Baptist in Harlem, New York. In one particularly inflammatory sermon, Powell denounced rampant "sexual perversion and moral degeneracy" among Black church leaders. The *National Baptist Voice* recapitulated the sermon and in subsequent issues published numerous hotly defensive responses from angry readers ("Dr. A. Clayton Powell Denounces Degeneracy in the Pulpit" 1929).[5] Such controversy deepened the sense among certain clergy that broad, bold, ecumenical church action would be necessary to demonstrate and protect the unique relevance of organized religion in Black life. FCNC leaders stated the unequivocal need to set aside significant doctrinal differences and competition for members in order to confront the problems besetting Black people, lest the churches perish as a whole.

Importantly for the religious economies or market perspective, none of the FCNC member denominations were actually shrinking at that time. Between 1926 and 1933, the Black Methodist denominations grew by 403,108 members and the Black Baptists gained 383,917. As market share is concerned, in 1933, the Baptists shepherded a whopping 69% of the faithful belonging to FCNC denominations. If membership decline or low market share were truly a prerequisite for denominational interest in ecumenism, the Black Baptists certainly would have avoided the FCNC.[6] Denominations that joined the FCNC saw ecumenical activism as a way to forestall the demise of Black religion and Black people as a whole. Meanwhile, its leadership presented the numerical strength of the unified Black churches as evidence not of its market power but of its *political* power. In a resolution delivered to President Roosevelt at a meeting with him in 1935, the FCNC stated,

> [T]he last census of religious bodies reported 42,585 Negro churches in the United States, owning more than $250,782,600 worth of church property which includes 6,543 parsonages. They have an income of over $43,024,259 per year. The church is the only really national organization which the Negroes have, support and control, and is still the chief organization of sentiment making, and the chief institutional of moral spiritual, social and civic leadership. It is not only strong in the larger cities, but it is almost the only voice of the inarticulate millions on the farms and in the rural districts and small towns of the nation. We come as the representatives of these people to speak to you what, we feel, is best for them and for our country. ("Committee Representing Race Churchdom Received By President Roosevelt" 1935)

CONCLUSION

What we call the "Black church" is a like a figure/background gestalt; at times, the movement comes into view, and at other times, it recedes into the background. It is a realm of discourse regarding the very meaning of survival for both church and people. The history of national Black ecumenical movements points to ways that religious economic theorizing fails to account for the various modes of social consciousness regarding that survival that motivate institutional religious activity. Black churches are indeed competitive— historically, they have competed with each other, with White religious alternatives, and with a host of perceived secular institutional threats over the private devotions of Black people. But major instances of nationally organized Black ecumenical activism have emerged as (a) efforts to change secular culture and politics that, (b) by virtue of their ecumenicity, did not represent the market ambitions of a particular church and (c) coalesced not for the sake of survival as the control of relative market shares but for the sake of public religious relevance in a struggle for race survival. The implication is that the Black churches have existed not merely as a market but as a field where market consciousness transforms into movement consciousness at *Kairos* moments of perceived political opportunity. At such moments, unified public religious action on behalf of "the people" is understood as more important than the competitive dominance of individual firms in a private religious market.

ENDNOTES

1. Indeed, the final Census of Religious Bodies, which Finke and Stark famously rely on for their analysis of denominational fates between 1890 and 1936, was executed only because the FCCC pressured President Franklin Roosevelt to fund it after Congress failed to do so.
2. See, for instance, the editorial "Disgusted With God" appearing in the January 17, 1931 (16:2, p. 3) issue of the *National Baptist Voice.* Here, the editor responds to Dubois's article, published in his own *Crisis* magazine, in which he imagines a Black Virgin Mary expressing her disappointment with a God who would abandon her people in their time of oppression and leave her pregnant and alone, to boot. DuBois's relationship with religion and spirituality were, in fact, more complex than many of his religious critics recognized. (See Edward J. Blum, *W.E.B. Dubois, American Prophet*.)
3. Carter G. Woodson, historian and educator who founded the Association for the Study of Negro Life and History and who inaugurated Black History Week (later Black History Month), created a tremendous flap by organizing a conference that would subject the Black church to an "acid test" of its relevance in Black life ("Carter Woodson Flays Church for Winking at Corruption" 1931; "The Church and Doctor Woodson" 1931). Elsewhere, Woodson had already criticized Black churchdom for maintaining too many physical plants, harboring corruption at the congregation level (this criticism was leveled especially at the Black Baptists), preferring ritual vanity

over social activism, and perpetuating sectarianism when Black ecumenical action was in order (see correspondence in CHS, CBP).

4. "In his poem, 'Ozie Powell, Ozie Powell,' read during the recent Negro Congress in Chicago, in February, Langston Hughes Declared, 'Now we know God does not Care.' It was a bold denial of the existence of God. . . . God does care, Langston, else you would not be here. Our people have suffered enough to have perished from the earth. Two Hundred and Fifty years of exasperating slavery; lynched and driven about like dumb cattle. Yet we have survived it all. The Christian religion has given us a technique of survival" (Barbour 1936:20).

5. Defensive responses tended to brand Powell and other "critics of the church" as grandstanding, fact-twisting enemies of the most powerful and holistically benevolent institution under Black control.

6. Figures are derived from the table "Membership Statistics of the Larger Religious Bodies" (Reverdy [1936] 1975:10).

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Original Research

Assessment Practices and Experiences of Sex Trafficking in Caseloads of Service Providers Working with High-Risk Youth in Indiana[*]

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ABSTRACT

With increased recognition of sex trafficking, calls have been made for greater identification and screening. Lack of awareness and assessment likely contribute to low identification of sex trafficking victims. The present study examined assessment practices, confidence in detecting trafficking, and experiences with domestic minor sex trafficking (DMST) survivors in the caseloads of service providers in the previous year. Employees at high-

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risk settings were recruited, resulting in a sample of 76 providers representing 21 agencies. Data revealed that while general risk factors were typically assessed, sex trafficking-specific risk factors and experiences were assessed less often. Approximately 30% of participants indicated that they had worked with at least one sex trafficking victim in the previous year; however, 44% of participants indicated low confidence in detection. Approximately 23% of participants had completed sex trafficking training, but few differences emerged between those with and without prior training. Increased training, assessment, and evaluations of the effectiveness of training programs are recommended.

The Trafficking Victims Protection Act (TVPA), considered the first comprehensive modern law relevant to human trafficking, was passed in 2000, formally acknowledging human trafficking within the United States and calling for increased attention, resources, and prevention efforts. Since that time, the TVPA has been reauthorized and updated numerous times, most recently in 2018–2019 (Wells 2019). Instances of human trafficking are most often classified as either labor trafficking or sex trafficking, although a multitude of proposed classifications exist (e.g., Gibbons, Chisolm-Straker, and Stoklosa 2020). The present study focuses on domestic minor sex trafficking (DMST), specifically experiences in Indiana. Sex trafficking occurs when a commercial sex act (i.e., any sex act performed in exchange for something of value) is induced by force, fraud, or coercion or in which the person inducted to perform such an act has not attained 18 years of age (TVPA 2000). Estimates of the number of trafficked minors in the United States vary widely and have severe weaknesses, which has led to recommendations to not attempt to estimate specific numbers of DMST survivors (Finkelhor, Vaquerano, and Stranski 2017). Improved identification and tracking of cases of DMST will be important in the future in order to plan prevention, intervention, and recovery services and to justify the resources needed to fund these efforts. Intrinsic, extrinsic, and systematic barriers to identification of DMST exist (Garg et al. 2020); it is therefore important that service providers are informed about DMST and intentionally and consistently assess for the presence of DMST. The current project is a quantitative examination of data provided by service providers in Indiana describing their assessment practices, confidence in detecting trafficking, and experiences with DMST survivors in their caseloads in the past year. Of note, the terms *victim* and *survivor* are both used in DMST literature. Although some have argued for important distinctions between the terms, the terms are often used interchangeably (e.g., Office for Victims of Crime Training and Technical Assistance Center n.d.). The present study will retain the term used by researchers when describing specific studies but, when speaking generally, will utilize the term *victim* when referring to individuals still involved in DMST and the term *survivor* to refer to those who are no longer actively being trafficked and/or are in recovery phases.

RISK FACTORS FOR MINOR SEX TRAFFICKING

Consistent with other types of sexual abuse/assault experiences (to be described as sexual abuse unless different definitions are used), research frequently indicates higher rates of sex trafficking among females compared to males (e.g., Gibbs et al. 2015; Varma et al. 2015). Additionally, racial and ethnic minorities (e.g., Butler 2015; Twis 2020) and members of the LGBTQ population (Boukli and Renz 2019; Murphy 2016) appear to be overrepresented in DMST. See Williamson and Flood (2021) for a discussion of systematic contributions and the disproportionate impact on racial, gender, and sexual orientation minorities. Overall, there are numerous races, genders, sexualities, risk profiles, and paths into the commercial sex trade or minor sex trafficking (Choi 2015; Reid et al. 2019). Rather than highlighting demographics, research has identified environmental and trauma-related risk factors that can make youth more vulnerable to sex trafficking. Particularly vulnerable populations include runaway and homeless youth, those involved in the foster care system (Fong and Cardoso 2010; O'Brien, White, and Rizo 2017), and youth involved in the juvenile justice system (Chohaney 2016; Gibbs et al. 2015; Twis 2020). Review findings highlight environmental factors (e.g., dysfunctional family environments, encounters with child welfare, poverty, and homelessness) and traumatic factors (e.g., childhood sexual abuse/interpersonal trauma) as highly associated with sex trafficking of minors and suggest that trauma is an important risk factor (Choi 2015; Franchino-Olsen 2019). Examination of adverse childhood experiences (ACEs) in juvenile-justice-involved youth indicated that trafficked youth reported higher levels of ACEs than a matched sample, but sexual abuse was the strongest predictor of human trafficking for both boys and girls (Reid et al. 2017). Pathways to DMST, and the associated risk factors, vary, however, and differences occur between individuals and may differ by factors such as region, location (urban versus rural), age, and race (Reid 2012; Twis 2020).

Studies have identified differences between minor survivors of sex trafficking and survivors of sexual abuse without trafficking. Researchers in a pediatric medical setting compared histories and found that commercially sexually exploited children (CSEC; sexual activity of children used for financial profit, including sexual trafficking of minors) had higher rates of violence by parents/caregivers, history of violence with sexual activity, substance use, running away, involvement with child protective services, and involvement with law enforcement (Varma et al. 2015). Similarly, a study reported that individuals involved in CSEC had higher rates of living in foster homes, running away, arrest, suspension from school, and drug use than those with sexual abuse without commercial exploitation (Shaw et al. 2017). Data from the National Child Traumatic Stress Network Core Data Set indicated that CSEC victims demonstrated higher rates of involvement with detention centers, hospital emergency rooms, and self-help groups as well as higher levels of skipping school, sexualized behavior, alcohol use, substance use, criminal activity, and running away compared to a matched comparison of sexual abuse victims without commercial exploitation (Cole et al. 2014). An evaluation of service providers in programs serving minor victims of sex trafficking concluded that the victims shared common involvement with child welfare services and the juvenile justice system, along with histories of childhood maltreatment and runaway youth status (Gibbs et al.

2015). As many of these risk factors, and their associated consequences, lead to service provision in settings such as healthcare, children's services, and juvenile justice, assessment of both general and DMST-specific risk factors in these settings is important for identification and treatment.

BARRIERS TO IDENTIFICATION

Identification of DMST is challenged by intrinsic, extrinsic, and systematic barriers (Garg et al. 2020), including the secretive nature of the illegal commercial sex trade, fear and reluctance among victims to report, and lack of knowledge in providers about sex trafficking (Busch, Fong, and Williamson 2004; Martinho, Goncalves, and Matos 2020; Wallace, Schein et al. 2021). Victims may fear authority and the legal system (e.g., Jordan, Patel, and Rapp 2013), which may be enhanced with involvement in illegal activities, which may be a component of the trafficking experience (U.S. Department of State 2016). Another factor that makes identification difficult is the often complex relationship between the victim and trafficker. Traffickers may groom victims for the experience by assuming the role of boyfriend in order to gain loyalty and trust, then use fear and manipulation to keep the victim under control (Gerassi et al. 2018; Jordan et al. 2013; Kotrla 2010; Rigby 2011). The relationship may result in feelings of loyalty, belonging, and security for some individuals and may result in failure to identify as a victim or in unwillingness to report their traffickers (Hardy, Compton, and McPhatter 2013). Although these approaches are considered common in DMST, evidence suggests that there are different types of relationships between victims and perpetrators (e.g., Serie et al. 2017) and that the most common descriptions are based on unrepresentative samples and may not be consistent with the larger population (e.g., Marcus et al. 2014).

Although survivors may be reluctant or unable to identify themselves, existing research also suggests that limited awareness about trafficking often results in a lack of identification by others, including health professionals and service providers. Research suggests that many human trafficking victims seek healthcare services before, during, and after trafficking experiences (e.g., Lederer and Wetzel 2014; Stoklosa, Grace, and Littenberg 2015). Given this, it has been argued that healthcare providers can play an important role in the identification of trafficking victims and serve as an important link to assistance (Gibbons and Stoklosa 2016; Testa 2020). Given the complexity of the problem, it will be beneficial for involvement in multiple settings, with schools being another potential area for detection and intervention (e.g., Chesworth et al. 2021; Rizo et al. 2021). Consistent with the emphasis in prior research on healthcare settings and the project's current focus on social services, these settings are the primary focus of the current paper. Qualitative examination of survivor reports indicates that survivors want providers (pediatric emergency medical providers, specifically, in this study) to ask about trafficking and to approach the topic in a direct, sensitive, and nonjudgmental manner (Wallace, Schein et al. 2021), and findings suggest that youth may be willing to disclose in supportive environments (Garg et al. 2020). Although health professionals are mandated reporters of minor abuse, there is frequently a lack of understanding and screening for trafficking situations among health professionals (Beck et al. 2015; Clawson and Goldblatt Grace

2007; Macy and Graham 2012). In particular, providers may not understand that force, fraud, or coercion do not need to be demonstrated for minors (Beck et al. 2015; Gerassi et al. 2018). Survivors have expressed frustration with the lack of sensitivity and understanding of trauma and DMST among healthcare providers and other frontline professionals, and they have indicated that these experiences further increase distrust and reluctance to seek care (Rajaram and Tidball 2018). Even providers who would recognize instances of sex trafficking can miss opportunities for victim identification because of a lack of consistent assessment (Dols et al. 2019; Fong and Cardoso 2010; Goździak and MacDonnell 2007). Much of the existing literature related to assessment and identification of trafficking victims has been conducted with medical providers and settings. Given the involvement with organizations such as child welfare and juvenile justice, social service agencies are also likely to encounter DMST.

DMST ASSESSMENT

Although measures have been developed to identify trafficking (e.g., Dank et al. 2017), the field has not come to a consensus regarding a gold standard in assessment, and providers and agencies use a wide variety of measures and methods (see Pate et al. 2021 or Romero et al. 2021 for discussion of available measures). Without consistent formal assessment, identification relies on the clinician's discretion, which likely results in highly variable experiences. Little research exists examining common assessment practices related to DMST. One study examined the routine assessment of trafficking in emergency departments in Texas and found that 37% routinely screened children for human trafficking (Dols et al. 2019). Given survivors' reluctance to voluntarily report or seek assistance for sex trafficking experiences, improved awareness and assessment by providers will be an essential step to increase identification and connection to appropriate services.

Additionally, although funding toward and engagement in efforts related to DMST have increased since the passing of the TVPA, little research has examined how many service providers have received training specific to DMST or providers' confidence in their ability to identify DMST when it occurs. Although distinct from accuracy, confidence is important to consider, given that providers are more likely to report child abuse generally when they are more confident (e.g., Flaherty et al. 2006). Additional research that further examines the relationship between individuals' perceptions of their knowledge and abilities, and the accuracy of their identification, is needed. Gonzalez-Pons and colleagues (2020) examined provider confidence in ability to identify DMST victims and found that just over half of the participants believed their organizations would be able to identify DMST victims. Data suggest that service providers are interested in and see value in DMST training (Beck et al. 2015; Gonzalez-Pons et al. 2020), and lack of awareness or training has been suggested as a barrier to identification (Beck et al. 2015; Testa 2020). Numerous calls have been made for consistent training related to sex trafficking (e.g., Dols et al. 2019; Garg et al. 2020; Litam and Lam 2020; Martinho et al. 2020; Stoklosa et al. 2015; Talbott et al. 2020). Although a standard approach to training is not agreed upon (see Miller, Duke, and Northam 2016 for recommendations), there is evidence that participation in training can result in increased awareness, confidence, and knowledge of sex trafficking (Beck et al. 2015; Grace et al. 2014).

PRESENT STUDY

The present study aims to gather data from service providers in Indiana about their assessment practices, confidence in detecting trafficking, and experiences with DMST survivors in their caseloads in the prior year. Much prior research has focused on healthcare/medical settings, whereas the current study examines primarily social services and juvenile justice. These settings were chosen based on the high likelihood of DMST survivors receiving services from these types of agencies (e.g., involvement with child welfare and/or juvenile justice typically leads to connection to social services) and based on the interests of the researchers and task force. As the detection of DMST is often dependent upon provider assessment, the study aims to provide information about how frequently providers assess general and specific risk factors and experiences of DMST. The study also aimed to assess providers' perceptions of their confidence in assessment of DMST. Finally, the study sought to gain information about DMST experiences in Indiana from providers who knew or suspected that they had clients who were DMST survivors. The current study was conducted by members of the Indiana Protection of Abused and Trafficked Humans (IPATH) task force, with the support of the task force; the focus was therefore on providers in Indiana specifically. Trafficking experiences in the Midwest are understudied (Gerassi et al. 2018), and the current study adds to the literature in this area. Service providers working with high-risk youth completed an online survey asking about their assessment practices and client experiences. Given the lack of a standardized assessment at the time of study development (see Dank et al. 2017 for review of existing measures and measure development), a measure was created for the study; measurement development was not a primary goal, however. The aims were considered exploratory, but the investigators expected that although some of the general risk factors for trafficking would be assessed regularly, the specific risk factors and indicators of DMST would be assessed less frequently.

METHODS

Participants

Inclusion criteria included working at agencies in Indiana that provided at least one of the following services to individuals under 18: temporary/emergency shelter, residential treatment, acute inpatient treatment, independent/transitional living programs, day psychological treatment, outpatient mental health services, home-based mental healthcare, group home services, foster care services, child advocacy, child protective services, or juvenile justice services. To be included, individuals must have been working in Indiana and have been involved in direct care. These organizations were chosen to be the focus of the present study because of their work with youth at high risk for DMST, based on known risk factors, and to complement prior studies focused on healthcare. No specific exclusion criteria were identified. As the survey was administered online and all questions were in English, participants must have had access to internet and the ability to read and respond in English.

Initial contact occurred in April 2014. Study personnel communicated with agencies, answered questions as they arose, and obtained information about additional agencies. Initial study recruitment emails were sent in December 2014. Because of the timing, reminders were also sent in February and March 2015. In total, 176 agencies were contacted. Of those, 80 (45.45%) agreed to participate. The final dataset represented 21 agencies. Information about the number of individuals at each agency who were sent the recruitment email was not collected. One hundred and fifty one (151) participants began the survey. Of the original 151 participants, 17 (11.3%) were deemed ineligible, because they did not work within Indiana ($n = 2$) or did not work directly with youth ($n = 15$). The final study sample included 134 adults who were providing direct services to youth in the state of Indiana at the time of survey completion. Of the 134 eligible participants who began the survey, 76 (56.7%) completed the full survey.

Basic information related to the educational and professional experiences of the participants (i.e., the service providers) was obtained. Because some organizations were located in rural areas and could easily be identified, personal demographics that could reveal the identities of the participants and/or clients in combination with the location (e.g., gender identity, race, age), especially for individuals with minority identities, were not asked. See Appendix A for background question items.

Participants worked in 21 agencies across Indiana. Most eligible participants reported having a bachelor's degree (47%) or master's degree (39.6%) and worked primarily as case workers/managers (44%) or therapists (23%). Almost all participants reported that they worked with both male and female youth clients. On average, participants estimated that the majority of their clients came from urban areas (64%) and were referred to their agencies by the Department of Child Services (43.3%) or by the juvenile justice system (24.6%).

Procedures

Participants were recruited from agencies across the state of Indiana that worked directly with youth to provide social or juvenile justice services. An internet search was conducted, using terms such as *residential treatment*, *child advocacy*, *juvenile justice*, and *youth shelter*. Only Indiana agencies that worked with clients under age 18 were contacted. The search also identified two relevant governmental departments and four professional organizations that were affiliated with a large number of local agencies across the state, and they were added to the contact list. Agencies were also identified through snowball sampling. Agencies were not excluded based on size or employee characteristics. Attempts to identify an individual at each organization to distribute the survey to relevant employees and/or volunteers were made. An initial email was sent to potential contacts, typically listed as director or general contact emails, which explained the study and asked for willingness to distribute the survey (to be sent later). Emails emphasized that participation was intended to be voluntary. If there was no response to the initial email, a follow-up email was sent. If email contact was not available or successful, an attempt was made to contact the agency by phone. After a contact person agreed to distribute the survey, they were later sent a recruitment email that included a basic explanation of the study and a link to take the survey

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online. The contact person was asked to forward the recruitment email to all eligible employees and/or volunteers. After several weeks, a reminder email was sent. Individuals and agencies were not compensated for their participation. All study procedures and materials were approved by the University of Indianapolis Institutional Review Board.

Measure

At the time the study was designed, the authors were unable to identify a preexisting measure that assessed risk factors for human trafficking broadly; therefore, the measure used was developed by the research team. The research team primarily included members of the state human trafficking task force, who were well informed and trained regarding human trafficking. Prior to the development of the measure, existing measures and relevant literature were reviewed (e.g., Smith, Vardaman, and Snow 2009). Ultimately, the items selected for inclusion were decided upon informally after discussion by the research team. The survey was administered through Qualtrics. Participants began the survey by clicking a link in the recruitment email and were required to provide consent before starting. The survey collected background information, information regarding prior training about sex trafficking, initial prevalence estimate, percentages of clients possessing risk factors, and frequency of assessment for specific risk factors and trafficking experiences. After reading a definition, participants provided estimates of confidence and answered questions about clients who experienced sex trafficking. Reports of sex trafficking victims, and descriptions of their experiences, that were provided by service providers were estimates, and providers were not required to limit to confirmed cases.

Demographic Information, Prior Training, and Initial Estimate. The survey began by obtaining background information about participants and their organizations (see Appendix). Prior to the distribution of the survey, Indiana's human trafficking task force had provided numerous trainings on human trafficking. Participants were therefore asked whether they had ever received specialized training related to sex trafficking. Participants were also asked to estimate the percentages of males and females on their caseloads over the past year who had ever been victims of sex trafficking.

Risk Factors and Experiences. Next, participants were asked to provide estimates about 29 experiences (see Table 1 for items), of which 26 were considered general risk factors for sex trafficking (e.g., homelessness or "couch-surfing") and 3 assessed likely sex trafficking experiences (e.g., engaging in sexual acts for money). Participants were asked to respond to two questions: (1) "Approximately what percentage of youth on your caseload in the past year ever experienced each of the following? (write in)" and (2) "Is this something that you typically assess (in checklists, interviews, etc.) with this group? (yes/no)." Each participant was asked to provide separate estimates for male and female clients, for a total of four desired responses for each experience [i.e., "Approximately what percentage of MALE youth on your caseload in the past year ever experienced homelessness or couch surfing? (write in estimate)"; Is that something you typically assess (in checklists, interviews, etc.) with this group? (select yes/no)"; "Approximately what

percentage of FEMALE youth on your caseload in the past year ever experienced homelessness or couch surfing? (write in estimate)"; Is that something you typically assess (in checklists, interviews, etc.) with this group? (yes/no)"]. Internal consistency of the items examining the percentages and typical assessment was examined using Cronbach's alpha and demonstrated excellent internal consistency (Female percentages, α = .909, Female typical assessment, α = .920; Male percentages, α = .917, Male typical assessment, α = .915).

Table 1. Estimated Prevalence and Assessment of Risk Factors for Sex Trafficking among Youth on Participants' Caseloads, Previous Year

	FEMALE CLIENTS				**MALE CLIENTS**			
	Estimated prevalence			**Typically assessed?**	**Estimated prevalence**			**Typically assessed?**
	N	*M* (SD)	range	*N*	Yes	*N*	*M* (SD)	range	*N*	Yes
Risk Factors										
Separation or divorce of parents	67	80.8% (20.3)	0–100	73	90.4%	63	80.0% (21.4)	0–100	68	89.7%
Emotional maltreatment	64	56.1% (34.0)	0–100	71	94.4%	60	52.6% (33.6)	0–100	66	95.5%
Primary caregiver substance abuse	64	50.4% (26.6)	0–100	71	84.5%	60	52.8% (27.0)	0–100	67	85.1%
Mental illness or suicide of primary caregiver	63	43.1% (31.0)	0–100	72	83.3%	59	45.3% (32.1)	0–100	67	83.6%
Being in the foster care system	63	40.9% (36.6)	0–100	67	95.5%	60	38.5% (35.6)	0–100	64	98.4%
Moving frequently	62	40.9% (29.4)	0–100	68	80.9%	59	39.9% (30.7)	0–100	64	81.3%
Truancy	63	40.4% (32.6)	0–100	69	82.6%	60	40.9% (32.7)	0–100	66	84.8%
Intimate partner violence against parent	63	38.4% (26.5)	0–100	72	80.6%	60	39.8% (26.8)	0–100	68	79.4%
History of substance abuse	62	36.7% (32.6)	0–100	66	92.4%	59	37.2% (33.9)	0–100	64	92.2%
Physical abuse by parent	64	36.7% (28.1)	0–100	70	94.3%	60	36.6% (26.9)	0–100	67	95.5%
Parent in prison	67	35.9% (22.1)	0–100	73	87.7%	64	36.8% (22.8)	0–95	68	88.2%
Being a victim of sexual abuse or rape**	63	31.2% (28.6)	0–100	69	92.8%	60	19.3% (23.0)	0– 90	66	90.9%
Running away from home	62	26.5% (28.4)	0–98	68	89.7%	60	26.7% (28.3)	0–98	63	90.5%
Physical abuse by boyfriend or girlfriend*	63	18.9% (24.7)	0–100	70	84.3%	60	10.2% (18.4)	0–80	67	80.6%

Table 1. Estimated Prevalence and Assessment of Risk Factors for Sex Trafficking among Youth on Participants' Caseloads, Previous Year, cont.

| | FEMALE CLIENTS | | | | MALE CLIENTS | | | | |
| | Estimated prevalence | | | Typically assessed? | | Estimated prevalence | | | Typically assessed? |
	N	M (SD)	range	N	Yes	N	M (SD)	range	N	Yes
Risk Factors (concl.)										
Living in a group home	63	18.0% (31.9)	0–100	67	85.1%	60	16.2% (28.8)	0–100	64	87.5%
Homelessness or "couch-surfing"	62	16.7% (22.2)	0–80	67	79.1%	59	18.4% (21.9)	0–100	62	80.6%
Having a boyfriend/girlfriend who is much older*	60	16.2% (20.8)	0–85	67	59.7%	57	7.4% (15.3)	0–75	63	63.5%
Having one or more sexually transmitted diseases	61	13.0% (21.3)	0–100	66	63.6%	58	8.8% (20.2)	0–100	62	61.3%
Having ties to gangs or organized crime*	62	9.9% (15.2)	0–50	67	70.1%	60	16.0% (24.9)	0–90	62	72.6%
Having another person take sexually explicit photos or videos of them**	59	8.0% (11.4)	0–50	66	42.4%	56	3.4% (9.1)	0–50	62	37.1%
Traveling or moving with older male	59	4.8% (11.3)	0–70	67	47.8%	56	3.4% (13.6)	0–75	64	42.2%
Primary caregiver engaged in prostitution	60	4.5% (7.9)	0–50	72	36.1%	56	3.6% (7.6)	0–50	67	32.8%
Being gang-raped	60	2.1% (5.2)	0–25	66	57.6%	57	0.8% (2.6)	0–10	63	55.6%
Being forced to have sex while on her period, or told to use something to prevent flow of menstruation	56	1.4% (6.9)	0–50	66	18.2%	n/a	n/a	n/a	n/a	n/a
Being abducted	60	0.9% (3.6)	0–25	67	50.7%	56	0.4% (1.6)	0–10	63	47.6%
Sex Trafficking Experiences										
Engaging in sexual acts for favors, to pay off a debt, or for goods/services*	57	5.4% (10.6)	0–50	67	40.3%	55	3.0% (10.0)	0–50	64	34.4%
Engaging in sexual acts for money	58	4.5% (12.5)	0–70	66	45.5%	56	3.0% (11.2)	0–70	64	42.2%

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Table 1. Estimated Prevalence and Assessment of Risk Factors for Sex Trafficking among Youth on Participants' Caseloads, Previous Year, concl.

| | FEMALE CLIENTS | | | | | MALE CLIENTS | | | | |
| | Estimated prevalence | | | Typically assessed? | | Estimated prevalence | | | Typically assessed? | |
	N	*M* (SD)	range	*N*	Yes	*N*	*M* (SD)	range	*N*	Yes
Sex Trafficking Experiences, concl.										
Engaging in sex acts through online websites, escort services, street prostitution, informal arrangements, brothels, massage parlors, or strip clubs	56	3.9% (10.3)	0–50	67	28.4%	53	2.5% (8.5)	0–50	65	26.2%
Stripping, exotic dancing, or lap dancing	56	2.9% (8.2)	0–40	67	25.4%	54	1.0% (4.9)	0–30	62	25.8%

Note: Items in descending order of estimated prevalence for female clients. Here, *N* refers to all the participants who gave a response for that particular question. *Yes(%)* then refers to the percentage of *N* who answered yes for regular assessment of each risk factor.

p < .05 **p* < .001 (for differences in prevalence between genders)

Estimates of Sex Trafficking Victims and Trafficking Characteristics. Finally, participants were provided a definition and explanation of minor sex trafficking with three brief case examples. After reading these, participants were asked to indicate (1) if any youth on their caseload in the past year had been a victim of sex trafficking and (2) if they believed they would know if their clients were victims of sex trafficking (to assess confidence in detection). If the participant indicated they had not worked with any victims of sex trafficking, their participation with the survey was completed. If they answered yes, questions were asked about clients' relationships to the perpetrators/pimps [i.e., "Which of the following relationships did the perpetrator have with the youth? Check all that apply: family, acquaintance, stranger, friend, boyfriend/girlfriend (according to client, unknown, or other (write in)"], ages when trafficking occurred [i.e., "At what age(s) did the trafficking occur? Check all that apply: age 5 or younger, age 6–12, age 12 or older, unknown"], and their presenting problems at the participants' agencies [i.e., "What brought these youth to the attention of your agency? Check all that apply: truancy, homelessness or runaway, teenage pregnancy, underage prostitution, sex trafficking (specifically identified as such by the referral source), violent behavior, depression, posttraumatic stress disorder, delinquent/criminal behavior, substance use, and other (write in)"]. All data about client DMST experiences were reported by the service providers and therefore are limited by provider memories and interpretations of information revealed to them by their clients.

RESULTS

Participant Data

Independent *t*-tests were conducted to examine differences in demographic variables between completers and dropouts, but no significant differences emerged (*t*s ranging from 0.675 to 1.288, *p*s ranging from .200 to .501).

Risk Factors

Experiences. Participants estimated the prevalence of risk factors among the youth on their caseload in the past year (see Table 1). Among the risk factors examined, average estimates of prevalence were highest for parental separation or divorce. Participants also reported that their clients often had primary caregivers who abused substances, were mentally ill or had completed suicide, were victims of domestic violence, or were incarcerated. About half of participants' youth clients reported emotional maltreatment, while about one-third reported physical abuse by a parent. Sexual abuse or rape was estimated to have been reported by more than 30% of female clients and nearly 20% of male clients. Other frequently reported experiences among participants' clients included being in the foster care system, moving frequently, truancy, substance abuse, and running away from home. Rates of risk factors closely related to sex trafficking, including traveling with an older boyfriend, having a parent involved in prostitution, and a girl being forced to have sex while on her period, were generally lower than other risk factors.

When comparing estimated prevalence of risk factors across sex, most experiences did not differ, with several exceptions. Participants estimated that significantly more female clients reported sexual abuse or rape than did male clients, $t(55) = 4.059$, $p < .001$. Estimates for female clients were also significantly higher for experiences with physical abuse by a boyfriend/girlfriend, $t(55) = 2.259$, $p < .05$; having a much older boyfriend/girlfriend, $t(52) = 3.131$, $p < .05$; or having another person take sexually explicit photos or videos of them, $t(51) = 3.940$, $p < .001$. More male clients than female clients were estimated to have ties to gangs or organized crime, $t(54) = -2.040$, $p < .05$.

Participants were also asked about the prevalence of specific sex trafficking experiences. Participants estimated that each of these experiences was reported by about 3–5% of their female youth clients and 1–3% of their male youth clients. Although consistently higher for females, most estimates were not significantly different by sex, although female clients were estimated to have more frequently engaged in sexual acts for favors, to pay off debts, or for goods/services, $t(50) = 2.541$, $p < .05$.

Typical Assessment. Participants were asked about their typical assessment practices (Table 1). The majority of participants reported that they typically assessed their clients for many general risk factors. The most frequently assessed risk factors (by more than 90% of participants) included experiences with the foster care system, emotional maltreatment, physical abuse by a parent, sexual abuse or rape, and substance abuse. The least frequently assessed risk factors (by fewer than half of participants) included risk factors more closely linked to sex trafficking, including traveling/moving

with an older male, having another person take sexually explicit photos or videos of them, having a primary caregiver engaged in prostitution, and being forced to have sex while menstruating.

Participants reported less frequent assessment of direct indicators of sex trafficking. Fewer than half of participants reported regularly assessing their clients for experiences of engaging in sexual acts for money or favors, to pay off debts, or for goods/services. Meanwhile, fewer than 30% of participants reported that they typically screened their youth clients for stripping, exotic dancing, lap dancing, or engaging in sex acts in other commercial settings.

Estimates of Sex Trafficking Victims and Trafficking Characteristics

Assessment of sex trafficking victims in caseloads included a dichotomous question asking if participants had any victims of sex trafficking in their caseload and items which asked for estimates of the prevalence of sex trafficking victims in their caseloads. Approximately 27% of participants estimated that some percentage (a nonzero number) of their female clients likely experienced sex trafficking, with an average estimated percentage of 2.36% (range 0–45%, SD = 6.745). Approximately 13% of participants estimated that some percentage (a nonzero number) of their male clients likely experienced sex trafficking, with an average estimated percentage of 1.25% (range 0–30%, SD = 4.931). Of the 76 participants who completed the survey, 32.9% (n = 25) responded that they believed *at least one* of their youth clients over the past year had had experiences with sex trafficking; however, after reading a definition of sex trafficking, a little less than half of participants (44.2%, n = 34) reported that they did not think they would usually know if their clients had been victims of sex trafficking (i.e., low confidence in detection).

Prior Training

Of the 124 participants who answered questions about prior training experiences, 23% (n = 31) reported having received prior sex trafficking training. Analyses were conducted to examine whether prior training influenced prevalence estimates, confidence in detecting sex trafficking, or assessment practices. Participants were largely similar, with no significant differences in estimated prevalence in female or male clients [t = −.209 to −1.124, ps > .05], confidence in detecting sex trafficking [χ^2 (1) = 0.028, p = .868], and most assessment practices [χ^2 = 0.010 to 1.949, ps > .05]. Only one significant difference emerged: Individuals with prior training reported more commonly assessing experiences of having others take sexually explicit photographs, for their male clients only, χ^2 (1) = 4.942, p = .026.

Regional Differences

Exploratory analyses examining differences by region of the state were conducted. For the purposes of the present study, Indiana was split into three regions: north, central, and south

(STATS Indiana). As the task force was housed primarily in the central region of the state at the time, the researchers acknowledged that there may have been variance in the amount of attention that was dedicated to human trafficking across the state. The majority of participants were located in the central part of the state (60%), followed by the northern part (25%) and the southern part (15%). Neither estimates of percentages of clients on caseload with sex trafficking experiences [females $F(2, 112) = 0.119$, $p = .888$; males $F(2, 111) = 0.388$, $p = .679$] nor confidence in ability to know if clients had experienced sex trafficking [$\chi^2 (2) = 0.665$, $p = .717$] differed by region. Potential differences between participants serving primarily rural ($n = 16$) versus urban ($n = 27$) youth were also examined. Neither estimates of percentages of clients on caseload with sex trafficking experiences [females $F(1, 111) = 0.142$, $p = .707$; males $F(1, 110) = 0.297$, $p = .587$] nor confidence in ability to know if clients had experienced sex trafficking [$\chi^2 (2) = 0.009$, $p = .926$] differed by majority rural or urban clients.

Nature of Reported Experiences

Additional information about clients' reported sex trafficking experiences was gathered from the 25 participants who endorsed having at least one client over the past year with sex trafficking experiences. Providers were asked to indicate whether their clients had described certain experiences, by indicating their presence or absence (and were allowed to indicate multiple types of experiences). These participants most frequently reported encountering clients who had been aged 12 or older during trafficking (88% worked with at least one client 12 or older who experienced trafficking; 28% with at least one client 6–12, 4% at least one client 5 or younger). Providers most frequently endorsed working with clients who were recruited by romantic partners (44% endorsed at least one client) or family members (40%). When participants were asked about presenting problems of clients with sex trafficking experiences, the most endorsed reason was homelessness or running away (60% reported at least one client presenting with homelessness or running away). Other common referral reasons included substance abuse (44% of providers endorsed), delinquent/criminal behavior (44%), depression (32%), violent behavior (32%), and truancy (24%). Only 12% of participants reported having at least one youth client referred for problems that were specifically labeled as sex trafficking. Other presenting problems endorsed by fewer than 20% of the participants as presenting problems of their clients with sex trafficking experiences included child abuse, PTSD, "prostitution," and pregnancy.

DISCUSSION

The current study was conducted with the goal of increasing knowledge related to assessment practices, confidence in detecting trafficking, and experiences with DMST survivors reported by service providers in Indiana; however, the present study has limitations that should be taken into consideration. Although many organizations agreed to distribute recruitment information, a lower number of organizations and participants were represented in the sample than was hoped, and it is unlikely that the sample is representative of the larger population of individuals serving at-risk youth in Indiana. Additionally,

information about the number of individuals who received the recruitment email was not obtained, preventing the creation of an estimate of percentage of individuals who were recruited that agreed to participate.

Several factors likely contributed to recruitment challenges. First, participation was voluntary and no compensation was provided. Second, although the survey was not long and was consistent with the informed consent (15–20 minutes), the task of estimating percentages for a large number of items may have been perceived as tedious. Although the final number of participants was lower than hoped, numbers are similar to those of prior studies (e.g., Gerassi et al. 2018; Gonzalez-Pons et al. 2020). The present study utilized a simple survey that allowed only for descriptive analyses and simple group comparisons. Larger samples and more sophisticated designs and analyses would be beneficial. The measures were developed for the study, and psychometric analyses were not conducted. Although many identified risk factors of DMST were assessed, not all potential relevant factors were included. For example, the current study was not able to look at the genders or sexual orientations of the referenced trafficking survivors. Additionally, the data were provided by service providers rather than by survivors themselves, and it is possible that survivors received services from multiple participating agencies. Finally, several years have passed since the time of data collection. Numerous efforts to increase training, assessment, and services for survivors of sex trafficking have occurred in Indiana since then. It is likely that current practices differ from those captured by the data. Given the paucity of empirical research on sex trafficking in the USA generally, and in Indiana and the Midwest specifically (Gerassi et al. 2018), however, findings from the current study still offer a valuable contribution.

DMST Presence in Indiana

Overall, current findings indicate that DMST is occurring in Indiana and that at least some of the survivors are receiving services at agencies within the state. Although the percentages of clients in caseloads were low (2% of females and 1% of males), it is notable that approximately 30% of participants indicated that they believed at least one client on their caseload in the past year had experienced sex trafficking. These numbers were higher than estimated by healthcare providers in a prior study, in which about 14% of physicians and 7% of residents had suspected that a patient of theirs was a victim of human trafficking (Titchen et al. 2017); thus, although service providers may not be working with a large number of sex trafficking survivors, findings suggest that many service providers will encounter DMST victims or survivors. Additionally, findings did not reveal significant differences by region or service of clients from primarily urban or rural areas, suggesting the problem occurs throughout the state rather than being localized to a specific area; however, differences were examined only for prevalence and confidence, and the details of the trafficking experiences themselves were not compared by region or urban/rural setting. More specific DMST patterns (e.g., relationship to perpetrator) may vary by location (Twis 2020).

These findings have implications for service provision. If sex trafficking survivors have unique treatment needs (Gajic-Veljanoski and Stewart 2007; Shaw et al. 2017), it may

not be necessary or efficient to attempt to train all providers in trafficking-specific interventions. Instead, given the low but consistent presence, it may be more efficient to educate about identification of sex trafficking but have designated individuals within an organization or identified referral sources. Response plans following identification should include multidisciplinary efforts and should utilize empirically informed approaches when available (Martinho et al. 2020).

Awareness and Training

The present study also has implications for awareness and training of individuals. After reading a definition and examples, 44% of the sample indicated that they did not believe they would know if their clients were survivors of sex trafficking. This is similar to the findings by Gonzalez-Pons and colleagues (2020) indicating that close to half of the participants in their study reported they did not believe their organizations were able to identify DMST victims, as well as common expressions of uncertainty of providers in an Australian health facility (Testa 2020). Consistent with prior recommendations (e.g., Garg et al. 2020; Martinho et al. 2020), findings suggest that additional education, if empirically supported, and/or changes to standard practices would likely be beneficial for many providers. When resources are available, it is recommended that some assessment for human trafficking experiences be conducted in all intake interviews. When resources are limited, even the consistent practice of screening for human trafficking when other risk factors are present could be an improvement from current practice. Additionally, it suggests that current prevalence estimates are likely underestimates.

Trainings related to human trafficking in Indiana have been performed for a number of years, both prior to and following data collection. Approximately 23% of study participants indicated that they had previously received some training related to sex trafficking, which is less than that reported by an assessment of healthcare providers in Southeast Wisconsin (Beck et al. 2015). Unlike prior findings indicating greater confidence or knowledge reported by those who received training related to sex trafficking (Awerbuch et al. 2020; Beck et al. 2015; Fraley, Aronowitz, and Stoklosa 2020; Litam and Lam 2020), in the present study, individuals with and without sex trafficking training did not differ in their confidence related to detection of sex trafficking, their estimated prevalence, or their typical assessment of most trafficking experiences. The present study is not able to determine if this is because of knowledge and diagnostic skills or because of environmental factors (e.g., requirements to follow strict assessment protocols); however, this finding indicates that trainings may not consistently result in increased confidence or behavior change. Based on these results, it is recommended that individuals providing sex trafficking training utilize assessment to evaluate training programs. (See Felner and DuBois 2017 for a systematic review of program and policy evaluations specific to the commercial sexual exploitation of children and youth.) At a minimum, obtaining pre- and post assessments during the training itself would reveal information about change in knowledge. Inclusion of both concrete items, such as identifying definitions, and applied items, such as case examples, is recommended. As interest in human trafficking has increased, numerous attempts to train and educate individuals have been made, with much variability in efforts,

including accuracy, evidence-based content, and outcome assessment (e.g., Preble et al. 2016). Reviews of available programs have suggested that many training programs have focused on monitoring rather than evaluation and have utilized insufficient data-collection techniques and methods (Davy 2016). If feasible, implementation of follow-up assessment would provide valuable information about the maintenance of knowledge and changes in trainees' practice. Research on therapist training programs has demonstrated that changes in knowledge and behaviors are often distinct and that in-person trainings are typically more successful at changing knowledge than behavior, despite the fact that behavioral change is typically the desired outcome (Herschell et al. 2010). Furthermore, even when individuals initially report changes in behavior, changes often decrease over time. The current study did not obtain information about time since training, but data likely reflect a wide variation in time since participation, including individuals for whom much time has passed. Multicomponent training packages or workshops with active follow-ups have demonstrated increased effectiveness (Herschell et al. 2010); thus, organizations with high rates of sex trafficking survivors may benefit from ongoing collaboration in order to assist employees in the integration and application of skills.

Provider Typical Assessment

Findings related to assessment practices are likely connected to low confidence in one's ability to detect sex trafficking in one's clients and prevalence rates of experiences. Although providers demonstrated high rates of assessment of general risk factors (some of which are very common in both clinical and nonclinical populations, such as divorce of parents), the rates of sex trafficking-specific risk factors, such as traveling with an older male, and of sex trafficking experiences themselves revealed lower rates of typical assessment. As research continues to develop, it will be useful to identify which risk factors are most strongly associated with the presence of trafficking, in order to use assessment time efficiently. With rates of typical assessment around 40%, it is encouraging that some participants are typically asking about the presence of some sex trafficking experiences (e.g., exchange of sex acts for goods, services, or money, or participation in escort services or street prostitution). Interestingly, rates of typical assessment in this study were similar to those reported by emergency room nurses in Texas (Dols et al. 2019); however, it is likely that an increase in assessment of sex trafficking experiences would result in increased identification and confidence in detection. Rather than placing the burden on individual providers, the integration of a sex trafficking screener into organizational routine assessment would be ideal (Fong and Cardoso 2010; Stoklosa et al. 2017).

DMST Experiences in Indiana

Finally, responses provided information about experiences of trafficking survivors in Indiana at the time of data collection. First, although frequencies were higher for females in each of the sex trafficking items, most differences were nonsignificant. This highlights the need for consideration of male survivors and awareness of intervention options for males, as many services for survivors of trafficking focus on females. Responses indicated that the majority

of the clients did not present seeking services related to trafficking experiences. Consistent with prior research, the most common presentation was related to homelessness, followed by delinquent behavior and substance use (Fong and Cardoso 2010; Gibbs et al. 2015). This highlights the need for awareness in both the criminal justice system and mental health services. Additionally, providers reported the most contact with survivors 12 or older. Consistent with common presentations, the most common type of relationship the survivor had with the perpetrator was that of romantic partner (Gibbs et al. 2015). The second most common presentation was family member. The presence of family member perpetrators highlights the need for sensitivity and informed practices for both the assessment and treatment of trafficking survivors. Survivors have reported that they are frequently not separated from their traffickers when accessing healthcare, which limits opportunities for reporting and seeking help (Wallace, Lavina, and Mollen 2021). Given the commonness of partners or family members attending medical appointments with individuals, the presence of an individual in this role would not necessarily seem unusual. An increase in intentional time alone with patients, including minors, would be helpful for the identification and intervention of sex trafficking survivors. Additionally, attempts to reintegrate an individual into their home may be detrimental if the trafficking situation occurs amongst family members. It also suggests that other family members could be at risk.

CONCLUSION

The present study serves as an early step towards understanding the occurrence and assessment of sex trafficking in Indiana and adds to the literature for the United States. Findings suggest that survivors of sex trafficking are presenting at youth agencies in Indiana and that many providers are not confident in their abilities to detect trafficking experiences. Continued efforts to train are encouraged, and it is recommended that the effectiveness of trainings be assessed. Additionally, organizations may benefit from identifying specific employees or sources to whom clients with sex trafficking experiences can be referred when survivors are identified.

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APPENDIX A

Provider Background Questions

What is the name of the organization where you work? _____

In what city is your organization located? _____

What is the highest level of education you have completed?
- o   High school
- o   Associate's degree
- o   Bachelor's degree
- o   Master's degree
- o   Doctoral degree
- o   Other: _____

What is the field of study for your degree?
- o   Clinical or counseling psychology
- o   Social work
- o   Nursing
- o   Psychiatry
- o   Law
- o   Education
- o   Other: _____

What is your job title? _____

Which option best describes your primary job function? (choose one):
- o   Advocate
- o   Assessor
- o   Case worker/case manager
- o   Clergy
- o   Judge
- o   Lawyer
- o   Nurse
- o   Psychiatrist
- o   Psychology technician
- o   Residential floor staff
- o   Therapist
- o   Teacher
- o   Other: _____

As part of your job, do you work directly with youth under the age of 18?   Choose Yes or No.

Do you work with <u>females</u> under the age of 18? Choose Yes or No.

Do you work with <u>males</u> under the age of 18? Choose Yes or No.

Of the youth (under age 18) on your caseload…
> The majority come from:
> > o Urban areas
> > o Rural areas
>
> The majority are initially referred to this organization through the:
> > o Department of Child Services
> > o Juvenile justice system
> > o Self-referred
> > o Other: _____

Of the youth (under age 18) on your caseload, approximately what percentage comes from outside the city/town where this organization is located? _____

Have you ever had specialized training related to sex trafficking?
> o Yes
> o No

How would you define sex trafficking?

_____

_____

Considering only the females under age 18 who were on your caseload <u>during the past 12 months,</u> approximately what percentage has ever been a victim of sex trafficking? ____%

Considering only the males under age 18 who were on your caseload <u>during the past 12 months,</u> approximately what percentage has ever been a victim of sex trafficking? ____%

When Free Ain't Really Free: The Hidden Barriers of the Free Application for Federal Student Aid[*]

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ABSTRACT

A completed Free Application for Federal Student Aid (FAFSA) serves as an objective and neutral form required for all individuals who plan to attend college. The social barriers that the application produces and reinforces are all but objective. The application collects information and sorts students into groups based on their responses to questions regarding citizenship, race, gender, marital status, parental income, and convictions and distributes or restricts financial resources based on group membership. The intersection of low socioeconomic status combined with experience in the criminal justice system, which disproportionately arrests and charges people of color (Brown, Lane, and Rogers 2002; Butler 2017), exacerbates gaps in FAFSA completion rates. Although college completion exists as a mitigating factor that combats intergenerational reproduction in the criminal justice system, minority youth who are disproportionately affected by the criminal justice system continuously face challenges accessing higher education. The FAFSA serves as an indicator of financial status because it assigns scores indicating to colleges and universities how much families are expected to contribute. The sorting function serves as a barrier to postsecondary education because it does not consider how these groupings affect the chances and choices of applicants. The language and policies such as the Drug-Free Student Aid Provision are deterrents for people of color who bear the social burden of the label convict. Adding to the body of research on the FAFSA, this study examines the use, effects, and function of its written language, particularly for question 23. A discourse analysis of the wording of question 23 on the FAFSA reveals the maintenance of a racialized social hierarchy that hinders access to educational opportunity through practice, process, and policy. This finding suggests that access to

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postsecondary education is not as available as indicated by mainstream messages that resonate with prevailing discursive themes.

KEY WORDS Education; Social Reproduction; Social Inequality; Drugs and Crime; Financial Aid

In the United States, social mobility is an increasingly significant factor for attending and completing college. Moreover, in an increasingly credentialed society (Collins, Cottom, and Stevens 2019), a college degree is utilized as an indicator for the types of employment opportunities one can access. Research has found that those with bachelor's degrees earn more than $800,000 more in lifetime income than their peers with high school diplomas (Daly and Bengali 2014). As a result, colleges and universities are mechanisms for socioeconomic advancement (Suspitsyna 2012), and the degrees they award are social indicators of success as well as determinants for upward social mobility. For many who come from underserved and distressed neighborhoods, the promise of college is a one-way ticket out of the "hood"—a term originally characteristic of young, Black subculture that has today expanded to a plurality of ethnicities as it intersects with global capitalism to create unique opportunities and limitations (Richardson and Skott-Myhre 2012). As a result, higher education is viewed as a pathway out of generational poverty, although the one-way ticket includes essential knowledge and required adherence to a variety of processes for participating in higher education. One of the processes includes completion of the Free Application for Federal Student Aid (FAFSA). A completed application prompts a process that sorts and labels students according to their financial backgrounds. In other words, a completed FAFSA is the economic indicator of a student's ability to access higher education.

The Higher Education Act of 1965 established the U.S. federal government as the provider of financial aid (Aschenbrener 2016). In 1998, the act was amended to include a provision denying federal financial aid to anyone convicted of the sale or possession of controlled substances (Brown et al. 2002). The congressional mandate added a new question to the FAFSA—one that asks about prior drug-related convictions resulting in felonies or misdemeanors (Scott-Clayton 2017). The amendment, known as the Drug-Free Student Aid Provision, greatly affects the educational pursuits of people of low socioeconomic status and people of color, who are statistically more likely to be arrested and convicted of drug-related offenses (Brown et al. 2002; Scott-Clayton 2017). A completed FAFSA is required for students who want to attend college but need financial assistance. The form gives access to federal, state, and institutional programs that provide funding, including Pell Grants, Stafford Loans, and Work-Study. There are many factors involved in the decision to attend college, but a strong correlation exists between FAFSA completion and college enrollment (U.S. Department of Education 2021a). Although FAFSA completion rates have been declining since 2018, national results reported by race and ethnicity show a 25% difference between the overall FAFSA completion rates of Black and White students who enrolled in four-year public institutions (NSC Blog 2019).

THE FREE APPLICATION FOR FEDERAL STUDENT AID

Arguably, the FAFSA makes college more accessible to many students from underserved communities with financial need because it assists with acquiring federal and state financial aid as well as supplemental scholarships from colleges and universities; however, a barrier exists that can be found within the process for completing the FAFSA and can result in social reproduction. Research documenting challenges regarding FAFSA completion for students from all backgrounds emphasizes the dilemma of how gaps in completion leave millions of dollars unclaimed annually (Kofoed 2017). According to Hess (2017), the class of 2017 did not claim $2.3 billion of available free college money because of not completing the FAFSA. The FAFSA serves as the indicator of financial status for public as well as private dollars because it assigns scores that indicate to colleges and universities how much families are expected to contribute. The Expected Family Contribution (EFC) is derived from a federal formula that utilizes income and assets of parents to determine the score. It does not account for liabilities and other financial obligations. Officially, the FAFSA serves as an objective form analyzing the finances of all individuals who are planning to attend college; however, the social barriers that the form produces and reinforces are all but objective.

With growing gaps in college attainment by family income (Bailey and Dynarski 2011), students from lower class backgrounds are at a disadvantage. Research asserts that students in higher education are living in a "culture of despair" due to economic insecurity and that although university professionals are sympathetic to student issues, only a small portion perceive these issues as a result of structural factors (Aronson 2017). The perception reinforces the belief that student success or failure is determined primarily by individual factors. In the United States, it is necessary to complete a FAFSA form in its entirety and in a timely manner to receive federal financial aid as well as various forms of private aid, such as university-specific or supplemental donation-based scholarships on behalf of a third party. Completing the form on time maximizes the opportunities for money. Deadlines and reminders from both high school administrators and college admissions staff add legitimacy to this practice because it is a staunch belief that without the form, funding will not be distributed. Further, researchers have examined the link between FAFSA completion dates and the amount of funding received, demonstrating that FAFSA completion time can affect the persistence of college students, as it has been found that students who file later receive less financial aid (Kofoed 2017).

Research reveals that the primary reasons that low-income students do not attend college are a lack of finances and a lack of information about the availability of financial aid (Oliverez and Tierney 2005) and that financial aid awareness and college aspirations "must be simultaneous in the development of low-income students" (Rosa 2006:1864). Perna's (2006) conceptual model noted that college-related decision-making is influenced through the four layers of context: habitus; the school and community context; the higher education context; and the broader social, economic, and policy context. Applying this model, Dement (2020) found that low-income students' perceptions of financial aid contributed to their decision-making behavior to not seek out financial aid to cover their tuition, as the FAFSA was perceived as a time-consuming investment not

worth the risk of being denied aid. Additionally, research participants discussed how the dissemination of information from high school counselors did not translate to understanding of how to complete the FAFSA (Dement 2020). The intersection of low socioeconomic status with experience in the criminal justice system, which disproportionately arrests and charges people of color (Brown et al. 2002; Butler 2017), exacerbates gaps in FAFSA completion rates.

An analysis of the FAFSA in a social context reveals a line of questioning with implications for specific subsets of the population who wish to pursue college degrees. The intersections of cultural capital and race must not be overlooked in the discussion of the FAFSA. Cultural capital (Bourdieu 1991; Bourdieu and Passeron 1990) is instrumental in a student's ability to navigate the policies and practices of accessing and completing higher education (O'Shea 2016). In a capitalistic society where education is utilized as a tool for social mobility, cultural capital is an asset for those who can navigate the institutional processes and procedures. Cultural capital also serves as a mechanism for maintenance of an individual's current social position for those who do not possess this currency. Those from lower socioeconomic backgrounds are less likely to have social networks of individuals who have attended college and therefore are less likely to have the cultural capital to understand how processes such as completing the FAFSA can affect college enrollment, funding, and completion. Misperceptions about college costs are widespread and are most prevalent among students from the lowest income backgrounds (Grodsky and Jones 2007). It can therefore be argued that those who have connections to relatives, friends, or community members who have participated as students in higher education have access to networks that increase their cultural capital and their understanding of policies and practices related to higher education. The lack of access to a network of individuals who have participated in higher education creates issues in access, enrollment, and persistence because students from underserved socioeconomic backgrounds with less social and cultural capital may not have a full understanding of financial aid, including the significance of the FAFSA. Although high school counselors may act as mediating resources, many are not properly trained about the financial aid process (Hess 2017) or do not have the time, opportunity, or additional resources needed to assist students with less social and cultural capital within their specific high school context, especially where race and class are factors (Holland 2015).

While college completion exists as a mitigating factor that combats intergenerational reproduction in the criminal justice system, minority youth who are disproportionately affected by the criminal justice system continuously face challenges accessing higher education. Research has shown that higher education is a positive mediating factor reducing the social exclusion of children whose mother and/or father have been incarcerated as well as an instrumental factor in the intergenerational reproduction of those who attend college and those who become part of the criminal justice system (Foster and Hagan 2015). Students who do not have access to a network with experience in higher education lack the resources to navigate even the simplest pathways to college, including the FAFSA. Those who have convictions or experience with the criminal justice system are less likely to be culturally competent when making decisions regarding college

(Paternoster, Pogarsky, and Zimmerman 2011), and combined with limited social and cultural capital, these deficiencies can work to maintain the status quo.

A key component of breaking intergenerational contact with the criminal justice system is alleviating higher education barriers associated with a lack of social and cultural capital, including FAFSA completion. Additionally, the inclusion of a question on the FAFSA related to convictions takes a color-blind approach, meaning it is thought to be an objective question despite the reality that the U.S. criminal justice system disproportionately convicts people of color for drug-related offenses. For this reason, researchers must ask the following question: Is FAFSA an example of institutionalized color-blind rhetoric that reinforces the status quo?

Our work highlights the potential effect of the language used in the FAFSA, including on students with experience in the criminal justice system who wish to attend college. While the population of students seeking degrees from colleges and universities has increased over time, with a greater minority, first-generation, and other nontraditional student presence on campuses nationwide, discrimination remains a well-documented phenomenon, including for those who disclose criminal history (Agan and Starr 2016; Scott-Clayton 2017). Approximately 30% of all Americans have been arrested at least once by the age of 23. The rates are higher for men of color: 44% of Hispanic men and 49% of Black men have been arrested at least once by the age of 23, compared to 38% of White men (Brame et al. 2014; Scott-Clayton 2017). Research on discrimination in admissions reveals that college applicants with criminal convictions are three times as likely to be rejected than as are their counterparts without criminal histories (Stewart and Uggan 2020; Weissman and NaPier 2015). Further, Stewart and Uggen (2020) examined the intersection of race and institutional crime, revealing that institutions with higher rates of reported crime are most cautious when reviewing applications from Black males with criminal histories. Disclosure of criminal histories results in higher rates of rejection for those who complete admissions applications, but these questions also discourage applicants from pursuing higher education overall (Scott-Clayton 2017). The Center for Community Alternatives compared attrition and rejection rates for those with criminal records, revealing that for every 1 applicant who completed the college admissions and was rejected, 15 applicants abandoned the application altogether (Rosenthal et al. 2015; Weissman et al. 2010). An analysis of the language used on the FAFSA—particularly for question 23, which prompts criminal disclosure—is therefore imperative to exploring its effect on students applying to college. We argue that this question, which states, "Have you been convicted for the possession or sale of illegal drugs for an offense that occurred while you were receiving federal student aid (such as grants, work-study, or loans)?" serves as a deterrent to the successful completion of the FAFSA for individuals who have direct or indirect experiences with the criminal justice system. The language used in question 23 informs the practice of colleges and universities who utilize the form to assess financial status; the process for students who complete the FAFSA annually to receive financial aid; and the policy, because a response to question 23 is required to receive federal monies to fund higher education. This analysis was conducted before the enactment of the FAFSA Simplification Act (Federal Register 2021). Though the act will eliminate question 23 in

its entirety by the 2024–2025 academic year (Gravely 2021), the question currently remains on the form, requiring criminal status disclosure.

THEORETICAL FRAMEWORK FOR EXAMINING THE FAFSA

As a framework for unmasking the perception of color-blind and neutral laws, critical race theory situates race as a significant and central factor that influences practices and policies in the United States. Thus, racism goes beyond "images, words, attitudes, unconscious feelings, scripts, and social teachings by which we convey to one another that certain people are less intelligent, reliable, hardworking, virtuous, and American than others," to award status and privileges based on race (Delgado and Stefancic 2012:21). As a privilege, education was denied to the enslaved for fear that a literate slave would disrupt the economic system of slavery. As seen through the earliest common schools, laws were enacted to either prevent the education of the enslaved or provide an inferior education based on vocation to freed blacks (Williams 2005). The laws protected the interests of White male slave owners and insulated a system of social order and control. As a result, White students benefitted from a system that was created to help them specifically. This historical remnant continues to advantage White students more than non-White students in an institution that has an official mission to promote equality (Gillborn 2005). Consequently, the history, policies, and practices of the educational system must be examined using a critical race theory framework.

A basic tenet of critical race theory posits that racism is ordinary and "the usual way society does business" because it is embedded in the laws and policies of U.S. institutions (Delgado and Stefancic 2012:7). Moreover, policies, practices, and processes that appear neutral, objective, and meritocratic (e.g., completing the FAFSA) contribute to sustaining the status quo of social inequality because racism is difficult to observe and acknowledge (Delgado and Stefancic 2012). This tenet establishes the basis for understanding institutional racism, which is the result of discriminatory practices embedded in laws and other social policies that result in unequal outcomes, whether deliberately or unintentionally.

In addition to utilizing a theoretical approach that confronts race as the determining factor in historical educational participation, it is also important to examine how that factor influences current processes in higher education. CRT is also useful for critically analyzing the presumptions and reasoning that underlie educational policies and their impact on marginalized populations (Teranishi 2007). The theory offers a way to rethink traditional education scholarship by challenging the traditional claims of objectivity, meritocracy, color blindness, race neutrality, and equal opportunity as well as the dominant discourse of race and racism by examining how educational theory, policy, and practice have been used to subordinate racial groups (Ladson-Billings and Tate 1995; Solorzano 1998).

In an era of mass incarceration that disproportionately affects people of color, public policy and private prejudice conspire to maintain the racialized hierarchies in our society by preventing access to a mechanism that has demonstrated its ability to improve social and economic outcomes. The FAFSA is responsible for sorting individuals into groups based on citizenship, marital status, parental income, and absence or presence of

convictions and for distributing or restricting financial resources based on group membership. Because membership into any one of the groups mentioned can either help or hinder a student's ability to secure financial aid to attend college, the application goes beyond collecting data for demographic purposes. The sorting function serves as a barrier to access because it does not consider how these groupings affect the chances and choices of the student. Moreover, the sorting function does not consider how the label of conviction operates in the mind of the individual completing the form.

METHODOLOGY FOR ANALYZING THE FAFSA

While critical race theory illuminates how both historic laws and current educational practices reinforce oppression on a macro level, discourse analysis provides insight into how the language of the FAFSA is experienced by a specific subset of the population: those with criminal convictions. More than a method, discourse analysis is a "conceptual enterprise" that gives context to the nature of language and its relationship to central issues in society (Wood and Kroger 2000). The operating assumption is that language has not only meaning to describe and communicate but also power to do things (Austin 1962); thus, the emphasis in discourse analysis is on what the text is achieving. Discourse analysis allows researchers to analyze text in broader forms, including how individuals can be advantaged or disadvantaged. The method considers the conception of language—its use, effects, and function (Wood and Kroger 2000).

Language mirrors conscious as well as unconscious ideas (Boréus and Bergström 2017). If written words are seen as objective and neutral, then the status quo of the social structure remains intact. Discourse analysis identifies language as being a perspective of the world (Boréus and Bergström 2017). A basic sociological notion contends that language reflects culture. The usage as well as understanding of language is also reflective of culture. Moreover, language informs a dominant culture's social practices, including ways of writing and understanding. Providing a foundation for discourse, these actions connect rules for how people speak, write, and interact (Boréus and Bergström 2017). Discourse is therefore embedded in language, institutionalizes ways of thinking and speaking about things, and shapes people's thoughts and behaviors (Fairclough and Wodak 1997; Spickard 2017). As a result, discourse can act as a barrier for those who have membership in a different cultural group.

Interpretivist methods such as content analysis and discourse analysis have been useful for unmasking hidden barriers in a variety of social practices and institutions, including higher education (Cleland and Fahey 2018; Hakkola 2019; Sikandar 2017). The process can be straightforward when utilizing cases and contexts that are undeniably apparent and more readily identifiable, such as housing segregation. The challenge is observing barriers that are hidden in a body of discourse because of policies and practices that were created to be neutral.
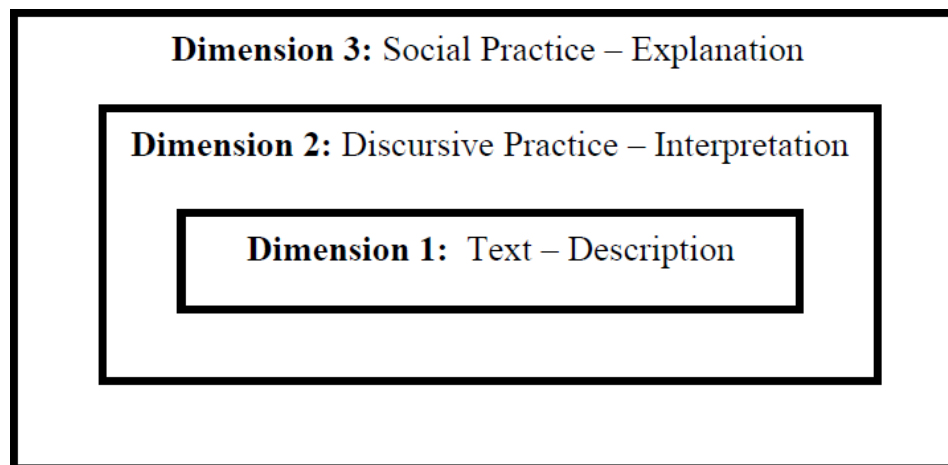
By critically analyzing question 23, we can explore how language is used on the FAFSA to maintain the status quo of limiting educational pursuits by exposing the hidden dimensions of the text. The barriers that the FAFSA presents are difficult to see because they are embedded in the widely accepted practices for the college admissions

process or are camouflaged in routine social processes such as answering demographic questions. This research presents a critical discourse analysis of the language in question 23 on the FAFSA.

A significant difference between discourse analysis and critical discourse analysis (CDA) is that the latter is concerned with the relationship between power, language, and social change (Fairclough 1995). As a methodology, discourse theory aims "to investigate and analyze power relations in society and to formulate normative perspectives from which a critique of such relations can be made with an eye on the possibilities for social change" (Jørgensen and Phillips 2002:2). CDA is a useful methodology for analyzing what is written as well as what is not—the hidden text. Questions such as whose interest is being served, whose interest is being ignored, and the implications of each position are what CDA seeks to answer (Janks 1997).

A basic premise of CDA is that discourses reflect, reinforce, create, and redistribute ideologies that inform social practices which are connected to historical contexts (Fairclough 1995). Through words, power is created, conveyed, and exercised in ways that either sustain or challenge the status quo. Power, whether hidden or revealed, operates by having certain knowledge accepted as the correct knowledge (Boréus and Bergström 2017).

Figure 1. Fairclough's 3-D Critical Discourse Analysis Model

Dimension 3: Social Practice – Explanation

Dimension 2: Discursive Practice – Interpretation

Dimension 1: Text – Description

Fairclough (1989, 1995) describes CDA as a three-dimensional analysis of the interrelated parts of discourse: text, discursive practices, and social practices (Figure 1). Each dimension of discourse requires a different analysis, yet the dimensions are interdependent and require an "intricate moving backward and forward" between them (Janks 1997). The first dimension is text, which includes speech, writing, and images. The text dimension is a word-level analysis that describes word choice and the attitude that the words reflect. The second dimension is discursive practices, which refers to the production or constitution of texts, meaning the ways in which the discourse is produced, received,

and interpreted. At this level, any text can be interpreted and processed. This level of analysis assumes language is not neutral and objective, because the words used contain values and attitudes. The third dimension is social practices, which refers to the social and historical contexts that govern discourse (Janks 1997) and creates the social structure that is organized by norms. Social practice involves norms, traditions, and interactions. At this level, language is explained in the ways in which people interact with each other and their environment, and how power affects those interactions.

ANALYSIS OF THE FAFSA

The utility of the three-dimensional approach to CDA is that it facilitates a multifaceted analysis into the ways that language is used to wield power, beginning at word choice and composition, and ending at the implication of those words on social interaction. The layered approach uncovers patterns that need to be described, interpreted, and explained and allows researchers to focus on the distribution of discourses within a particular domain to account for differences. For example, when universities incorporate discourses from the market, such as completion of financial aid documents, CDA explains why some students draw certain conclusions regarding financial aid while others do not, as evidenced by research on low-income students and financial aid (see Dement 2020; Oliverez and Tierney 2005; Perna 2006; Rosa 2006). Using Fairclough's three-dimensional model for analysis of discourse, we analyzed question 23 on the FAFSA. Specifically, we asked, *What function does the discourse serve?* and *What ideology is being reflected and reproduced through language?* Critical race theory was used to contextualize any revealed patterns. The sample for this analysis is text from FAFSA question 23 and the supplemental information available on the Federal Student Aid website for students and potential students who have criminal convictions before enactment of the FAFSA Simplification Act. Specifically, question 23 on the FAFSA form asks,

> Have you been convicted for the possession or sale of
> illegal drugs for an offense that occurred while you were
> receiving federal student aid (such as grants, work-study, or
> loans)? Answer "No" if you have never received federal
> student aid or if you have never had a drug conviction for
> an offense that occurred while receiving federal student aid.
> If you have a drug conviction for an offense that occurred
> while you were receiving federal student aid, answer
> "Yes," but complete and submit this application, and we
> will mail you a worksheet to help you determine if your
> conviction affects your eligibility for aid. If you are unsure
> how to answer this question, call 1-800-433-3243 for help.
> (studentaid.ed.gov)

As part of the college-going process, the FAFSA has become well known as an important form that must be completed to receive financial aid. Because access to federal

student loans becomes available once the form is completed, the thought process has become so ingrained that potential students and their families assume that without the form, financial aid will not be distributed (Marcus 2012), when in fact, the form states that it is for the distribution of federal monies and that colleges *may* utilize information from the form to determine eligibility for school and state aid. The FAFSA form itself therefore serves as a barrier to higher education as a result of the significance it carries in the college-going process. If the form is thought to be required for receiving any financial aid, then the form's importance is heightened for the individual completing it. Compounding that level of importance with the text of question 23 adds layers of insecurity and uncertainty because it contains phrases and words that can impede progress in completing the form.

On the surface, question 23 seems normal and demographic because U.S. citizens are accustomed to responding to questions that ask about criminal convictions; however, a positive response (yes) to questions that inquire about past criminal convictions has implications for the opportunity structure for the individual completing the form, while simultaneously ignoring the social structure that allows unequal arrests and convictions to persist for people of color (Brame et al. 2014; Butler 2017; Scott-Clayton 2017). Language is a form of power that confers status and worth through labels (Bourdieu 1991). Thus, when the question asks, "Have you been convicted" the individual completing the form must answer with the weight of knowing the reality that the label of *convict* constructs. The label as it operates in society assumes perpetual guilt, no matter if a crime was proven or committed. Moreover, the label of *convict* does not allow the individual the dignity of moving on after paying their debt to society. Instead, questions about criminal history serve as a reminder that affects microlevel social interaction and access to social resources such as financial aid.

According to Uggen, Manza, and Thompson (2006), those with experience in the criminal justice system represent a new caste excluded from education, labor and employment, and the civic sphere. Although instructions for the form indicate that answering *yes* to question 23 does not automatically prevent distribution of federal aid, the process of eligibility adds another barrier. Prior to changes made by the FAFSA Simplification Act, the latter part of question 23 read:

> If you have a drug conviction for an offense that occurred
> while you were receiving federal student aid, answer
> "Yes," but complete and submit this application, and we
> will mail you a worksheet to help you determine if your
> conviction affects your eligibility for aid.

As a result of conviction and time spent, reentry into society is often challenging. This portion of the question fails to consider the level of transience that many involved in the criminal justice system experience. Research has documented the impact of homelessness, but housing insecurity—a measure that includes homelessness and marginal housing—is three times more common than homelessness alone, representing a more comprehensive snapshot of the formerly incarcerated (Couloute 2018). Housing instability and residential transiency for those involved in the criminal justice system result from a variety of factors, such as discrimination in private and public housing authorities,

shortages in affordable housing, and biased screening practices, and this instability destabilizes rehabilitation into society by disrupting employment and educational opportunities (Couloute 2018; Desmond 2017).

The FAFSA Simplification Act will eliminate question 23 in its entirety by the 2024–2025 academic year. Until then, students applying for financial aid are required to answer it. The following language is included under the question for more understanding of the new act's effect on the FAFSA:

> Answer "No" if you have never received federal student aid or if you have never had a drug conviction for an offense that occurred while receiving federal student aid. If you have a drug conviction for an offense that occurred while you were receiving federal student aid, answer "Yes." A recently passed law means that you are now eligible for federal student aid even if you have been convicted for the sale or possession of illegal drugs while receiving federal student aid. No further action is required.

Although the new explanation suggests that a conviction does not restrict federal financial aid and explicitly states that conviction will no longer affect eligibility, it does not account for how the complex emotional behavioral response to the question could affect decision-making and the agency to complete the form.

Thoughtfully reflective decision-making is a strategy for sifting through various options that are available to an individual to make decisions that provide favorable outcomes and assist in achieving desired goals (Byrnes 2002; Paternoster et al. 2010). Strong emotional states can affect thoughtfully reflective decision-making by distorting the weights attached to possible outcomes (Paternoster et al. 2011). Knowing that a completed FAFSA is needed to access as well as pay for higher education to improve one's choices and chances for success, an individual may find their ability to be reflective and to think about the various options given in the instructions hindered as a result of the power that the word *conviction* exerts on social life. Moreover, it is a social fact that laws, practices, and policies—historically as well as traditionally—have been applied differently for people of color. Consequently, people of color are socialized to expect a negative outcome when making decisions, despite instructions such as those given with question 23 (Anderson and Stevenson 2019).

Critical race theory illuminates the relationship between power and the social construction of social roles (Delgado and Stefancic 2012). The word *convicted* and its various derivatives construct a social role that immediately wields power over the potential student's opportunity structure. The question denies the lived experiences of people of color in America. It overlooks the unequal opportunity structure that makes it more viable to sell drugs as a means of taking care of one's family than to pursue higher education. It ignores the disproportionate amount of Black and Brown folks who are arrested and convicted for the sale and possession of illegal drugs compared to White folks (Blumstein 2003; Brame et al. 2014; Davis 2011; Schanzenbach et al. 2016; Scott-Clayton 2017).

The seemingly neutral and objective question asks about an occurrence that includes outside factors that are beyond the control of the individual completing the FAFSA. As a consequence of the potential student's membership in a specific racial category, the chances and choices that are available are laid out as a social fact. As research has demonstrated, denial of financial aid for those who have committed drug offenses has a direct impact on limited opportunities for urban youth, who are disproportionately Black and Brown (Lovenheim and Owens 2014). Regardless of time served, the label *criminal* has lasting implications on future endeavors. The label creates the social role of the "other," which limits opportunity and affects microlevel interactions and macrolevel aspirations such as attending college. Despite a multitude of research on financial aid inequities, the fact that criminal disclosure remains on the form for at least two additional academic years until full implementation of the FAFSA Simplification Act reflects normative cultural expectations of who *should be* able to attend college. If the question is proposed to be eliminated in its entirety in the future, why does it remain in the interim?

DISCUSSION AND IMPLICATIONS FOR HIGHER EDUCATION

As ideological institutions responsible for creating, distributing, and perpetuating ideas for and about society, colleges and universities transmit knowledge with the purpose of preparing individuals to live productively in society. As a social institution, the education system is also responsible for the choices and chances provided to the individuals it serves (Mungo 2015). Covertly embedded in the goals of higher education is social reproduction. Although the goals reflect a meritocratic process, the strategies and policies reflect inequality that stems from the social order. Education and its ideals of meritocracy have fallen short of realizing education's goals for all citizens. The framework of the opportunity structure mirrors American society. As a major engine of economic development (Altbach, Reisberg, and Rumbley 2009), higher education has not escaped the inequality inherent in a capitalist society. For nearly a century, educational theorists have cited the need for education to insulate itself from the oppressive nature of capitalism to facilitate social transformation. Multicultural social reconstructionist George Counts (1932) urged the institution of education to lead rather than follow the economy, while critically analyzing how education upholds the status quo. The challenge, then, becomes how the admittance processes that colleges and universities follow can move beyond adapting and conforming to a society filled with inequality to level the proverbial playing field. How can all citizens of the United States realize the goals of achievement ideology that invade every facet of American life through higher education? What transformative strategy can be utilized to make institutions of higher education the great equalizers that they ostensibly aspire to be?

Expanding participation in higher education is a force for democratization only when participation is representative of the population as a whole (Altbach et al. 2009); thus, ensuring equal participation in education in the United States is a vital concern for the coming decades. Practitioners must gain an empathic understanding of the microlevel impact of criminal-background questions. The questions go beyond mere process and policy; there is a historical sorting dimension that characterizes the practices and policies related to college admittance and, specifically, financial aid. For example, the Common

Application goes deeper into criminal-background questions than the FAFSA, asking about misdemeanor and felony convictions as well as involvement in the juvenile system (Scott-Clayton 2017). We therefore recommend removing any questions that inquire about criminal background.

As a strategy to intervene and to interrupt the social consequences of the prison-industrial complex, education has been effective in reducing recidivism and improving long-term employment opportunities for offenders (Ellison et al. 2017). Both vocational and academic education are common rehabilitative programs found to reduce recidivism (Steurer et al. 2001). Because education has been shown to be an effective rehabilitative tool, the removal of question 23 from the FAFSA would assist in achieving the overall goal of increased access to higher education as well as the stated goal of the U.S. criminal justice system, which is to provide security, safety, and rehabilitation (Steurer et al. 2001). Higher educational policies and practices should work to promote, not inhibit, educational opportunities for those from all backgrounds rather than perpetuate a social stigma that contributes to inequality. Because schools do not exist as independent social institutions separate from economic, political, cultural, and social contexts, they can neither be insulated from the challenges that each context provides (Welner and Carter 2013) nor remain blind to the resolutions needed.

Although prejudice, discrimination, and disadvantage did not begin within the university, the university is obligated to address these issues because they impede progress (Altbach et al. 2009). Because the legacy of racism is embedded in every social institution in America, the tools of racism—the mainstream educational approaches that are intractably and implicitly linked to White supremacist assumptions—cannot be used to examine and subsequently change racism's outcomes (Lorde 1984). The strategy must therefore be radical and inclusive of the dynamic experiences of all the citizenry, not just a reflection of dominant class ideology.

Lovenheim and Owens (2014) found that college enrollment rates declined for high school graduates who disclosed that they had recent drug convictions. With the removal of question 23 from the FAFSA, nearly 70 million individuals in America who have been arrested or convicted for a criminal offense would have access to higher educational opportunities (United States Department of Education 2016). Consequently, the U.S. Department of Education has taken action to guide educational administrators who consider individuals for admissions despite criminal records. The report, titled *Beyond the Box: Increasing Access to Higher Education for Justice-Involved Individuals* (2016), addresses an array of criminal convictions beyond drug offenses and addresses how colleges and universities can increase access to offenders who associate education with opportunity for successful reentry into society. Additionally, the Department of Education has sought to expand access to higher education by rebuffing the restrictions on those convicted of drug-related felonies through programs such as the Second Chance Pell Experiment (2015), a recently renewed initiative providing Pell Grants to postsecondary incarcerated students in state and federal prisons (United States Department of Education, 2021b).

CONCLUSION

The message that higher education improves social mobility has been a consistent one for students from underprivileged backgrounds. While students from these backgrounds are increasingly visible on college campuses, those who may have less social, cultural, and financial capital struggle to overcome barriers regarding enrollment and completion. The FAFSA is arguably one of the most critical components in determining whether higher education is accessible as well as how it is financed. Although the FAFSA may appear to be objective and neutral, critical race theory contextualizes a critical discourse analysis that reveals how the question that addresses criminal drug convictions is anything but neutral. The social structure in which the FAFSA is used has historically exploited and restricted the opportunities of people of color. The power wielded by the language used in question 23 sustains the status quo by permitting, restricting, or denying access to higher education. The form produces additional and long-term consequences outside of the criminal justice system for individuals who have been convicted of the possession or sale of illegal drugs. Those denied access to financial aid face the challenge of funding their postsecondary education through alternatives such as student loans, which expose students to private lenders who may operate under deceptive practices, including high interest rates that lead to student debt (Nicoletta 2015).

The instructions for question 23 can lead to opportunities denied, talents unexplored, and livelihoods stunted. The term *criminal* carries a lasting impact. Research demonstrates that such stigmatized labels have an impact on cognitive processes that influence decision-making, such as completing the additional form needed on the FAFSA. The social implications of being labeled as a criminal intersect with systemic policies that reinforce the existing power structure of a dominant class. Based on *Beyond the Box*'s recognition that educational opportunities need to be expanded, combined with research that recidivism is reduced through education, question 23 on the FAFSA is counterproductive at best and maintains the racialized social hierarchy at worst. The Consolidated Appropriations Act of 2021 mandated the removal of question 23 from the FAFSA as of July 2021 as part of the FAFSA simplification provisions, but full removal did not occur. Instead, the FAFSA Simplification Act amended the language following question 23. Removal of question 23 is slated to occur during the 2024–2025 academic year. The new legislation provides the opportunity to study the long-term impact of the question's amended language and future removal on FAFSA completion and social mobility. As this study suggests, removing the question is important for opportunities for social change that normalize college access for all who seek it. Because education is promoted by the criminal justice system as a tool for rehabilitation and the U.S. Department of Education has publicly addressed the need to expand education to criminal offenders, removing the question is overdue.

Unlike the historical overt actions of racism and discrimination, current covert systems of oppression work to protect the privileges of the dominant class by denying people of color opportunities for upward mobility (Lipsitz 2006). Postsecondary institutions are one such opportunity, as education is one of the mechanisms that can improve social mobility. Policies and practices in higher education must be analyzed

outside of the accepted and established framework of the prevailing social order because they can control the opportunity structure of those who seek access. One such way to do so in higher education is to reconceptualize racial equity as "corrective justice" for educational debt in order to bridge the gap between talking the talk and walking the walk when it comes to social justice (McNair, Bensimon, and Malcolm-Piqueux 2019). Our research illuminates the structural and social relationship between higher education and the criminal justice system using critical discourse analysis. The latter has far-reaching effects that can constrain access to the former. In the economic marketplace, a college degree is a commodity that wields the power for upward social mobility. The social practices that surround the FAFSA erode higher education's mission to be a public good. A free application for access to financial aid should not have so many barriers.

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Different Maternal Responses and Cognitions in Hypothetical Power Bouts: Relations to Parenting Styles[*]

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ABSTRACT

In order to explore how parental styles and maternal cognitions interacted with difficult extended discipline episodes called power bouts, 88 mothers were categorized as either authoritative, authoritarian, permissive, or uninvolved. Mothers then read six hypothetical vignettes about a four-year-old child misbehaving and were asked how they would respond to the child and how they would respond a second time if the child did not behave. These open-ended responses were coded on a scale of increasing power assertiveness, with 0 indicating giving in and 5 indicating using punishment through spanking, removal of privilege, or time-out. Using Bell and Chapman's (1986) control system model to understand how mothers of different parenting styles would respond in a power bout, it was hypothesized that authoritative mothers would become increasingly power assertive in order to control the child but that authoritarian mothers would use higher levels of power assertion over both responses and that permissive parents would be consistently lower in power assertion. Results confirmed the hypothesis for authoritarian mothers, but permissive mothers also increased power-assertive responses, as did authoritative mothers. Authoritarian mothers were consistent but did not react as power-assertively as anticipated. Results are discussed in terms of how power bouts interact with parental cognition and discipline strategies in conjunction with Bell and Chapman's model but could be different for authoritative parents compared to other parental styles.

KEY WORDS Parenting Styles; Parenting Cognitions; Power Bouts; Discipline

Baumrind's (1971) seminal work defining general parenting styles profoundly shaped parenting theory, not only influencing views of effective parenting but also setting the research agenda. Her work identified three prominent styles, to which Maccoby and Martin (1983) added a fourth. Each of these styles has its own approach to showing warmth and enforcing limits through discipline. Though they have been tied to specific parental actions,

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they can represent general beliefs about how to raise children. Authoritarian parents are often controlling, focused on strict adherence to rules and obedience, as well as more formal and less nurturing (Baumrind 1971; Maccoby and Martin 1983). Their style tends to include harsh discipline practices, including coercive power assertion (Baumrind 2012), physical power assertion, and psychological control. Authoritarian parenting has often been related to increased problems in children over time, including increased risk for externalizing problems (Akhter et al. 2011; Calders et al. 2020; Pinquart 2017a), internalizing problems (Pinquart 2017b), conduct disorder (Smith and Hall 2008; Thompson, Hollis, and Richards 2003), substance use (Thompson et al. 2003), poor academic achievement (Pinquart 2016), problematic emotional regulation (Goagoses et al. 2022), obsessive compulsive symptoms (Timpano et al. 2010), and others.

Permissive parents are often overly lax, sometimes even giving in overly much, possibly because they believe in providing warmth to their children while allowing children free expression and supporting development of autonomy (Baumrind 2013). These children often exhibit increased sensitivity for anxiety issues (Timpano et al. 2015) as well as externalizing and internalizing behavior problems (Akhter et al. 2011). The uninvolved parenting style was later added by Maccoby and Martin (1983) and describes parents who often do not properly supervise children, who may use harsh controlling discipline strategies, and who also give in. They appear to be more focused on themselves than on attending to their children's needs. Their children are at high risk for many of the same problems as children of authoritarian parents (Pinquart 2017a).

Authoritative parenting is often affiliated with better child outcomes (Pinquart 2017a, 2017b). Authoritative parents are more nurturing and reasonable in setting and enforcing limits. They often use verbal give-and-take when discussing issues and limits with their children, using more reasoning than harsh power assertive techniques; however, they do enforce limits using confrontive discipline strategies, which can use power assertive strategies, but are focused on regulating the children's behavior rather than on demanding obedience as authoritarian parents do (Baumrind 2012). These parents value warm and close relationships focused on helping children develop as individuals who also demonstrate compliance and thus moral development (Baumrind 2013).

Though parents might appear to demonstrate use of all of these styles based on situational contexts and specific child behaviors, it is the child-rearing belief of adherence to obedience (authoritarian), warm acceptance of the child's self-expression (permissive), self-focus (uninvolved), or warm guidance (authoritative) that is the focus here. Examination of these parenting styles suggests that there is not one overall strategy that a parent with a particular style might use. Though it could be expected that authoritarian parents might consistently use verbal and physical power assertive techniques and other harsh parenting strategies, it is unlikely that they begin with the most coercive option, perhaps starting with a statement about their expectations for the child to follow the rules, followed by more punitive and harsh measures if the child does not immediately comply. Moreover, a permissive parent might consistently allow a child to have their way but might begin a discipline episode by suggesting alternatives and reasoning with the child, trying to cajole the child into cooperation. Authoritative parents are generally described by Baumrind (1971) as engaging in more verbal give-and-take with their children and as using

a variety of methods to interact with their children during discipline episodes, predominately engaging in reasoning, negotiating, and offering alternatives during the interactions, while the children do the same; however, because more-authoritative parents should be more attuned to their children's behaviors and thoughts, they might use a wider variety of discipline strategies. If the child's misbehavior necessitates firmer control, an authoritative parent will move to using more power assertive strategies (Baumrind 2012). In other words, the mechanism by which parenting styles get activated within everyday situations could be during this back-and-forth process between parents and children.

The cascade model of Bornstein, Putnick, and Suwalsky (2018) supports this movement as well. On a broad construct of supportive parenting tested longitudinally over two years for children from twenty months old to four years old, these authors found evidence for the impact of broad parental social cognitions such as satisfaction with parenting and having internalized attributions of their parental success. In an additional assessment conducted six years after the longitudinal assessment of parenting, that level of supportive parenting was negatively related to the child's externalizing behavior at 10 years old. Though these are broad measures showing a connection between parenting self-beliefs, parenting behavior, and child outcomes longitudinally, the implication is that beliefs about child-rearing styles would have a similar impact. Authoritative parents may use more supportive parenting, while authoritarian parents might use less supportive parenting. Bornstein, Putnick, and Suwalsky's study focused on long-term impacts; the mechanism for how supportive parenting relates to the verbal back-and-forth described in authoritative parenting is focused on daily interactions. Thus, the mechanism for how parenting beliefs and cognitions lead to general supportive parenting behavior needs to be addressed in daily encounters, such as discipline situations.

This mechanism might be in everyday discipline encounters called power bouts, which are extended sequences of parent-child interactions (Ritchie 1999) in which parents try various strategies to manage different types of child noncompliance (Kuczynski and Kochanska 1990). Certainly, the verbal give-and-take of authoritative parents and their children could be construed as a power bout. Moreover, the interplay of both child and parent behaviors becomes complicated as the power bout continues, which may have different effects later on parenting behaviors, depending on the general parenting style that a parent uses. Ritchie (1999) found that, generally, mothers reported using more reasoning earlier in a power bout but using more physical power assertion, time-out, and ignoring as the episode grew longer. Moreover, mothers did not use one strategy consistently throughout the power bout but rather seemed to react to the child's form of noncompliance. For example, maternal use of physical power assertion, spanking, and time-out was more common following child defiance or tantrums, whereas maternal reasoning and offering of alternatives were more common following child negotiations. Furthermore, Larzelere et al. (2018) demonstrated that maternal use of positive parenting approaches, such as offering alternatives and reasoning, more effectively reduced child noncompliance during power bouts when children were negotiating and whining but that power assertive strategies were more effective when children were defiant or hitting. The interplay between parent and child as they try different strategies during discipline episodes could be related to the beliefs that parents have about how to control and nurture children.

Additionally, power bouts may affect how mothers think during discipline episodes. Ritchie (1999) found that mothers were more upset when confronted with hypothetical situations in which a child continued noncompliance, as in a power bout, compared to a string of single noncompliance episodes. The interactive nature of noncompliance in an extended discipline episode such as a power bout was related to more negative social cognitions as compared to the same number of noncompliance episodes that were not connected into a single discipline episode. Even a child extending typical noncompliance beyond a single episode could lead parents to become more negative in their appraisals of that child's behavior (Dopke and Milner 2000; Ritchie 2011). These negative parental cognitions and attributions then relate to the parent choosing to be more stern (Dix et al. 1986), to use harsher parenting (Park et al. 2018), and to change parenting goals (Lin, Ritchie, and Larzelere 2020). These negative specific social cognitions and hostile parental behaviors have been related to children's externalizing behaviors (Halligan et al. 2007) and conduct problems (Snyder et al. 2005).

Bell and Chapman's (1986) control system model is a good way to view the ebb and flow of a power bout. This model asserts that as children's behavior becomes more difficult, parents will move to more-assertive control strategies to contain the child's behavior. That is, parents will view the child as passing an upper control limit, which leads to this assertive parental strategy. Inherent in this model is that there are parental cognitions necessary to deem that the child needs to be controlled. Once the child returns to better behavior or diminishes the intensity of noncompliance, the parents return to less-assertive strategies. The control system model also has a process for when children need to be stimulated, as in when they pass below a lower control limit, which is not usually part of a difficult discipline episode.

The combination of the control system model, power bouts, and Baumrind's parenting styles would better explain not only contextual issues inherent in the discipline episode (e.g., child noncompliance type) but also the impact of parental general styles and beliefs on that system. For example, the control system model posits that all parents have an upper limit in a power bout, at which they move to strategies to bring the child's behavior back under control. Parents may differ in their beliefs about when a child has reached that upper limit and about what types of parental strategies are needed to return the child to more normal behaviors, however. For example, an authoritarian parent may be more likely to believe that simple noncompliance and whining indicates the need to move to an upper control strategy which could include harsh parenting strategies and power assertion. Moreover, they may insist on complete compliance before they reduce their use of these strategies. They might also believe that children's negative behaviors are more likely due to internal processes within the child, which then are related to greater anger (Coplan et al. 2002). A more permissive parent might not reach the upper control limit as easily as other parents, and when they do, they might choose to consent to the child's demands as a way to regain a level of positive parent-child interaction and drop below that upper control limit. An uninvolved parent might not reach that upper control quickly, either, but might choose to yell or to act coercively when they do notice the child has reached that limit, then not follow through to see that the child falls below the upper limit. An authoritative parent might set upper control limits higher than an authoritarian parent,

choosing to reason with a child at first, perhaps viewing the child's noncompliance as due to more external circumstances (Coplan et al. 2002), but if the child should become more problematic or defiant, then the authoritative parent might use more power assertive strategies such as confrontive discipline (Baumrind 2012). As the child's misbehavior becomes less severe, however, the authoritative parent might also reduce assertive strategies, contrary to the authoritarian parent. Thus, the structure of the power bout and the parental cognitions within the power bout could be related to the generalized child-rearing style espoused by the parent—along, of course, with other contextual issues inherent to the power bout (e.g., type of child noncompliance) and larger contextual issues (e.g., parental stress generally).

To determine if particular complicated power-bout sequences are related to Baumrind's parenting styles, this study explored mothers' reactions to six hypothetical common power bouts and assessed their beliefs about how to raise a child, leading to determination of parenting styles. Maternal discipline strategies were assessed using responses to two open-ended questions, which were then rated by coders for use of power assertiveness. Mothers were asked for their initial response to the hypothetical child and then what they would do if that initial response did not work. In addition, they rated their confidence in managing the child, their enjoyment of the child, and their level of upset with the child. It was hypothesized that more-authoritarian styles would be related to more power assertive choices of action in the scenarios across both responses but that authoritative individuals would shift to more coercion only after the first response. In addition, it was hypothesized that authoritarian parents would be more upset with the child but that permissive and authoritative parents, because of their higher levels of warmth, would find the child more enjoyable.

METHODS

Participants

Eighty-eight mothers participated in a larger study, which also included nonmothers, concerning predictors of child-rearing beliefs and cognitions. They were recruited from introductory psychology classes at a medium-sized midwestern university and by use of a snowball procedure in which subjects were given flyers to give to friends and family. Only six of the mothers had a high school education or less, while 77 were in pursuit of a college degree. Three of the mothers had graduated from college, and two left this question blank. Mothers averaged 33.6 years old (SD = 9.6), and the target child in the larger study averaged 6.6 years old (SD = 4.4). The majority of the children (53.7%) were between 3 and 7 years old, while 13.1% were between 1 and 3 years old; 19.0% were between 8 and 11 years old, and 15.5% were between 12 and 18 years old. Mothers averaged 1.84 (SD = 0.86) children.

Sixty-four of the mothers were White, 3 were Asian, and 18 were African American; 1 identified as Other, and 2 left this question blank. Fourteen of the mothers were divorced, and 46 were married. The other 26 mothers were single, were cohabiting, or left the answer blank.

Information about family income was not collected, though each participant's sole income was assessed. Because most participants were students, 34 mothers had incomes that fell below $15,000 annually, 24 had incomes between $15,000 and $30,000, 26 reported incomes above $30,000, and the remainder did not indicate their income.

In addition, mothers completed a 58-item checklist of activities with preschoolers ranging from common activities, such as feeding and playing with preschoolers, to highly unlikely and often professional activities, such as giving preschoolers shots or developmental tests. This was done as a measure of their overall familiarity and experience with children. Mothers averaged 43.9 (SD = 11.9) activities.

Measures

Child-Rearing Practices Report. Mothers completed a modified version of Block's (1965) Child-Rearing Practices Report (CRPR) in a survey form. They rated 40 statements on a scale from 1 (*extremely disagree*) to 7 (*extremely agree*) to indicate how characteristic each statement was of their beliefs about how to raise a child. Because this sample was part of a larger project including nonparents, all items were focused on their general beliefs about what they would do rather than on their beliefs about what they did do with their own children. Seventeen items assessed beliefs concerning warmth directed toward children, including items such as *I would try to make sure that my child knows that I appreciate what they try to accomplish* as well as *I would encourage my child to be curious, to explore, and question things* and *I will express my affection by hugging, kissing, and holding my child*. This scale had an internal consistency of .734 in this sample of mothers. Control of children was assessed using 23 items with an internal consistency of .781. Examples of items included *I would teach my children that in one way or another, punishment will find them when they are bad* as well as *I don't think children of different sexes should be allowed to see each other naked* and *I would let my children know how ashamed and disappointed I was when they misbehaved*.

Four parenting style groups were formed by using the 33rd and 67th percentiles to denote the extremes for both control and warmth. With a total possible score of 119, in this sample, the 33rd percentile for warmth was 105 and the 67th percentile was 111. For control, 33% of mothers fell at or below 80, and 67% fell at or below 93, from a total possible score of 161. Mothers were classified as Authoritarian (*n* = 12) if they fell at or above 93 for control and also at or below 105 for warmth. A mother was coded as Permissive (*n* = 14) if she fell at or above 111 for warmth as well as at or below 80 for control. Mothers were coded as Uninvolved (*n* = 10) only if they fell at or below 105 for warmth and 80 for control. All other mothers were coded as Authoritative (*n* = 50).

Hypothetical Discipline Episodes Questionnaire. As part of a packet of questionnaires, the mothers were given six common misbehaviors of four-year-old children, followed by six questions concerning the mothers' reactions. The scenarios included a boy who wanted to keep watching his show on TV rather than clean his room, a boy who was squishing the tuna sandwich that he did not like to eat after trying two bites,

a girl who threw a tantrum when she was told she could not have candy at the grocery store because she had been grouchy, a girl who is slow getting ready in the morning, a boy purposefully kicking a table leg because he is bored at dinner, and a girl who wants to wear summer clothes during the middle of winter.

For each scenario, subjects first responded to an open-ended question about why the child acted this way. Then they were asked what they would do as the parent in the scenario and what they would do next if this did not work. These two questions were coded along a rating scale of increasing power assertiveness, with 0 for giving in, 1 for not responding, 2 for reasoning or offering alternatives, 3 for using verbal power assertion, 4 for using physical power assertion, and 5 for punishing with time-out, spanking, or removal of privilege. If subjects gave more than one response to each question, the highest level of assertiveness was coded. Twenty percent (20%) of the mothers' responses were recoded by a student researcher for reliability. Percent agreement ranged from .5 to 1.0, with an average of .83. Disagreements were settled by discussion. Responses were averaged across the six scenarios to yield an average for the first response (R1) and an average for the second response (R2).

In addition, for each scenario, participants rated how upset they were with the child from 1 (*not at all*) to 5 (*extremely*) as well as how confident they were that they could manage the child and how much they would enjoy interacting with the child. These three ratings were then averaged across the six scenarios to yield average ratings for Upset, Confidence, and Enjoyment.

Procedure

Mothers began by completing informed consent as part of the IRB-approved procedures. Mothers then gave a short interview in which demographic information was collected, followed by receiving a packet of surveys to complete as part of a larger study. For this analysis, mothers completed the modified CRPR so researchers could assess their beliefs about warmth and control of children consistent with Baumrind's parenting styles. Mothers also completed a survey consisting of the six common child-rearing discipline episodes (e.g., procrastinating, not getting dressed, having a temper tantrum) and six parental cognition questions. After completing the packet, mothers completed the adult attachment interview as part of the larger study on predicting their child-rearing beliefs.

RESULTS

Comparing Parenting Style Groups

The four parenting style groups were submitted to a 4 (Parenting Style) x 2 (Response) repeated measures ANOVA, with severity of response as the dependent variable, and including the covariates of maternal age, education, income, number of children, activities experienced with preschoolers, and child's age. A trend for response, $F(1, 62) = 2.916$, $p = .093$, was attenuated by the significant interaction of response and parenting style, $F(3, 62) = 4.29$, $p = .008$. None of the covariates was significant or reached the level of a trend.

As post hoc analyses, paired sample *t*-tests were calculated separately for each parenting style group. Significant differences from Response 1 to Response 2 were found for the Authoritative, $t(51) = -11.68$, $p < .001$, and Permissive, $t(13) = -5.50$, $p < .001$, styles. A trend was found for the Uninvolved style, $t(9) = -1.84$, $p = .10$. No significant effect was found for the Authoritarian style, $t(11) = -1.32$, $p = .214$. As can be seen in Table 1, both Authoritative and Permissive mothers increased the severity of their response the second time, and Uninvolved mothers did so only slightly.

A second set of post hoc analyses compared each parental style group on Response 1 and separately on Response 2. A significant difference was found only for Response 2, $F(3, 84) = 3.439$, $p = .02$. Further post hoc analyses revealed that Authoritative mothers were significantly more power assertive on this second response than were Authoritarian mothers ($p = .05$), while also tending to be more power assertive than Uninvolved mothers ($p = .10$). Still, it is important to note that averages for all parenting style groups for Response 1 place maternal responses mostly with reasoning and offering alternatives (a rating of 2) and verbal power assertion (a rating of 3) and that for Response 2, most types remained, on average, at verbal power assertion whereas Authoritative mothers approached using physical power assertion (a rating of 4).

Table 1. Means and Standard Deviations of Parenting Style Groups by Response

Parenting Style	Response 1	Response 2
Authoritative[***]	2.69 (.52)	3.64 (.56)[a,b]
Authoritarian	2.74 (.44)	3.06 (.87)[a]
Permissive[***]	2.46 (.48)	3.40 (.91)
Uninvolved[+]	2.65 (.36)	3.08 (.86)[b]

*Note*s: Standard deviations are given in parentheses. Means with the same superscript were significantly different or tended to be different from each other on Tukey HSD post hoc tests.

***$p < .001$ +$p < .10$

To test whether parenting styles differed on the parenting social cognitions, averages were calculated across the six scenarios for mothers' ratings of Upset, Enjoyment, and Confidence. These ratings were submitted to a MANOVA comparing parenting styles on these three ratings, but no significant multivariate effect was found, $F(9, 246) = .81$, $p = .61$. (See Table 2 for means and standard deviations.)

To investigate whether different components of warmth and control from the parenting styles might be related to these parenting cognitions as well as behavioral intentions in Responses 1 and 2, correlational analyses were completed on these five variables along with several demographic variables (Table 3). Generally, control beliefs were positively related to more power-assertive first responses, being upset, and having confidence in managing the child, and warmth beliefs were significantly related to having confidence in managing the child and enjoying the child as well as to a trend of being less

power assertive in the first response. For demographics, control beliefs were positively related to lower income, while warmth beliefs were related to having an older child and tended to be related to experiencing more activities with preschoolers. No significant correlations were found for Response 2.

Table 2. Means and Standard Deviations of Parenting Style Groups by Parental Cognition Variable

Parenting Style	Upset	Confidence	Enjoyment
Authoritative	2.99 (.70)	4.00 (.69)	3.53 (.71)
Authoritarian	3.26 (.88)	4.17 (.26)	3.32 (.86)
Permissive	2.75 (.63)	4.05 (.89)	3.73 (.68)
Uninvolved	2.78 (.74)	3.87 (.68)	3.70 (.70)

Notes: Standard deviations are given in parentheses. No significant differences were found in these analyses.

Table 3. Correlations of Parental Cognition and Behavioral Intention Variables with Control and Warmth

Variable	Control	Warmth
Response 1	.241*	−.195[+]
Response 2	−.049	−.038
Upset	.234*	−.156
Confidence	.214*	.245*
Enjoyment	−.031	.270*
Activities with preschoolers	.027	.208[+]
Maternal age	−.107	.145
Maternal education	−.134	.094
Maternal income	−.266*	.161
Child age	−.166	.218*
Number of children	−.096	−.098

*p < .05 +p < .10

Regressions Analyses Predicting First and Second Responses

Hierarchical multiple regressions consisting of two steps were used to predict the mothers' first and second responses. In the first step, demographic variables of the mother's age, education, income, and number of children were entered, along with her child's age (closest

to five) and the number of activities she had done with a preschooler. In step two for the dependent variable Response 1, potential predictors were entered using a stepwise regression with $p = .10$ as the cutoff for entry into the equation. These included the parental social cognitive variables of Upset, Confidence, and Enjoyment along with their total Warmth and Control scores. For Response 1, the first step was not significant, $F(6, 81) = 1.298$, $p = .268$, and none of these demographic variables were significant in the final equation, either. For the second step, a significant regression was found for Response 1 with three predictors, $F(9, 78) = 2.751$, $p = .008$. In the order each entered the equation, significant predictors of the first response were Upset ($\beta = .268$, $p = .012$) and Confidence ($\beta = .253$, $p = .017$), and a trend for Warmth was found ($\beta = -.194$, $p = .08$). To predict the second response, the same two steps were taken in a hierarchical multiple regression with the second step including the same five potential predictors along with Response 1, but the only significant predictor was Response 1, $F(7, 80) = 3.096$, $p = .006$, $\beta = .432$).

DISCUSSION

Though Authoritarian parents may have started with the highest power assertion score on Response 1, they were not significantly different from Authoritative parents as hypothesized. Moreover, they did not become significantly more power assertive for the second response; however, parenting style did predict movement to more-power-assertive strategies for the second response for those styles for which warmth was high, particularly for Authoritative and Permissive parenting styles and marginally so for Uninvolved style. Though there were no differences in the groups for Response 1, Authoritative mothers were more power assertive than were Authoritarian parents on Response 2, counter to expectations. Authoritarian mothers were expected to be more power assertive on the first and subsequent responses. Though they were equally power assertive as the other styles on the first response, they did not show the strong shift to more power assertive strategies as did Authoritative mothers.

Interestingly, the regression analyses give yet a different picture. Predictions of higher power assertion on the first response were related to ratings of being upset and confident, as well as tending to be less warm, even after controlling for some demographic variables. This suggests that more-authoritarian mothers would have higher power assertion scores, alongside more-uninvolved mothers. Though there were no significant parenting style differences on the first response, these results along with correlations suggest that mothers who have higher power-assertion ratings were more likely to be upset, as well as to have higher controlling and lower warmth beliefs, which is consistent with the authoritarian parenting style. Perhaps the different picture of the regression analyses compared to the group differences could be due to the subtle differences in authoritarian approaches that were not present with group differences because of the use of the 33rd and 67th percentiles to form the groups, as well as their lower frequency in this sample. Moreover, the methodology asked mothers for only two responses to the same child misbehavior, whereas a power bout could ensue for much longer and could evolve into different, potentially more problematic, child misbehaviors. Perhaps authoritarian mothers

might become more power assertive in later responses or to different types of child misbehaviors, compared to other mothers. For example, if a child was initially negative but then started to negotiate and reason with the mother, an authoritarian mother might still be focused on obedience and remain power assertive, whereas an authoritative mother might reduce her power assertion responses, as would be consistent with Bell and Chapman's control system model. Moreover, it is also possible that the increasing power assertiveness for authoritative mothers was a move to confrontive discipline rather than an attempt to be coercive (Baumrind 2013). In essence, perhaps these mothers were trying to "nip the behavior in the bud" so they could then talk about the problem to the child. Because some demographic variables, in particular maternal income and child's age, were related to control and warmth, it is also possible that these results could be explained by larger contextual issues in the child-rearing environment; however, these same demographic variables were not significant predictors in the regression equations for Response 1 or 2 or as covariates in the repeated measures MANOVA.

Still, parental social cognitions, along with warmth, were most predictive of mothers' initial responses. Being upset and being confident could be related to individual parenting beliefs and styles but are also part of the context of the individual discipline situation. The context of maternal responses within a power bout may be related to parenting style, in particular the relation of maternal first responses to warmth, but in the context of the child's continued noncompliance, authoritative confrontive discipline and authoritarian coercive discipline might look similar until the child changes tactics. At that point, the authoritative parent might have "nipped the problem in the bud" and then return to more reasoning tactics but the authoritarian parent would only see the child's behavior as continued disobedience. The importance of social cognitions and their potential relation to parenting styles is consistent with work by Del Vecchio and O'Leary (2008), showing that becoming angry positively mediates the relations between attributions about the child and using overactive discipline, consistent with authoritarian parenting. On the other hand, this mediating relationship for anger was negative between attributions and lax discipline strategies, more common for permissive parents. The role of anger and overactive discipline is consistent with the results of this study showing that being upset predicts greater power assertiveness. It is also possible that authoritarian parenting styles could be more likely to lead to power assertion strategies, but through the lens of parental social cognitions. Warmth might have a direct impact on the initial response, but controlling beliefs (which are essential to authoritarian parenting styles) might be more impactful through parental social cognitions, in particular being upset.

Bornstein, Putnick, and Suwalsky's (2018) cascade model explains how a mother's social cognitions about her own child-rearing (satisfaction, knowledge, and internalized attributions of success in child-rearing) longitudinally predicted supportive parenting two years later and the child's classroom externalizing behavior even later. Though their study focused on longitudinal observations and this study focuses on the microanalytic changes in a single discipline episode called a power bout, both studies found that warmth was related to child-rearing choices, either in the overarching concept of supportive parenting or in the behavioral intention to be less power assertive in a first response. Interestingly, a measure of the child's hostility and aggression in Bornstein, Putnick, and Suwalsky's

(2018) study negatively affected supportive parenting. Taken with Del Vecchio and O'Leary's (2008) study showing that anger was related to overactive discipline, the current study demonstrates both of the results of these two studies in the microanalytic analysis of power bouts and maternal behavioral intentions. Higher behavioral intentions to be power assertive were predicted by being more upset, more confident, and less warm. The implication is that the overarching concepts and longitudinal results of the Cascade model could be related to the microanalytical steps involved in day-to-day discipline interactions like power bouts. Further research should explore how day-to-day interactions could be a mechanism for the development of generalized styles of interaction as well as how general beliefs about child-rearing impact those day-to-day interactions.

Thus, parenting style beliefs might have complicated relations with parental discipline strategies through the immediate, contextualized social cognitions of the parent rather than directly on the behaviors of the parents. For example, an authoritative mother might choose less-power-assertive strategies because she is not yet upset at the child, whereas if the child continues to misbehave, she might become more upset and move to more-assertive strategies to control the child. Such might be the case if the child were to respond with continued noncompliance as in a simple power bout. The power bouts of hypothetical discipline issues in this study displayed simple continuance of behavior, not behavior that grew in intensity or changed type; thus, the only predictor of the second response was the mothers' first response, though those with authoritative and permissive parenting style beliefs did choose slightly more power-assertive strategies in the second response.

Bell and Chapman's control system model suggests that parents would become more assertive within a power bout as the child reached the need for an upper control limit. Authoritative parents were hypothesized to move to more-power-assertive strategies with continued child noncompliance, and the results were consistent with this hypothesis. The picture that emerges is that mothers with authoritative parenting styles became more upset with the children, leading to an increase in power assertion to control the children, per the model; however, there were no significant differences on becoming upset across the parenting styles, and permissive parents also showed this same pattern. These results could be explained by the fact that only two maternal responses were used in this study. It could be that permissive parents would follow the hypothesis of giving in to bring the child below the need for an upper limit control only after at least some attempt to control the child with increased assertiveness. As hypothesized, authoritarian mothers did not significantly change their responses, perhaps because they had confidence that they would prevail eventually. The control system model seems to work well for explaining how parents in general manage power bouts, especially for authoritative parents, but more research is needed with more extensive power bouts to ascertain the effect of the model on permissive and authoritarian parents. More research with longer power bouts and different forms of child noncompliance would help with discerning if authoritarian mothers might change their strategies to more-assertive approaches and permissive mothers might eventually give in on subsequent continuation of the child noncompliance or on change in child strategy to more defiance and tantrums.

The current study did have some limitations. First, only mothers who had a fairly high education level were used in these analyses. Fathers may have a very different pattern of the interactions of parenting styles and parental cognitions within power bouts. Furthermore, to test the relation of power bouts and parenting styles to parenting cognitions, hypothetical vignettes were used. Social desirability could have had an impact on the mothers' reports of their behavioral intentions within these vignettes. There is some evidence showing that parents' social cognitions about their own children affect parental responses as well as child outcomes (Lee et al. 2019; Snyder et al. 2005). Furthermore, Lin, Ritchie, and Larzelere's (2020) study of parental goals used maternal reports of actual power bouts with their children and demonstrated that parents did shift their goals when children hit or were more defiant. Developing a methodology to track parenting social cognitions from observed or reports of actual power bouts would help to understand how these extended discipline episodes interact with parenting styles and cognitions. In addition, though an attempt was made to control for broad demographic variables, contextual variables about participants' children, such as temperament, were not assessed. Last, the current study did not explore extended power bouts but rather only short episodes of fairly normal child misbehaviors. Perhaps the impact of parenting styles is more evident in extended power bouts or only with certain kinds of child misbehaviors, such as defiance or tantrums.

Even with these limitations, clearly, power bouts, with their shifts in parent and child behaviors during discipline episodes, have an impact on the way mothers think about children's misbehavior. Further, some parenting styles may matter more. For authoritative parents, the verbal give-and-take was represented in these results. Authoritative mothers did increase their power assertiveness on the second response, and generally, increased warmth was related to less-power-assertive choices on the first response, as hypothesized. The impact of having an authoritarian parenting style may not have been fully discovered in this study, but the pattern of lower warmth, along with higher ratings for Upset and Confidence, related with more-power-assertive responses on the first response, suggests that authoritarian parents may move to moderate coercion of using verbal power assertion and then continuing that response subsequently. If the child were to move to more-problematic behaviors, then perhaps the authoritarian parent would move to harsher, more-power-assertive strategies. If parents are more likely to use more-power-assertive and harsher discipline practices when children are defiant or having tantrums (Larzelere et al. 2018; Ritchie 1999), then perhaps authoritarian parents are also more likely to engage in power assertion in the face of such difficult child behaviors and power bouts in order to end the extended child misbehaviors and to obtain obedience. Future research should explore in depth how changes in child misbehaviors within an extended power bout are connected to potential changes in parental attributions and more-power assertive parental strategies within power bouts, especially for those parents with more authoritarian parenting styles. In addition, given that authoritative mothers shifted to more-power-assertive strategies in the second response in this study, further research could help discern if these mothers are moving to confrontive discipline to reduce the child's misbehavior so they can then reengage the child in a warmer, more reasoning approach during the power bout. Moreover, further research into parental attributions during such extended discipline

episodes might demonstrate whether permissive parents eventually give in to a defiant or tantrumming child. Such research using power bouts would be more consistent with the daily kinds of decisions and attributions that parents make about their children during difficult discipline situations.

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Event-Related Potentials in Individuals with Attention-Deficit/Hyperactivity Disorder Performing the Attention Network Test[*]

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ABSTRACT

The current study investigated the neural basis of attention-deficit/hyperactivity disorder (ADHD) by examining the performance of individuals with ADHD on the Attention Network Test (ANT) by Fan, McCandliss, Sommer, Raz, and Posner (2002) while recording high-density electroencephalography (EEG) and utilizing event-related potential (ERP) methodology. Fifty-seven college students were divided into three groups: ADHD-inattentive subtype (ADHD-IA), ADHD-hyperactive/combined subtype (ADHD-HI), and control. The peak amplitude of the P300 waveform was analyzed for performance on each attention network measured by the ANT: the alerting network, the orienting network, and the executive control network. The peak P3 was significantly different between the control and ADHD-IA groups for the alerting and executive networks, and between the control and ADHD-HI groups for the orienting network. Behaviorally, participants in the control and ADHD-IA groups had faster reaction times than did participants in the ADHD-HI group, but all groups performed at a high level of accuracy.

KEY WORDS Attention; Attention Network Test; ADHD; ADHD Subtypes; Event-Related Potentials

Attention-deficit/hyperactivity disorder (ADHD) is one of the most common mental health problems, present in anywhere between 5% and 10% of the population (CDC 2022; Cortese et al. 2012; Iannaccone et al. 2015). Generally conceived of as having two dimensions—inattention and hyperactivity/impulsivity (Clarke et al. 2001; Johnstone, Barry, and Clarke 2012; Karalunas and Nigg 2019; Burns et al. 2001)—ADHD is divided in the *Diagnostic*

and Statistical Manual of Mental Disorders, fifth edition (DSM-5) into three subtypes revolving around these dimensions: predominantly inattentive (ADHD-IA), predominantly hyperactive/impulsive (ADHD-HI), and combined inattentive and hyperactive/impulsive (ADHD-C; American Psychiatric Association 2013). The behavioral disturbances exhibited by children with ADHD are known to persist into adolescence and adulthood (Barkley 1998; Callahan and Plamondon 2018; CDC 2022; Kooij et al. 2016; Lazzaro et al. 1997; Luo, Halperin, and Li 2020; Silk et al. 2016; Torgalsbøen, Zeiner, and Øie 2019). Despite many years of research in this area, there are still questions and controversies surrounding ADHD and its treatment (Baeyens, Roeyers, and Walle 2006; Cortese et al. 2012; National Institutes of Health 2000). One current controversy revolves around the future of diagnosing subtypes of ADHD. Scientists have long debated the heterogeneity of ADHD in clinical presentations (Lee, Sibley, and Epstein 2016). Although clinical experience suggests that the subtypes of ADHD are so distinct that they should perhaps be categorized as different disorders, evidence also exists that subtypes do not show diagnostic stability over time (Nigg, Tannock, and Rohde 2010; Simon et al. 2009). One possible explanation for such diagnostic instability is based on long-term and age-related studies that have shown natural changes in attentional efficiency from childhood into adulthood due to neural development (Arias et al. 2016; Abundis-Gutierrez et al. 2014; Lee et al. 2016; Luo et al. 2020; van Dinteren et al. 2014). In concordance with recent neurodevelopmental research, the DSM-5 has introduced diagnostic criteria by which the severity of inattentive and hyperactive/impulsive symptoms are rated along a three-point spectrum: mild, moderate, or severe.

The complex nature of ADHD has been revealed in research because of the variability in behavioral presentations of the disorder. According to a 10-year event-related potential (ERP) review (Johnstone et al. 2012), individuals with ADHD demonstrate consistent performance deficits in experimental settings, including higher-than-average errors of omission and commission (e.g., Defrance et al. 1996; Jonkman et al. 1997; Satterfield, Schell, and Nicholas 1994), as well as hindered performance on tasks of persistence, sustained attention, and planning or organizational skills (Ahmadi et al. 2014; Lee et al. 2016; Miller, Kavcic, and Leslie 1996), during experimental settings; however, although some studies have found that individuals with ADHD had slower reaction times (RTs) than did controls (Jonkman et al. 1999; Liu et al. 2020; Samyn et al. 2014), other studies have found the opposite (Konrad et al. 2006; Perchet et al. 2001). As a result of numerous experiments utilizing a homogeneous ADHD group rather than a heterogeneous (various subtypes) group, research has revealed that these differences could be due to a higher prevalence of one subtype over the others in the heterogeneous samples. For instance, individuals with ADHD-IA typically display slower reaction times in attention-demanding tasks (Baeyens et al. 2006), whereas individuals with ADHD-HI and those with ADHD-C usually display faster reaction times in the same tasks (Rodriguez and Baylis 2007). The inconsistencies in behavioral as well as ERP outcomes have thus been attributed to variations in experimental factors such as task requirements, age groups, and ADHD subtype groups (Johnstone et al. 2012; Kratz et al. 2011; Samyn et al. 2014; Silk et al. 2016).

This lack of experimental consistency has led researchers to focus on identifying more empirically valid methods for diagnosing ADHD. The current predominant method of ADHD diagnosis has been highly dependent on symptoms reported on questionnaires as well as on external observations (Konrad et al. 2006) rather than on physiological measurements (Karalunas et al. 2014); however, the pathophysiology of ADHD has been increasingly characterized by the dysfunction of neural processes underlying attentional networks (Cortese and Castellanos 2015; Iannaccone et al. 2015; Johnstone et al. 2012). Numerous studies suggest that a combination of neuroimaging techniques in addition to current clinical methods would provide a clearer understanding of the neural processes, allowing for a more objective means by which to diagnose and distinguish between ADHD subtypes (Cortese and Castellanos 2015; Iannaccone et al. 2015). Given the lack of consensus on diagnosing subtypes for ADHD (Kuntsi et al. 2014; Lee et al. 2016), the differential behavioral results in ADHD literature, and the need for further investigation of neural correlates underlying the disorder (Silk et al. 2016), it is crucial that the neural basis of ADHD be investigated with regard to the differences that can be observed in each subtype by implementing attention-demanding tasks along with cognitive neuroscience methods. The present study accomplished this by combining the Attention Network Test (ANT) by Fan, McCandliss, Sommer, Raz, and Posner (2002) with ERP methodology. Differences among the subtypes were analyzed based on their inattentive or hyperactive/impulsive symptoms listed in the DSM-5, while adhering to an argument made by Milich, Balentine, and Lynam (2001) and Riley and colleagues (2008) that ADHD-HI and ADHD-C are the same in adulthood. Alternatively, most research has focused on the differences between the ADHD-IA and ADHD-C subtypes, given the low rates of ADHD-HI diagnoses in children (Baeyens et al. 2006) and adults (Nikolas and Nigg 2013).

ATTENTION NETWORK TEST AND ADHD

Fan et al. (2002) designed the ANT to examine the independence of the attentional networks proposed by Posner and Petersen (1990). Posner and Petersen developed the hypothesis that the sources of attention form a specific system of anatomical areas. These areas are posited to comprise three networks, which are responsible for alerting, orienting, and executive control. *Alerting* consists of attaining and sustaining a vigilant state and is thought to be associated with the frontal and parietal regions of the right hemisphere (Fan et al. 2002; Markett et al. 2013). *Orienting* refers to the selection of pertinent information from sensory input and has been associated through event-related functional magnetic resonance imaging (fMRI) studies with superior parietal lobe activation (Fan et al. 2002). Finally, *executive* control is defined as resolving conflict among responses (Fan et al. 2002) and "the ability to maintain an appropriate problem-solving set for attainment of a future goal" (Welsh and Pennington 1988:201; Baeyens et al. 2006). The executive control aspect of attention can be studied through tasks that involve conflict among stimuli, such conflict activating the anterior cingulate cortex and the lateral prefrontal cortex (Fan et al. 2002). A follow-up fMRI study by Fan, McCandliss, Flombaum, and Posner (2003) on the attentional networks indicated that the alerting part of the ANT activated frontal-parietal areas along with the thalamus, the orienting aspect of the ANT activated the superior

parietal lobes, and the conflict part of the ANT activated the anterior cingulate plus right and left frontal areas. The overall role of each network in attentional processing can be studied by comparing different trial conditions within the ANT paradigm; therefore, the ANT can potentially indicate which attentional network's dysfunction might contribute to the attention disorders in clinical patients, such as ADHD.

Several studies have examined ADHD participant performance on the ANT paradigm. Findings in the literature, including a recent meta-analysis of the literature on this clinical subset, indicate that ADHD participants show deficits in the alerting network measured by the ANT (Arora, Lawrence, and Klein 2020; Booth, Carlson, and Tucker 2007; Johnson et al. 2008; Mullane et al. 2010). Specifically, Mullane and colleagues found deficits in reaction time and accuracy for the alerting task, and Johnson and colleagues demonstrated elevated omission errors for the alerting task. Although neither of these studies observed differences between ADHD participants and controls in the orienting network, they did report decreased performance in the conflict, or executive function, task. Furthermore, Mullane and colleagues examined for but failed to find differences between ADHD subtypes in any of the three attentional networks. Results from Booth and colleagues' study demonstrated subtle differences between ADHD subtypes, such that participants diagnosed with ADHD-IA performed better for the alerting network task on the ANT than did participants diagnosed with ADHD-C. A study by Adólfsdóttir and colleagues (2008) found no differences between ADHD subtypes but did find that, overall, participants with ADHD had lower accuracy than did control participants for the entire ANT and showed larger standard errors on their reaction times than did control participants. The literature examining ANT performance by individuals with ADHD indicates that there are deficits in relation to the alerting network and possibly the executive function network but not the orienting network (Abramov et al. 2019; Arora et al. 2020; Booth et al. 2007; Johnson et al. 2008; Mullane et al. 2010); however, results are mixed regarding differences between ADHD subtypes. It would thus be useful to examine the brain processes underlying observed behavioral results in ADHD participants by recording ERPs during performance on the ANT.

EVENT-RELATED POTENTIALS

ERPs consist of EEG signals averaged over multiple trials and time-locked to stimulus or response production (van Dinteren et al. 2014). They are useful for examining the functional relationship between brain physiology and the cognitive operations underlying behavior (Barceló and Rubia 1998; Falkenstein, Hoormann, and Hohnsbein 1999; Johnstone et al. 2012; Li et al. 2015). ERPs comprise several waveforms, differentiated in terms of their polarity, amplitude, latency, and scalp distribution (van Dinteren et al. 2014). The earlier positive waveforms (P1 and P2) are thought to pertain to processing of the physical attributes of the stimulus. The early negative waveforms (N1 and N2) seem to reflect other aspects of stimulus processing, such as feature analysis.

The later positive waveforms reflect judgmental processes, independent of the physical aspects of the stimuli (Defrance et al. 1996; Sutton, Braren, and Zubin 1965). One such late positivity, termed P3, which occurs approximately 300 ms after stimulus onset (Fabiani,

Gratton, and Coles 2000; Li et al. 2015; Neuhaus et al. 2010; van Dinteren et al. 2014), is associated with identification processes related to the detection of task-relevant stimuli (Kratz et al. 2011; Mangun and Hillyard 1995; Neuhaus et al. 2010) and the allocation of attentional resources when working memory is engaged (Donchin and Coles 1988; Li et al. 2015; Linden 2005; Neuhaus et al. 2010; Picton 1992). Wright, Geffen, and Geffen (1995) found that validly cued targets increased P3 amplitudes (Abundis-Gutierrez et al. 2014). P3 amplitude is thought to be a reflection of the effortfulness of the stimulus response and the intensity of processing (Neuhaus et al. 2010), whereas P3 latency is taken as a reflection of the speed/efficiency of information processing (Li et al. 2015).

The relation between P3 amplitude and the amount of effort put into a task is counterintuitive, with larger amplitudes observed in less cognitively demanding conditions (such as validly cued targets) and smaller amplitudes observed in more cognitively demanding conditions (such as invalidly cued targets); thus, an increase in mental effort appears to suppress P3 amplitude. One explanation for this could be that, because neural processes in the brain operate on automatic/unconscious levels in reaction to previously learned stimuli involving simpler processes, larger P3 waves are associated with less mental effort because the brain is carrying out these tasks "automatically" in response to the cues, resulting in less need for conscious effort. We see cognitive processes operating in this manner in many other daily tasks involving processing of simple and/or previously learned stimuli and tasks, including proprioception, visual processes, color processing, and the like. If, for example, an individual were to practice the more complex, cognitively demanding conditions, allowing for the brain to learn and familiarize itself with the process, we might see an increase in P3 amplitude on these tasks because the neural system would be responding to previously associated patterns or stimuli. Indeed, previous studies have shown that after practice, subjects can detect contours embedded in complex backgrounds with more ease, and as detection improves with contour length, the responses of neurons in the primary visual cortex (area V1) increase as well (Kandell et al. 2021).

The P3 wave represents a complex summation of interactions between neural systems involving the frontal and parietal lobes during cognitive processes of attention and working memory. Further, cognitive deficits due to mental or neurological diseases result in increases in P3 latency as well as decreases in P3 amplitude (Li et al. 2015). Children with a clinical diagnosis of ADHD have demonstrated reduced frontal and parietal P3 amplitudes to target stimuli in visual and auditory studies, in comparison with typically developing children, dyslexic children, and children diagnosed with autism spectrum disorder (Abramov et al. 2019; Jonkman et al. 1997; Kemner et al. 1996, 1998; Satterfield et al. 1990; Verbaten et al. 1994). van Dinteren and colleagues (2014) suggest that the suppressed P3 amplitude exhibited by individuals with ADHD is due to compensation mechanisms, more easily visible in neuroimaging techniques (Cortese et al. 2012), which recruit neural resources to maintain a steady level of behavioral performance. Results of a Go/NoGo ERP study by Rodriguez and Baylis (2007) revealed that ADHD participants demonstrated smaller P3 amplitudes than did control participants at frontal electrode sites, correlating to the anterior attentional system that includes the anterior cingulate cortex and basal ganglia, the anterior system being involved in executive functions, attentional

recruitment, and control of brain areas performing complex cognitive tasks (Posner and Dehaene 1994).

Additionally, a lower P3 amplitude in ADHD participants at posterior parietal electrode sites was observed, indicating that portions of the parietal lobe were involved in covert orienting to visual stimuli. This posterior system is thought to comprise the superior parietal cortex, the pulvinar, and the superior colliculus. It is largely responsible for selecting one stimulus location out of many and for shifting between stimuli (Posner and Dehaene 1994). The differences between the controls and the attention-disordered groups remained consistent across the anterior and posterior attentional systems, indicating that individuals with ADHD demonstrated deficits in the processes involved in both alerting and orienting.

The present study used ERPs from channels surrounding and including Fz and Pz of a high-density EEG sensory net to investigate the electrophysiological differences between controls and ADHD-subtypes in the attention networks as elicited by the ANT. This study hypothesized that individuals with ADHD-IA would show suppressed ERP activity in the alerting network, whereas individuals with ADHD-C/HI would show suppressed ERP activity in the executive network. In accordance with the Rodriguez and Baylis (2007) study, it was hypothesized that reaction time differences would not be significant but that the ADHD subgroups would commit more errors than would controls. No predictions regarding the orienting network were made, as previous studies did not find significant effects in that network (Booth et al. 2007; Johnson et al. 2008; Mullane et al. 2010). It was expected that the present ERP study would follow the patterns of activation in electrodes that correlated with the areas found in the Fan et al. (2003) fMRI study.

METHOD

Participants

A total of 57 adult undergraduate students participated in this study (control group *n* = 22, ADHD-IA *n* = 15, and ADHD-C/HI *n* = 20). There were 24 males and 33 females (ratio of 1:1.38) with normal or corrected-to-normal vision. Their ages ranged from 18 to 34 (M = 21, SD = 3.74). Participants with ADHD were contacted through the university's Office of Disability Services. These students had to provide documentation of their ADHD diagnosis to the experimenter before being able to participate in the study. Students who reported that they were taking medication were asked upon scheduling not to take their medication for 24 to 48 hours prior to participation in this study.

All participants were given the DSM-5 checklist for ADHD symptoms. For the purposes of this study, a distinction was not made between the ADHD-HI and ADHD-C subtypes. This decision was based on the study by Milich and colleagues (2001), which suggested that in adulthood, individuals with ADHD-HI and ADHD-C show little differences in symptoms, whereas individuals with ADHD-IA continue to show differences from the other two groups. This study therefore included three groups: ADHD-IA, ADHD-C/HI (comprising both ADHD-HI and ADHD-C subgroups) and control. Each

participant with ADHD was assigned to an ADHD subgroup according to their score on the DSM-5 checklist for ADHD symptoms.

Based on data from a normative pilot study collected from a sample of 1,400 undergraduate students, individuals scoring 11 or above in inattentive symptoms but below 13 in hyperactive/impulsive symptoms were assigned to the ADHD-IA group. Individuals scoring 13 or above on the hyperactive/impulsive symptoms were assigned to the ADHD-C/HI group, regardless of their score on the inattentive symptoms. Participants in the control group scored 6 or below on both inattentive and hyperactive/impulsive symptoms. Control participants were recruited through general psychology courses and completed the DSM-5 checklist for ADHD symptoms prior to participation. Potential control participants who scored above 6 on either scale were not included in this study, to eliminate any similarities in ADHD symptoms to those within the ADHD subgroups. Participants were either awarded a $25 monetary incentive or issued a 0.05% increase in class credit.

Materials

The DSM-5 checklist for ADHD symptoms consists of nine inattentive items and nine hyperactive/impulsive items. All inattentive and hyperactive/impulsive items are on a four-point scale (*not at all* = 0, *just a little* = 1, *pretty much* = 2, *very much* = 3). The inattentive items scale ranges from 0 (no ADHD-IA symptoms endorsed) to 27 (all ADHD-IA symptoms endorsed as *very much*). The hyperactive/impulsive items scale ranges from 0 (no ADHD-HI symptoms endorsed) to 27 (all ADHD-HI symptoms endorsed as *very much*).

All participants also completed a short questionnaire asking if they were taking any medication, when they had last taken said medication (if any), if they had any psychological or neurological disorders, if they had ever been diagnosed with a learning disability, and if they had ever been diagnosed with an attention disorder. Only participants reporting the absence of other psychological or neurological disorders participated in the present study. Participants who had taken medication fewer than 24 hours prior to the testing date were rescheduled.

The ANT (Fan et al. 2002) combines the cued reaction time (Posner 1980) and the flanker task (Eriksen and Eriksen 1974), requiring participants to indicate the direction of a horizontal arrow. Participants pressed the right key on a serial response box with their right thumb when the center arrow pointed right, and they pressed the left key with their left thumb when the center arrow pointed left. Flankers, which were either arrows (congruent or incongruent condition) or dashes (neutral condition), surrounded the target arrow, with two on each side. The target arrow and flankers all appeared in a straight line in the middle of the screen, either above or below a central fixation cross. The four flanker arrows pointed in the same direction, and they may or may not have coincided with the direction of the target arrow, resulting in congruent and incongruent conditions.

Warning asterisk cues did not always appear before target onset, but when they did, they signaled that target onset was upcoming. Warning cue conditions could be of four types: the absence of an asterisk cue (no cue condition); a single cue that replaced the fixation cross (center cue condition); two simultaneous cues, with one above and one below

the fixation cross (double cue condition); or a single cue that validly predicted the location, either above or below the fixation cross, of the upcoming target (spatial cue condition). There were a total of 96 trials per block, and 3 blocks per session.

The trials for each cue type condition (no cue, center, double, and spatial) were collapsed regardless of flanker type, yielding 72 trials for each cue type condition. The trials for each flanker type condition (congruent, incongruent, and neutral) were collapsed regardless of cue type condition, yielding 96 trials for each flanker type condition. Participants were seated 73 cm from a 29" color video computer monitor (NEC Multisync XM29) displaying at 1280 horizontal and 1024 vertical pixels. This distance resulted in a visual angle of .55˚ for target arrows.

Fan et al. (2002) explained that the attentional networks are determined by comparing measurements of the behavioral responses influenced by the alerting cues, the spatial cues, and the flankers. For the alerting network, the no-cue condition was compared to the double cue condition (72 no-cue trials vs. 72 double-cue trials). For the orienting network, the center cue condition was compared to the spatial cue condition (72 center cue trials vs. 72 spatial cue trials), and for the executive network, the congruent condition was compared to the incongruent condition (96 congruent trials vs. 96 incongruent trials). Fan et al. found no differences between the congruent and neutral conditions and that either of the two could be compared to the incongruent condition for the executive network.

Procedure

Participants were assigned to one of the three group conditions: ADHD-IA, ADHD-C/HI, or control group, based on their diagnoses and symptoms (or lack thereof). They were then fitted to the electrode cap (described below) and given the instructions for the ANT. They had two minutes of practice followed by three blocks of trials that lasted six minutes each. Participants were allowed to relax and rest their eyes between blocks.

Electrophysiological Data Analysis

Scalp EEG was recorded through a sensor net, part of the Electrical Geodesics Incorporated High-Density EEG system (Tucker 1993; Tucker et al. 1994), with amplifiers capable of collecting 128 channels of EEG data and high-impedance "geodesic electrodes" as transducers for the EEG. The impedance threshold was set at 100 kΩ. An average reference served as the reference for the EEG signal, which was recorded at a sampling rate of 250 Hz (4 ms samples), and the common electrode was located at the nasion. After recording, data were segmented using a 100 ms prestimulus interval and a 600 ms poststimulus onset for correct trials only. Segments were then averaged using Netstation 3 analysis tools (Electrical Geodesics, Inc. 1999) to derive ERPs for each participant. Based on the EGI (Electrical Geodesics, Inc.) guidelines, trials containing more than 10% bad channels were eliminated, as were trials containing an eye blink during the 700 ms segment. The bad-channel algorithm detects bad channels by measuring the difference between fast and slow

running averages of channel amplitude. Once these were detected, they were removed from the averaging procedure. Data were then filtered offline from 0.1 to 50 Hz.

ERP analysis consisted of only correct responses (left or right) to the target arrows. The P3 peak amplitude was measured at the frontal electrodes surrounding electrode 11, comparable to Fz on the Jasper 10-20 system (Jasper 1958; Luu and Ferree 2000) for the alerting and executive networks. The P3 peak amplitude was measured at the parietal electrodes surrounding electrode 62, comparable to Pz on the Jasper 10-20 system (Jasper 1958; Luu and Ferree 2000) for the orienting network. The late positive peak amplitude for each participant that occurred during these intervals was identified as the respective P3 used for the amplitude analysis. The latency for that peak was used for the latency analysis. These analyses were conducted using a mixed general linear model (GLM).

Behavioral Data Analysis

The number of correct responses, as well as the reaction times for those responses, was analyzed using mixed GLMs.

RESULTS

ERP Analysis

A mixed GLM consisted of the between-subjects factor group (three levels: control, ADHD-IA, and ADHD-C/HI) and the within-subjects factor condition (six levels: no cue, double cue, center cue, congruent, and incongruent). Where appropriate, follow-up contrasts were performed running a second mixed GLM of Group 2 by Condition 2 where only two groups at a time were compared (control vs. ADHD-IA, control vs. ADHD-C/HI, or ADHD-IA vs. ADHD-C/HI) on each attentional network as indicated by the levels of condition (no cue vs. double cue, center cue vs. spatial cue, or congruent vs. incongruent).

The first mixed GLM revealed no main effect of group, $F(2, 44) = .73$, $p = .49$, partial $\hat{\eta}^2 = .03$, power = .17. Controls, ADHD-IA, and ADHD-C/HI did not differ in their overall ERP activity to the ANT; however, group and condition interacted significantly, $F(10, 44) = 3.08$, $p = .001$, partial $\hat{\eta}^2 = .12$, power = .98. This interaction was explored further by running the second mixed GLM format for all three attentional networks. Each network was determined by comparing two of the six conditions. A significant P3 difference for a comparison—for example, no cue versus double cue—would indicate that target arrows were being processed differently based on the absence or presence of the signal (for the alerting network), the location of one cue (for the orienting network), and the direction of the flanker arrows (for the executive network). The first mixed GLM did not reveal which of the three groups engaged in differential processing for the two conditions compared in each network. The follow-up mixed GLMs provided the answers, with a significant interaction indicating which groups differed and in which networks.

Alerting Network

The alerting network was determined by comparing the no-cue condition to the double-cue condition during the 100–300 ms interval following the target. See Figures 1–3 for the alerting-network ERP waveforms for the control, ADHD-IA, and ADHD-C/HI groups. Results indicated that processing in the alerting network was different between the control and ADHD-IA groups ($F(1, 39) = 5.23$, $p = .03$, partial $\hat{\eta}^2 = .12$, power = .61) but not between the control and ADHD-C/HI groups ($F(1, 34) = .57$, $p = .46$, partial $\hat{\eta}^2 = .02$, power = .11), nor between the ADHD-IA and ADHD-C/HI groups, $F(1, 31) = 1.85$, $p = .18$, partial $\hat{\eta}^2 = .06$, power = .26. Overall, the mean P3 amplitude for the control and ADHD-C/HI groups was lower for the no-cue condition than for the double-cue condition, whereas the P3 amplitude for the ADHD-IA group was virtually the same in both conditions.

Figure 1. Alerting-Network ERP Waveform for the Control Group as Depicted by the No-Cue and Double-Cue Conditions
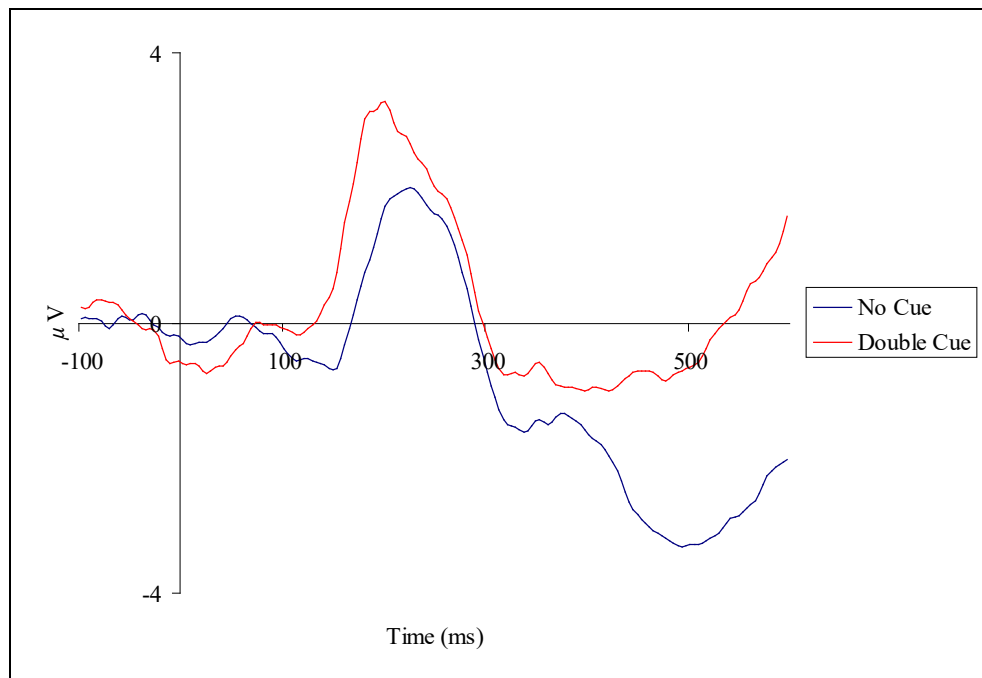
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Figure 2. Alerting-Network ERP Waveform for the ADHD-IA Group as Depicted by the No-Cue and Double-Cue Conditions
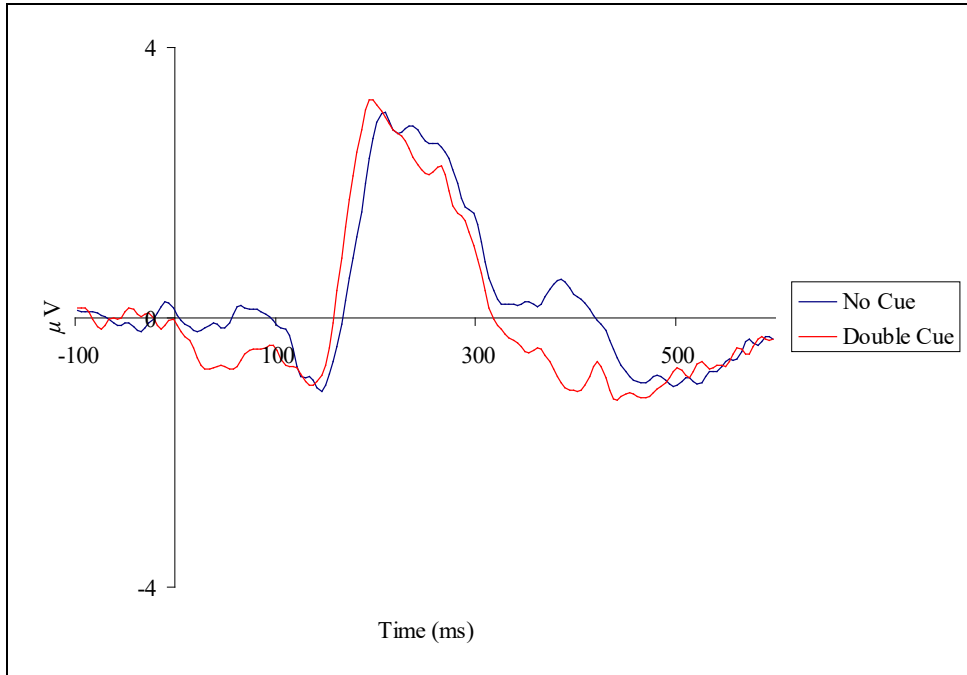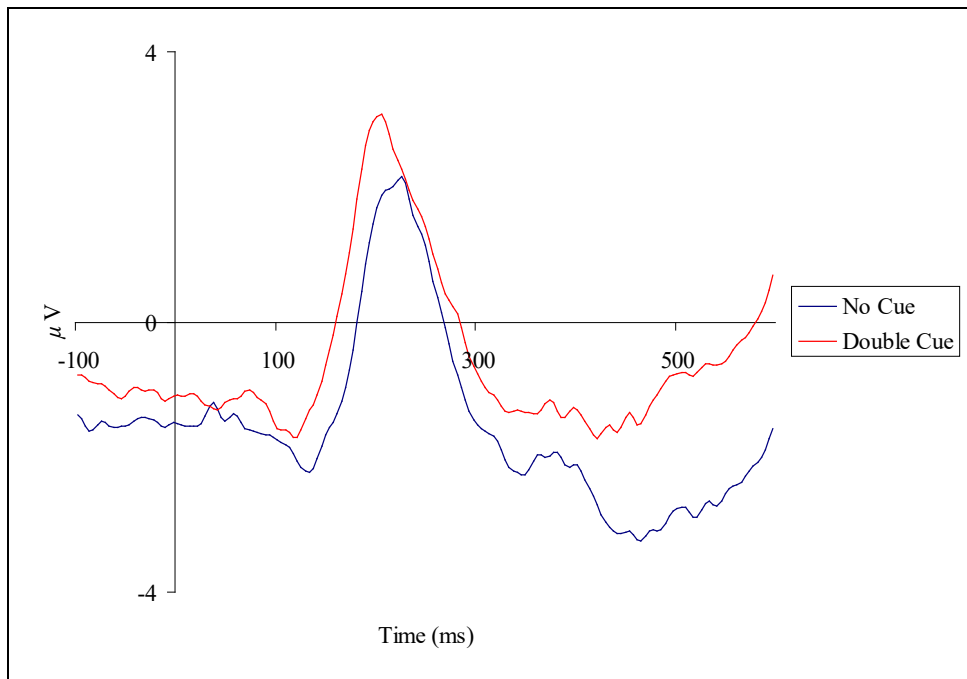

Figure 3. Alerting-Network ERP Waveform for the ADHD-C/HI Group as Depicted by the No-Cue and Double-Cue Conditions

Orienting Network

The orienting network was determined by comparing the center-cue condition to the spatial-cue condition during the 300–500 ms interval following the target. See Figures 4–6 for the orienting-network ERP waveforms for the control, ADHD-IA, and ADHD-C/HI groups. Results reveal that processing in the orienting network was different between the control and ADHD-C/HI groups ($F(1, 35) = 5.52$, $p = .03$, partial $\hat{\eta}^2 = .14$, power $= .63$) but not between the control and ADHD-IA groups ($F(1, 31) = .57$, $p = .46$, partial $\hat{\eta}^2 = .02$, power $= .11$) or between the ADHD-IA and ADHD-C/HI groups, $F(1, 30) = 2.37$, $p = .13$, partial $\hat{\eta}^2 = .07$, power $= .32$. The mean P3 amplitude for the control and ADHD-IA groups was much higher for the center-cue condition than for the spatial-cue condition in relation to the P3 amplitude for ADHD-C/HI, where the P3 amplitude for the center-cue condition was not much higher than for the spatial-cue condition.

Figure 4. Orienting-Network ERP Waveform for the Control Group as Depicted by the Center-Cue and Spatial-Cue Conditions
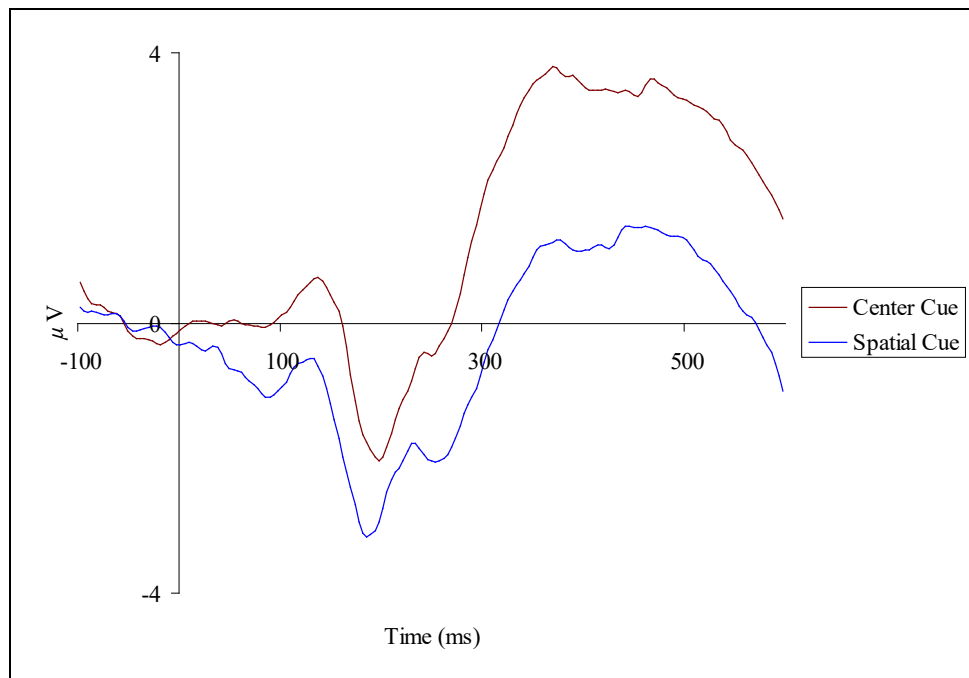
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Figure 5. Orienting-Network ERP Waveform for the ADHD-IA Group as Depicted by the Center-Cue and Spatial-Cue Conditions
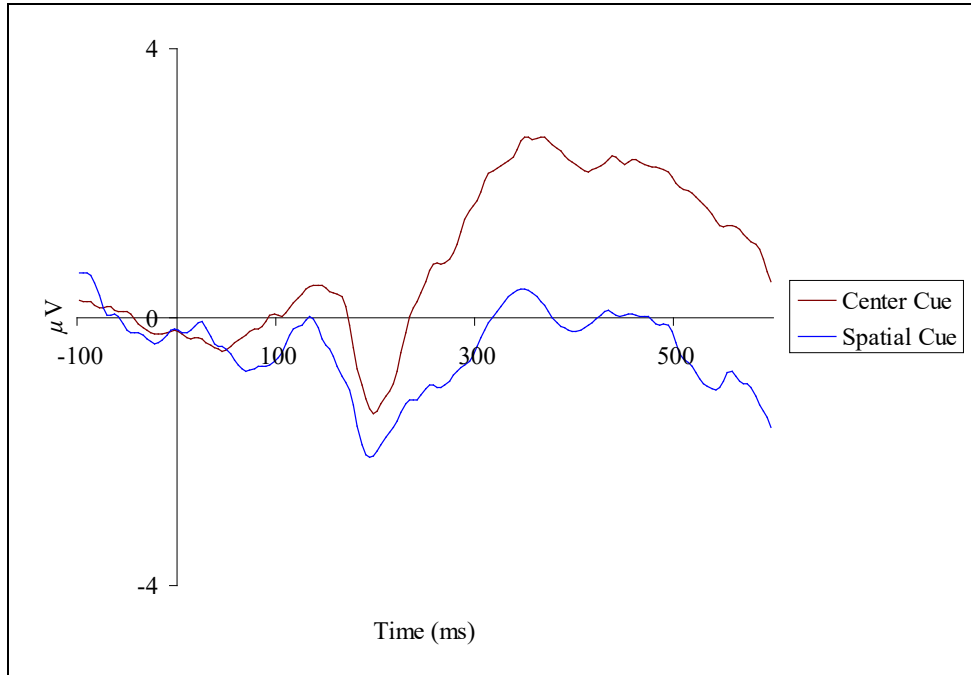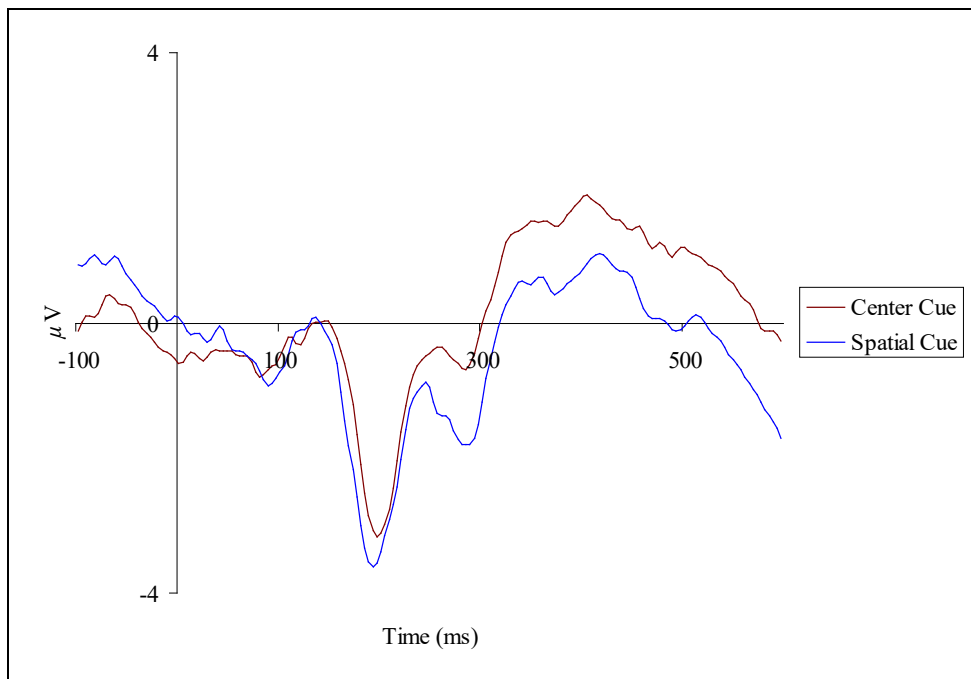

Figure 6. Orienting-Network ERP Waveform for the ADHD-C/HI Group as Depicted by the Center-Cue and Spatial-Cue Conditions

Executive Network

The executive network was determined by comparing the congruent condition to the incongruent condition during the 100–300 ms interval following the target. See Figures 7–9 for the executive-network ERP waveforms for the control, ADHD-IA, and ADHD-C/HI groups. Results indicated that processing in the executive network was different between the control and ADHD-IA groups ($F(1, 30) = 5.29$, $p = .03$, partial $\hat{\eta}^2 = .15$, power = .61) and the difference between the control and ADHD-C/HI groups was marginally significant ($F(1, 35) = 3.55$, $p = .07$, partial $\hat{\eta}^2 = .09$, power = .45) but the processing between the ADHD-IA and ADHD-C/HI groups was not significant, $F(1, 31) = .38$, $p = .54$, partial $\hat{\eta}^2 = .01$, power = .09. The overall pattern was for controls to have a higher mean P3 amplitude in the congruent condition than in the incongruent condition, whereas the P3 amplitude for ADHD-IA and ADHD-C/HI groups was virtually equal for both conditions.

Figure 7. Executive-Network ERP Waveform for the Control Group as Depicted by the Congruent and Incongruent Conditions
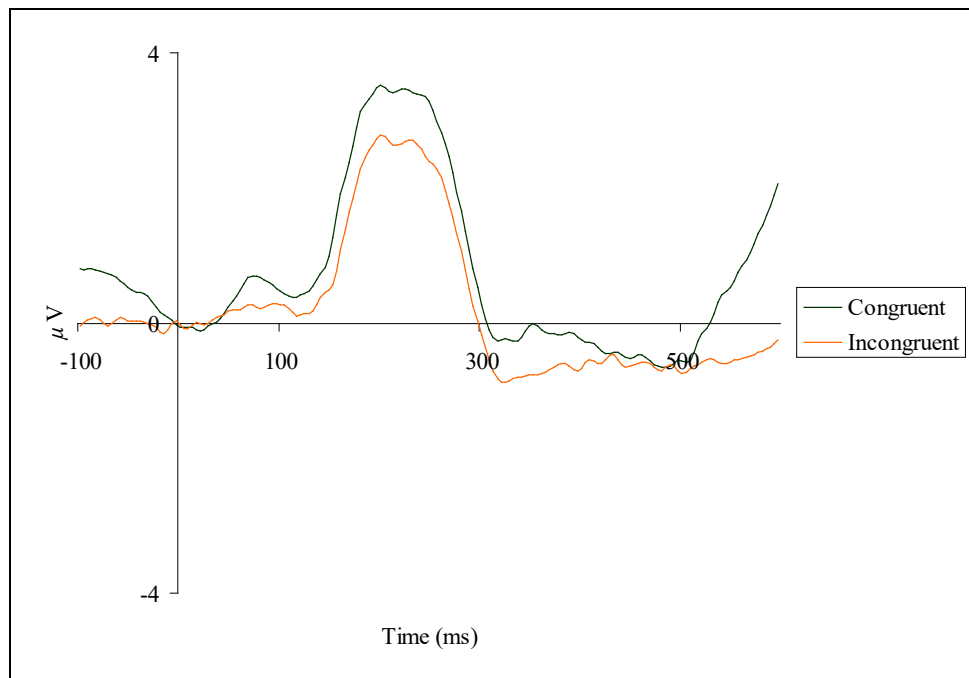
Figure 8. Executive-Network ERP Waveform for the ADHD-IA Group as Depicted by the Congruent and Incongruent Conditions
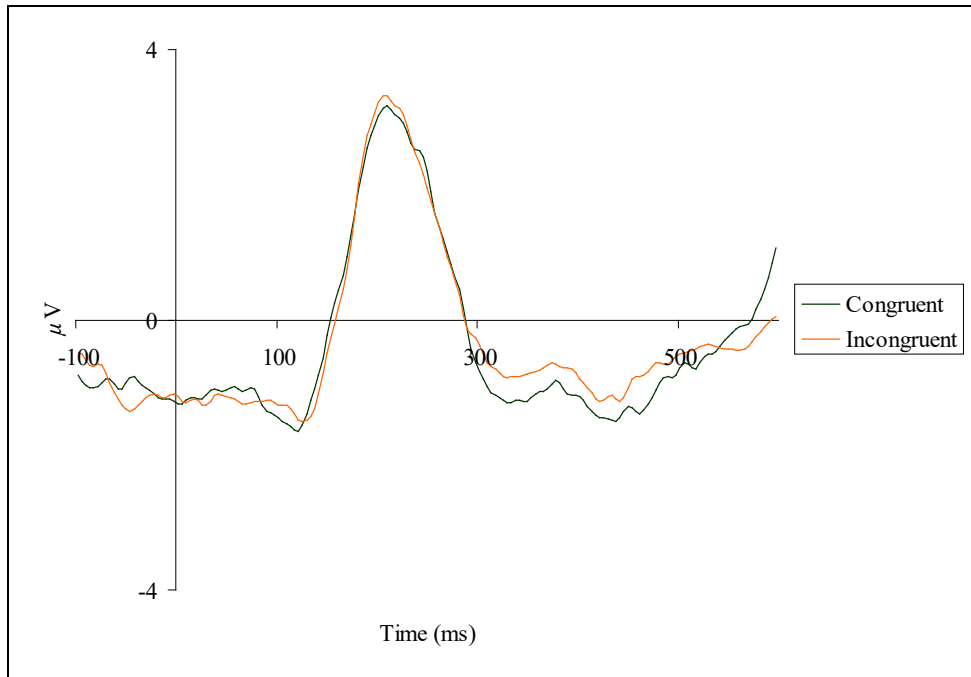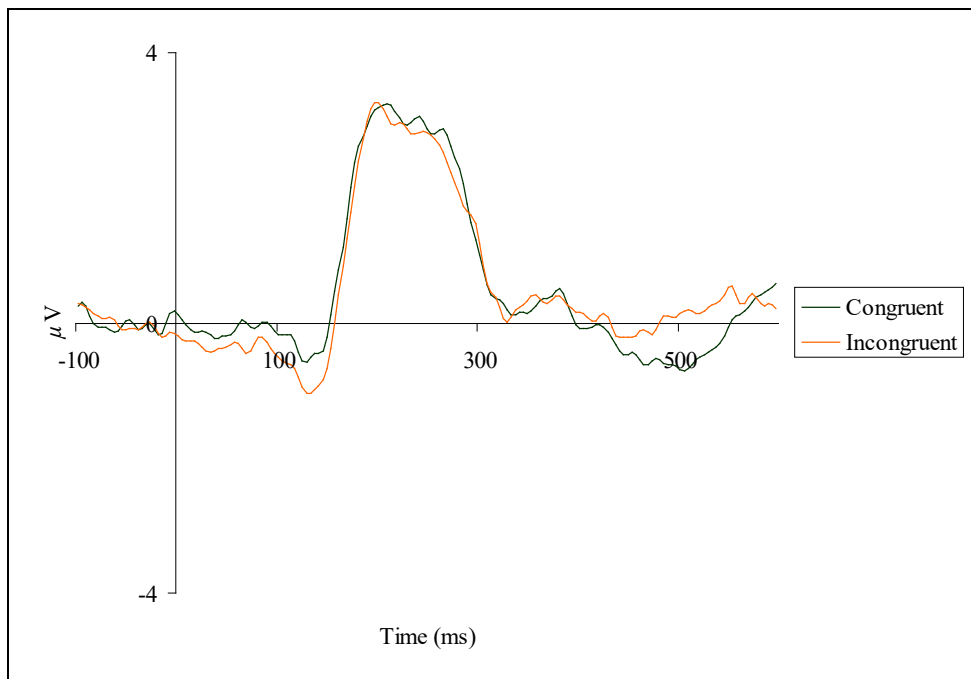

Figure 9. Executive-Network ERP Waveform for the ADHD-HI Group as Depicted by the Congruent and Incongruent Conditions

Latency

There were no latency effects for group or for the interaction between group and condition: $F(2, 44) = .98$, $p = .38$, partial $\hat{\eta}^2 = .04$, power = .21, and $F(10, 44) = 1.25$, $p = .26$, partial $\hat{\eta}^2 = .05$, power = .64, respectively. The latency for that peak was used for the latency analysis (see Table 1).

Table 1. Latency Range for P3 Analysis by Network

	Latency Range
Alerting network	100–300 ms
Orienting network	300–500 ms
Executive network	100–300 ms

Behavioral Data Analysis

Reaction times to correct responses were analyzed using a mixed 3 × 4 × 3 GLM, consisting of the between-subjects factor group (3) and two within-subjects factor conditions, cue type (no cue, double cue, center cue, and spatial cue), and flanker type (congruent, incongruent, and neutral). See Table 2 for RT means and standard deviations for each cue type and flanker type. Results indicated a significant effect of group ($F(2, 54) = .12.01$, $p = .0001$, partial $\hat{\eta}^2 = .31$, power = .99), cue type ($F(3, 162) = 198.25$, $p = .0001$, partial $\hat{\eta}^2 = .79$, power = 1.00), and flanker type ($F(2, 108) = 319.09$, $p = .0001$, partial $\hat{\eta}^2 = .86$, power = 1.00) separately. There were no interaction effects; however, the group × cue type × flanker type interaction was marginally significant, $F(12, 324) = 1.68$, $p = .07$, partial $\hat{\eta}^2 = .06$, power = .86.

Post hoc pairwise comparisons using the Tukey honestly significant difference (HSD) test revealed that the ADHD-C/HI group had slower RTs than did the control and ADHD-IA groups, while the control and ADHD-IA groups did not differ. Linear contrasts indicated that RTs were faster for target arrows preceded by a spatial cue (up or down) than for targets presented without a cue. As for flanker type, responses to targets in the incongruent condition were significantly slower than those in the congruent and neutral conditions. The cue-type and flanker-type findings coincided with Fan and colleagues' 2002 study. The marginally significant interaction effect of group x cue type x flanker type suggests a different RT pattern for ADHD-IA in the incongruent condition. RTs for the control and ADHD-C/HI groups in the incongruent condition were faster when the arrows were preceded by a double cue than when cues were not presented; however, for the ADHD-IA group, in the incongruent condition, the RT differences between no cue and double cue were minimal.

The three groups performed the task at a high level of accuracy and did not differ significantly in error rates, $F(2, 54) = 2.07$, $p = .14$, partial $\hat{\eta}^2 = .07$, power = .41. As shown in Table 3, the control group responded with 98.71% accuracy (SE = 1.92), the ADHD-IA

group responded with 97.75% accuracy (SE = 2.02), and the ADHD-C/HI group with 96.74% accuracy (SE = 2.33).

Table 2. Reaction Times by Group and by Cue Type for Each Flanker Type

Cue Type	Flanker Type	Control ms (SE)	ADHD-IA ms (SE)	ADHD-C/HI ms (SE)
No cue	Congruent	541 (12)	575 (21)	681 (31)
	Incongruent	623 (19)	695 (31)	783 (31)
	Neutral	526 (13)	566 (20)	674 (34)
Double Cue	Congruent	486 (11)	524 (19)	629 (28)
	Incongruent	602 (19)	684 (34)	759 (32)
	Neutral	473 (10)	526 (22)	628 (31)
Center Cue	Congruent	498 (12)	561 (27)	646 (34)
	Incongruent	609 (17)	673 (32)	768 (30)
	Neutral	486 (12)	538 (20)	632 (30)
Spatial Cue	Congruent	453 (12)	511 (22)	591 (28)
	Incongruent	539 (16)	618 (36)	718 (36)
	Neutral	438 (10)	514 (22)	580 (30)

Table 3. Accuracy Rates by ADHD Group Collapsed across All Tasks

	Control	ADHD-IA	ADHD-HI
Percent correct	98.71	97.75	96.74
Standard error	1.92	2.02	2.33

DISCUSSION

This study examined neurological and behavioral performance differences between the subtypes of ADHD and controls for the three attention networks proposed by Posner and Petersen (1990). The pattern was for controls to consistently elicit larger P3 peak amplitudes for one condition than the other for each attention network. This variation in amplitude of the controls was significantly different from those of the participants with ADHD-IA for the alerting and executive networks and of the participants with ADHD-C/HI for the orienting network. Behaviorally, the control and ADHD-IA participants had faster RTs than did ADHD-C/HI participants, and all groups performed at a high level of accuracy throughout.

Interpreting the results requires caution because the ANT does not directly measure the attention networks by tracking one specific component but rather relies on a subtraction technique of two conditions. Although individuals with ADHD usually have smaller P3 amplitudes to correctly detected targets (Brandeis et al. 2002), the present

study did not focus on comparing P3 amplitudes of individual conditions between the ADHD groups and controls but focused on the amplitude difference between two conditions associated with a particular network; information on each network was derived by comparing two conditions at a time, following the Fan and colleagues' 2002 procedure. A significant difference between two conditions does not necessarily describe a network's operation; however, when we compared this difference to the difference between those same conditions across two groups (e.g., comparing the difference between the no-cue condition and the double-cue condition across the control and ADHD-IA groups), we were able to describe that network's operation for the first group in relation to the second group. For instance, controls exhibited a larger P3 amplitude for the double-cue condition than for the no-cue condition (alerting network), but the P3 amplitudes for these two conditions in the ADHD-IA group were equal. We conclude that participants in the control group (presumably representing the general population) were processing the two conditions differently, whereas participants in the ADHD-IA group were processing the two conditions equally. This indicates a difference of function in the alerting network for participants with ADHD-IA.

Alerting Network

The hypothesis for the alerting network stated that the ADHD-IA group would show suppressed ERP activity, indicating more effortful processing of the target. Results supported this hypothesis and revealed that for the alerting network, the control group generated a larger P3 peak amplitude in the double-cue condition than in the no-cue condition; this indicates that controls processed target arrows with less effort based on the presence of warning cues. There was no significant difference in the alerting network between the control and ADHD-C/HI groups nor between the ADHD-IA and ADHD-C/HI groups; however, although the control group processed the two conditions differently, the peak P3 amplitudes in both conditions were equal for the ADHD-IA group (see Figure 10). This difference between groups on the alerting network suggests that participants in the control group were better able to establish a vigilant state and to maintain readiness to react than were participants in the ADHD-IA group, presumably because of the latter's inattentive tendencies. Results here coincided in part with the conclusion of Sergeant, Oosterlann, and van der Meere (1999), who asserted that individuals with ADHD have difficulty controlling the activation state. Furthermore, the literature supports findings that individuals with ADHD show behavioral deficits in the alerting network as measured by the ANT (Booth et al. 2007; Johnson et al. 2008; Mullane et al. 2010). This once again aligns with previous studies and hypotheses that suggest the higher activation of the neural system is due to neurons responding to cues and previously learned stimuli, explaining the counterintuitive nature of higher P3 amplitudes resulting in less mental effort put forth (Kandell et al. 2021).

Figure 10. Topographical Maps for the Alerting Network

Control

ADHD-IA

ADHD-HI

192   Time (ms)   252
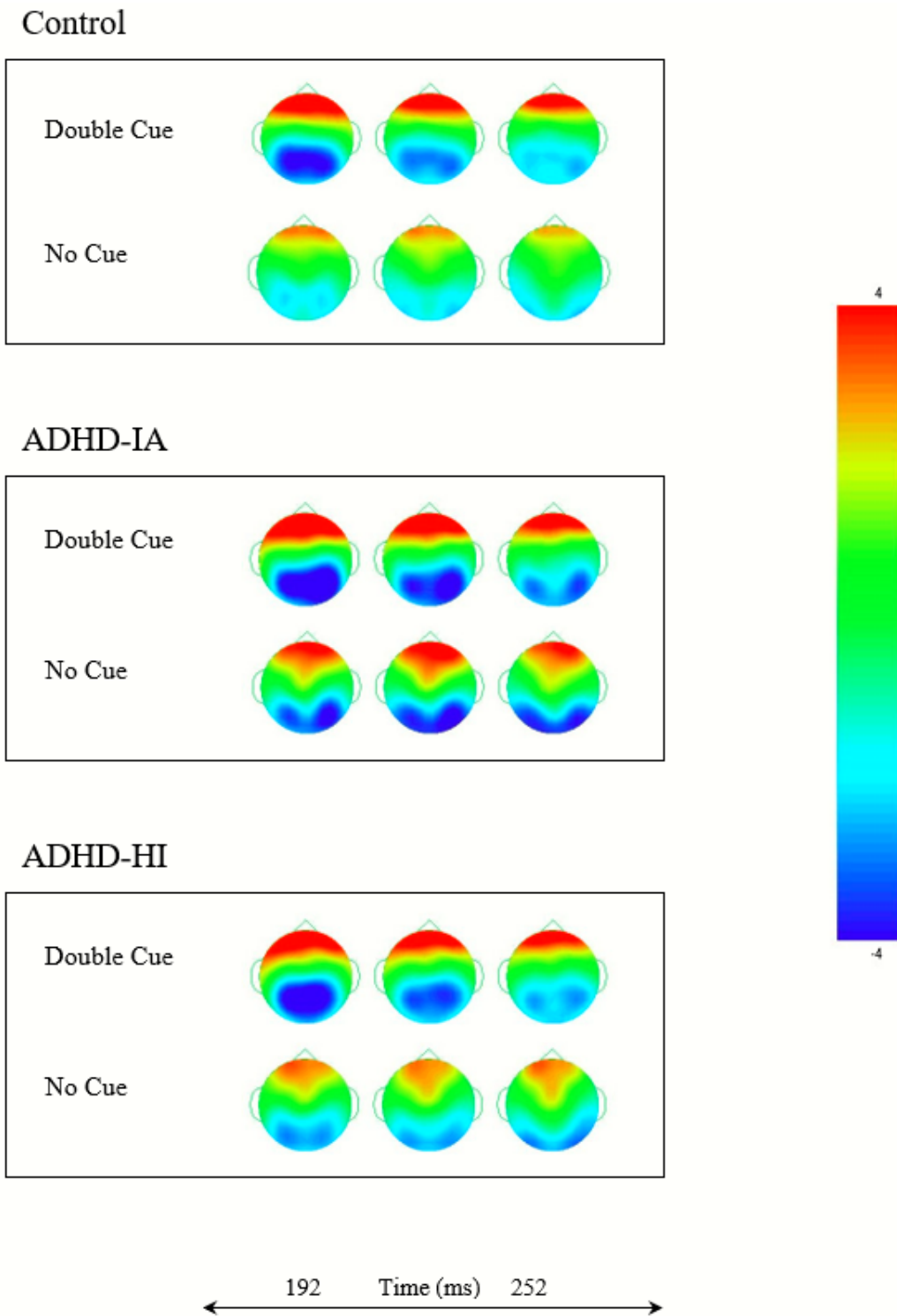
The differences between ADHD-IA and ADHD-C/HI in the alerting network were not significant; the only difference observed was between the control and ADHD-IA groups. The obvious question then becomes, Why were participants in the ADHD-C/HI group more similar to those in the control group than in the ADHD-IA group? After all, the ADHD-C/HI group used here scored higher on inattentive symptoms than did the ADHD-IA group. One could argue that different subgroups of ADHD may have different sources of their symptoms. Individuals in the ADHD-C/HI group could potentially experience inattentive symptoms due to their hyperactive/impulsive tendencies. Such behavioral problems cannot account for the ADHD-IA group's inattention, however. Their attention deficits may well be due to a dysfunction of the alerting system. Findings by Booth and colleagues (2007) indicated that participants with ADHD-IA performed better behaviorally on the alerting task than did participants in the control group. Our findings do not necessarily contradict those findings. Potentially, participants with ADHD-IA showed more effortful processing during the double-cue condition, indexed by the lack of a difference in the P3 amplitude between the double- and no-cue conditions, because they were having to compensate and focus more on the task; thus, the behavioral facilitation observed by Booth and colleagues may be an indicator of compensatory effort on the part of the participants in the ADHD-IA group.

Orienting Network

Results indicated that processing in the orienting network was significantly different between controls and ADHD-C/HI, but not ADHD-IA. Although both groups elicited a higher P3 peak amplitude in the center-cue condition than in the spatial-cue condition, the interaction effect reveals that the difference in P3 peak amplitude was larger for controls than for ADHD-C/HI. This suggests that for control-group participants, processing of the target arrows was influenced by the location of the warning signal to a greater extent than for participants in the ADHD-C/HI group, who processed the target arrows more similarly regardless of location. This finding is in agreement with results from a study by van Leeuwen and colleagues (1998), in which the researchers determined that children with ADHD differed from controls in preparatory processing attributed to the orienting network; however, that study did not differentiate among the subtypes of ADHD. In comparison, Berger and Posner (2000) stated that empirical support of the involvement of the orienting network in ADHD pathology is lacking. In support of this, significant behavioral differences in the orienting network for ADHD participants and controls has not been reported in the literature (Booth et al. 2007; Johnson et al. 2008; Mullane et al. 2010). The present study, however, detected a significant difference in the orienting network between participants in the control and ADHD-C/HI groups, indicating a difference in function of the orienting network (see Figure 11). This may be a subtle enough effect that it is more observable when examining neural correlates through such methods as ERPs than through behavior alone, a conclusion that is supported by Rodriguez and Baylis (2007), who found smaller, lower P3 amplitudes for ADHD participants with electrodes recording brain activity correlating to the orienting network. The ADHD-IA group did not differ from the control or ADHD-C/HI groups in P3 peak amplitude.

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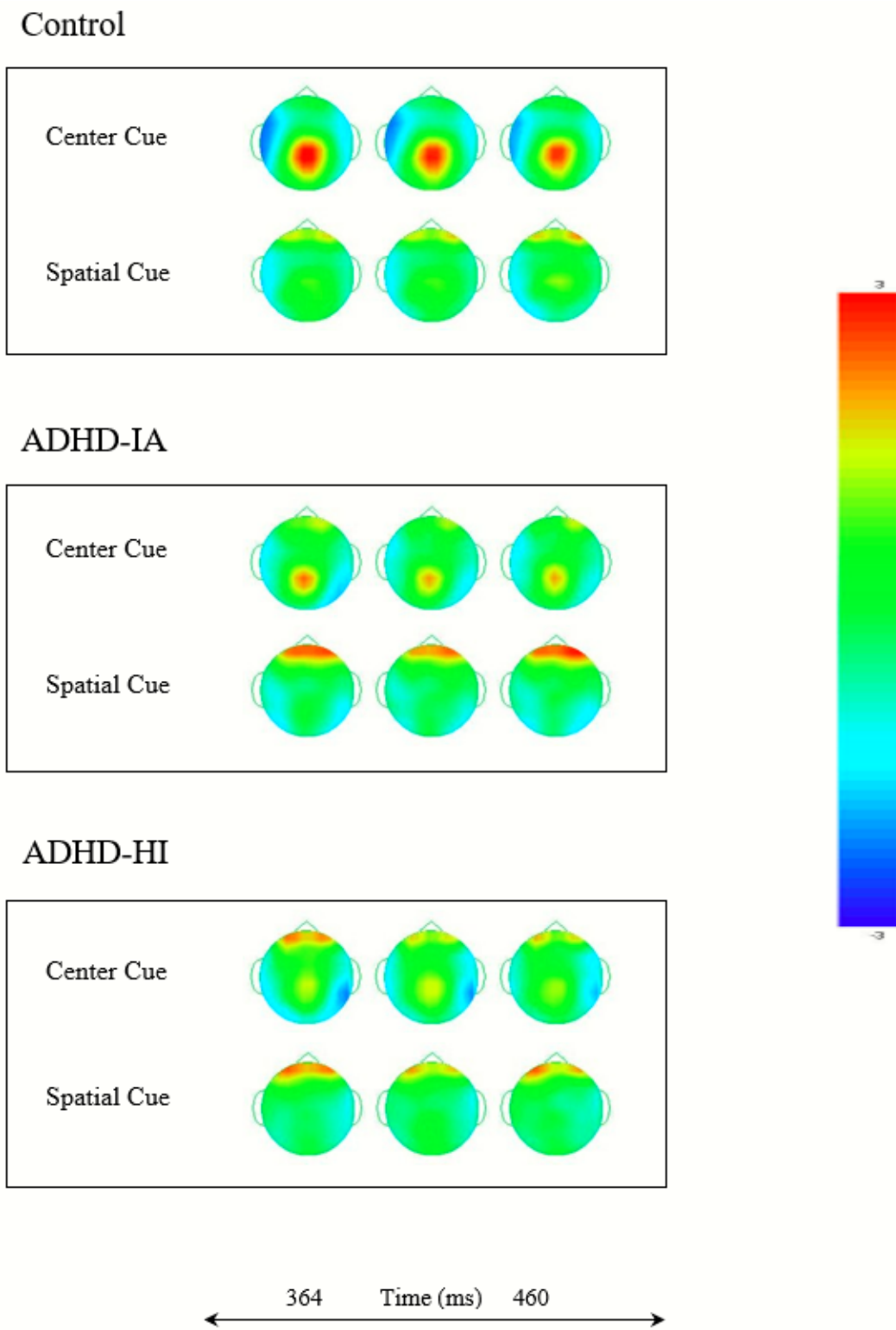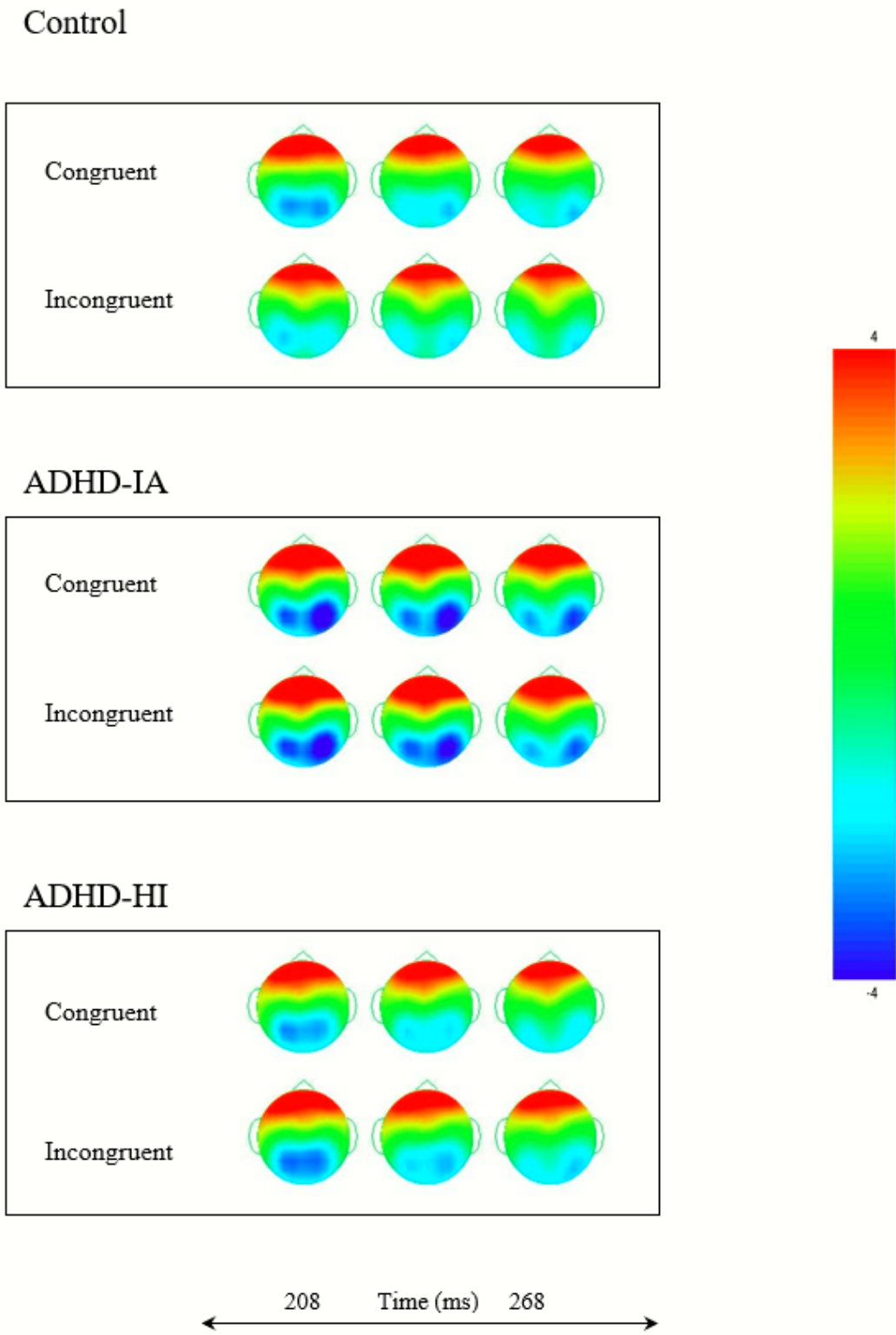**Figure 11. Topographical Maps for the Orienting Network**

Figure 12. Topographical Maps for the Executive Network

Executive Network

The hypothesis for the executive network stated that the ADHD-C/HI group would show suppressed ERP activity. This hypothesis was partially supported. The P3 peak amplitude for the congruent condition was larger than for the incongruent condition only in the control group. The other two groups demonstrated no difference in processing congruent flankers and incongruent flankers (see Figure 12). According to the results, the executive network for the control group operated differently than for the ADHD-IA group, and the difference between the control and ADHD-C/HI groups was marginally significant. Both of these comparisons indicate a difference in function in the executive network for both of the ADHD subgroups. Barkley (1998) discussed the idea that ADHD is a deficit in executive control and that this deficit extends to cognitive processes. Berger and Posner (2000) also stated that the deficits seen in ADHD are due to executive function/effortful control dysfunctions. These findings are consistent with reports on the performance of ADHD participants on the ANT, which indicate behavioral deficits for the executive network (Booth et al. 2007; Johnson et al. 2008; Mullane et al. 2010). The two ADHD subgroups, however, did not differ from one another in the executive network.

Behavioral Measures

A review of the studies reveals that some research found slower RTs for the ADHD group than for controls (e.g., Jonkman et al. 1997). In contrast, other studies found faster RTs for the ADHD group (e.g., Perchet et al. 2001) and still others found no RT differences (e.g., van Leeuwen et al. 1998). The hypothesis for the present study predicted no RT differences between the groups. Results, however, revealed that participants in the ADHD-C/HI group had slower RTs than did participants in the control and ADHD-IA groups. These results are in line with findings by Booth and colleagues (2007), which demonstrated that ADHD-IA participants performed better than ADHD-C/HI participants for the alerting-network piece of the ANT. Other aforementioned studies did not differentiate among the subtypes of ADHD; therefore, it is likely that, because those samples consisted of all the subtypes together, the slower RT of the ADHD-C/HI group seen in the present study was canceled out by the faster RT of the ADHD-IA group. It is also possible that the ADHD-C/HI group participants, aware of their impulsive tendencies and knowing that the object of the task was to be accurate, were engaging in an accuracy/speed trade-off, for they were as accurate as the other groups' participants. In general, though, the patterns found in the present study, while not always significant, follow the same trend identified in the meta-analysis of Arora and colleagues (2020), which indicated that children with ADHD exhibit slower RTs on these types of tasks than do children in control groups.

We predicted that the ADHD groups would commit more errors than the control group. The higher-than-average errors committed by participants with ADHD reported in other studies (e.g., Defrance et al. 1996; Johnson et al. 2008; Jonkman et al. 1999; Satterfield et al. 1994) were not evident in this study, however. Participants with ADHD as well as participants in the control group performed the ANT at a high level of accuracy. This could also be sample-specific, for the participants in this study were college students

who already performed at a relatively high level in order to be admitted to and remain in higher education. It is possible that the same study with a sample consisting of a lower-education tier of individuals with ADHD might reveal different levels of accuracy between them and controls. In fact, there is some support for this hypothesis. Adólfsdóttir and colleagues (2008) observed that when participants' full-scale intelligence quotient scores were included as a covariate in performance on the ANT, behavioral group differences were nonsignificant. Equal education level, as in the present study, may work as a similar control. A major strength of the present study consists of differentiating ERP activation in groups matched on overall performance. This study was able to measure processing differences in all three attention networks and that found ERP activity cannot be attributed to accuracy differences.

GENERAL CONCLUSIONS

When considering the ERP differences across the groups, one pattern was consistent across all three networks: The control group was always significantly different than at least one ADHD subgroup, but the two ADHD subgroups were never significantly different from each other. These findings partially support the idea of heterogeneous groups of ADHD. If individuals with ADHD comprised one homogeneous group, controls would display different attentional network ERP activity than both individuals with ADHD-IA and those with ADHD-C/HI. This is not the case here, where the control group is clearly different in ERP activity from the ADHD-IA group in the alerting network and from the ADHD-C/HI group in the orienting network. For the executive network, the control group processed information differently than did the ADHD-IA group, and the differences between the control and ADHD-C/HI groups were marginally significant. This last network is the only network for which one could potentially argue that ADHD-IA and ADHD-C/HI belong to a homogeneous group. The lack of significant differences in ERP activity between ADHD subtypes can be accounted for by looking at the behavioral measures. The vast majority of the literature draws the same conclusion: Individuals with ADHD perform more poorly than do controls on behavioral tasks (e.g., van Leewun et al. 1998). This conclusion is absent from the present study. Using a college sample accounts for this lack of agreement with the literature and is supported by findings from Adólfsdóttir and colleagues (2008). Participants in this study must perform at a certain level of success in order to enter and remain in higher education. These participants are either not afflicted by their attention disorder or are able of coping with the disorder through medication or other means; therefore, although their attention networks function differently than those of controls, these participants manage to perform behavioral tasks at levels equal to those of controls. Interestingly, though, the only behavioral difference between ADHD-IA and ADHD-C/HI comes in the RT data: Participants with ADHD-IA were faster than participants with ADHD-C/HI. The probable explanation is the speed/accuracy tradeoff referenced earlier.

The present study makes a strong case for heterogeneity in ADHD when it comes to the underlying neural systems compromised by the disorder. Specifically, in comparison to controls, individuals with ADHD-IA were found to have P3 deficits in the alerting

network while individuals classified as having ADHD-C/HI were found to have P3 deficits in the orienting network. These deficits indicate that it took more effort for individuals with ADHD-IA than for individuals in the control group to perform the alerting aspect of the task, while individuals with ADHD-C/HI put more effort into the orienting aspect of the task. Future studies could use an ADHD sample consisting of individuals whose attention disorder prevents them from performing at optimal levels, with the goal of highlighting neurophysiological and behavioral differences based on the deficits differentially affecting underlying neural networks.

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Incarcerated Men's Perceptions of the Prison Environment: An Exploratory Study[*]

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ABSTRACT

The punitiveness of prisons is considered necessary for deterrence, but there is also a societal expectation that prisons will also rehabilitate. Scholars have examined whether prisons are ideal environments for rehabilitation from the perspective of the inmate, though this work focuses largely on measurement issues related to the scales used to measure offenders' perceptions. The current research expands upon this by asking a sample of 154 incarcerated men from across three correctional facilities in the midwestern United States what they think about their current correctional environment using the Prison Environment Scale (PES) and focusing on the answers provided by those incarcerated individuals. These results are presented descriptively, giving a voice to the incarcerated and to their perceptions of the prison environment. Results from this exploratory study indicate that incarcerated individuals feel negatively about the social and physical environment of prisons, noting the existence of hierarchies, use of possessions as currency, lack of physical space, and lack of meaningful activities. Devising ways to promote a prosocial prison environment is important for effective rehabilitation, improved institutional conduct, and positive postrelease outcomes.

KEY WORDS Inmate Attitudes; Inmate Perceptions; Prison Environment; Physical Environment; Social Environment

In an era of mass incarceration in the United States, studies of prisons and prisoners remain relevant. Although contemporary prisons are meant to focus on both punishment and rehabilitation, this dual mission comes with contradictions. Exploring the environment that

exists within the prison is important for several reasons. First, the overemphasis on punishment during the past four decades has stimulated the "no frills," or penal harm, movement, in which increased punitiveness of the prison environment is viewed as appropriate to deter offenders and potential offenders (Garland 2001; Siegel and Bartollas 2016). Second, the American public wants offenders to be rehabilitated prior to their release (Cullen et al. 2000, 2002; Roberts and Hough 2005), and rehabilitative programs are offered within correctional facilities to reduce offending (Latessa, Cullen, and Gendreau 2002; Lipsey and Cullen 2007; Wilson et al. 2000). Some question exists as to whether prisons are ideal or appropriate environments in which to rehabilitate individuals, however. Prisons isolate offenders from their families and communities and contribute to the development of antisocial coping mechanisms, all of which make prison environments unlikely to be supportive of rehabilitation (Petersilia 2003; Sykes 1958). The presence of prison gangs and the threat of physical and sexual violence further contribute to negative environments (Fleisher and Decker 2001; Trammell 2012). Although these perils of the prison environment have been investigated, little attention has been paid to how incarcerated individuals themselves interpret the physical and social environments surrounding them. An idea of how incarcerated individuals perceive the prison environment generally is needed, given how important that environment is to rehabilitation, misconduct while incarcerated, and recidivism.

Previous research exploring the prison environment has focused largely on examining scales used to measure offenders' perceptions of the prison environment (Ross et al. 2008; Saylor 1984; Tonkin 2015; Wright 1985) or has been conducted in countries other than the United States (Allison and Ireland 2010; Ireland, Ireland, and Power 2016; Molleman and van Ginneken 2015; Stasch et al. 2018; Woessner and Schwedler 2014). While some research has focused on the United States, much of that is outdated (Saylor 1984; Waters and Megathlin 2002; for exceptions, see Bradford 2006 and Ross et al. 2008). The current research provides a contemporary examination by asking incarcerated individuals in the midwestern United States what they think about their current correctional environment utilizing the Prison Environment Scale (PES, Allison and Ireland 2010) using data collected in 2017. These results are presented descriptively, giving a voice to the incarcerated and to their perceptions of the prison environment. Utilizing a sample of 154 men incarcerated in three prisons in a U.S. midwestern state, results from this exploratory study indicate that incarcerated individuals feel negatively about the social and physical environments of prisons, noting the existence of hierarchies, use of possessions as currency, lack of physical space, and lack of meaningful activities.

LITERATURE REVIEW

Prison Environment

The prison environment consists of the physical structure and layout of the facility as well as the social atmosphere and relationships. The physical and social environments are affected by the regulations governing correctional facilities. The prison's purpose of maintaining control over its incarcerated occupants is thus reflected in its physical structure and social climate.

The physical structures of prison facilities are complex, and in the United States, they vary from state to state and within states. The most obvious differences are related to security level. Minimum- or low-security prisons are for those deemed the smallest risk to society and who do not require a strict level of supervision. Minimum-security prisons often lack perimeter fences, typically house the incarcerated in dormitories, and allow the incarcerated the most freedom of movement. Medium- and maximum-security facilities are characterized by perimeter fencing or double fencing and watchtowers (Siegel and Bartollas 2016). Medium-security prisons may house incarcerated individuals in dormitories or cells and exert more control over movement. Maximum-security prisons house the incarcerated in cells and strictly control movement. In supermax prisons, incarcerated individuals are housed in single cells, typically for 23 hours per day, and exert extremely strict control over the incarcerated individuals' movements outside their cells. As security level of the prison increases, the inmate-to-staff ratio increases (Bradford 2006; Siegel and Bartollas 2016).

In addition to security level and physical structure, other physical aspects of prison environments should be noted. Prisons often lack natural daylight and have "harsh acoustic environments" (Moran 2019:47). Natural light and control of noise have been shown to be important for health, well-being, and recovery and are "likely to be extremely challenging to deliver in prison" (Moran 2019:47). A study of Dutch remand centers indicated that the layout of the prison significantly affected how incarcerated individuals felt about their relationships with staff, with those housed in panopticon-style prisons, older units, and units with more double cells feeling less positive about their interactions with staff (Beijersbergen et al. 2016). Molleman and van Ginneken (2015) found that prisoners who shared cells viewed the quality of the prison as lower than those who did not share cells. The no-frills movement has also seen the removal of weight-lifting equipment, cable television, R-rated movies, and other amenities from the correctional environment because of the idea that offenders do not deserve such luxuries and that prison environments need to be as Spartan as possible (Hensley et al. 2003; Johnson, Bennett, and Flanagan 1997). These physical features of prisons, along with others not specifically mentioned here, are the physical context in which the social climate forms.

Wright (1985) identified social climate as "a set of organizational properties or conditions that are perceived by its members and are assumed to exert a major influence on behavior" (p. 258). In the prison context, scholars have been interested in how incarcerated individuals experience incarceration, as the prison environment will influence how the individuals adapt and conduct themselves in this environment and perhaps after release (Wright 1985). As Moran (2019) recently wrote, "It is perhaps intuitively clear to anyone living or working in prison that the nature of the prison environment affects the wellbeing of those within it" (p. 48). In the 1970s, Toch (1977:10) interviewed incarcerated individuals in order to identify "shared environmental concerns . . . that 'cut across' persons" and understand what the incarcerated believed were important problems in the correctional setting. He identified eight concerns: privacy, safety, structure, support, emotional feedback, social stimulation, activity, and freedom. Wright (1985) characterized these eight concerns as "global concerns of inmates that are universally perceived" (p. 260). These eight areas have been the subject of some research in criminal justice even if not

specifically identified as part of the environment of the prison. Liebling's (2004) book *Prisons and Their Moral Performance* examined incarcerated individuals' perceptions of the prison environment in UK prisons, focusing on quality of life. Her work illustrated that how the incarcerated felt they were treated by prison staff was the most important variable for distinguishing among quality of life in prisons. Liebling (2004) referred to these elements, including kindness and respect, as "moral dimensions" that could be measured as the "moral performance" of each prison.

A brief overview of Toch's eight environmental concerns is warranted. Privacy within a correctional facility includes the extent of (over)crowding and is a major issue (Bradford 2006; Toch 1977). Crowding and overcrowding are acknowledged as having negative effects on the incarcerated (Specter 2010; Steiner and Wooldredge 2009). Privacy and the lack thereof illustrate how the physical and social environments are interwoven in the prison context. Albrecht (2012) argued that overcrowding negatively influences the trust and confidence that the incarcerated have in prison authorities and also reduces the services that prisons can provide. Although people typically think of prisons as keeping the public safe from inmates, it is also the duty of the prison to ensure the safety of inmates. Safety is a major concern of the incarcerated, given that they may encounter violence from other incarcerated individuals or from staff (Sykes 1958). Safety was a prevalent issue in a study of incarcerated females' perceptions of the prison environment (Bradley and Davino 2002), where safety in prison was compared to safety before incarceration, largely within the context of interpersonal violence in relationships. Bradley and Davino (2002) argued that for effective treatment of past trauma to occur, an environment that is safe, both physically and psychologically, must first be established. Toch (1977) argued that the structure of the prison is concerned mostly with how daily life is governed by the rules and regulations of the facility. This is related to the behavior of the incarcerated and the use of punishment when rules are broken and also concerns the availability of services such as showers and recreation (Bradford 2006).

Social support refers to the availability of counseling, self-help groups, or other kinds of enrichment activities that can help the incarcerated deal with problems and improve their skills (Bradford 2006; Toch 1977). The availability of mental health services and of opportunities for self-improvement can improve the abilities of the incarcerated to manage depression and to better cope with the deprivations of the prison environment. *Emotional feedback* includes relationships between the incarcerated and staff, relationships among the incarcerated, and interaction of the incarcerated with those outside the prison through visits, telephone calls, and letters (Bradford, 2006). A significant amount of research on inmate-correctional staff relationships has focused on inappropriate relationships and misconduct by staff (Worley 2011; Worley, Marquart, and Mullings 2003; Worley and Worley 2016). Prison visitation research typically measures whether an incarcerated individual had a visit in a specific time frame and whether that was related to outcomes such as prison misconduct and recidivism, but more recent research on prison visits acknowledges that such visits are multidimensional and complex (Hickert, Tahamont, and Bushway 2018) and that some prison visitors are not supportive to the incarcerated (Meyers et al. 2017).

Social stimulation refers to the social elements that affect the incarcerated, such as interactions with other incarcerated individuals and with correctional staff (Bradford 2006; Toch 1977). An essential part of life in prison and in society generally is interpersonal relationships (Liebling 2011), and a significant part of Liebling's (2004) Measurement of Quality of Prison Life Questionnaire addresses relationships between the incarcerated and staff. Social stimulation also includes the prison culture, composed of the norms and customs within the correctional environment. Prisons are often regarded as a microcosm of society (Clemmer 1940; Siegel and Bartollas 2016), with the idea that incarcerated individuals import their values and cultures into the prison (Irwin and Cressey 1962). Clemmer (1940) described prisonization as "a process of assimilation in which prisoners adopt a subordinate status, learn prison argot (language), take on the habits of other prisoners, engage in various forms of deviant behavior . . . , develop antagonistic attitudes towards guards, and become acquainted with inmate dogmas and mores" (pp. 299–300). Prisons have long been characterized as violent places, and that violence may stem from the social interactions that occur in them.

Activities in prison can include physical recreation, educational and vocational classes, card playing or television watching, or any number of other activities (Bradford 2006; Toch 1977). Such activities can provide relief from the monotony of tightly scheduled life. The availability of such activities may have declined because of demands that prisons environments be more Spartan (Hensley et al. 2003; Johnson et al. 1997). The dimension of freedom is concerned with inmates' autonomy and control over their own environment (Bradford 2006; Toch 1977). Incarcerated individuals have limited autonomy over their day-to-day activities. Their perceived feelings of control may vary and can be related to stress (Ruback, Carr, and Hopper 1986).

Prisons are complex places both physically and socially, and these interact and contribute to the overall environment in which incarcerated individuals live and, presumably, are rehabilitated. Barquin, Cano, and Calvo (2019) illustrated how perceptions of the prison environment and quality of life held by incarcerated individuals varied among five Spanish prisons, highlighting the fact that even in the same country, prisons vary quite a bit. While some researchers have investigated individual aspects of the prison environment, others have created scales to tap into multiple dimensions.

Prison Environment Studies and Scales

Numerous studies have investigated incarcerated individuals' perceptions of the prison environment, utilizing various measures and scales in a variety of countries. Saylor (1984) wrote a report for the U.S. Federal Bureau of Prisons in which he examined various ways to measure prison climate. His review of the early attempts to measure prison climate concluded that Moos' 1975 instrument, the Correctional Institutions Environment Scale (CIES), presented the most frequently used survey in adult correctional facilities at that time. Saylor (1984) questioned whether the CIES was an appropriate scale to utilize, given the emphasis on comparing institutions or units in terms of treatment effectiveness, which Saylor viewed as not the goal or objective of most correctional administrators when considering the prison environment. Waters and Megathlin (2002) utilized the CIES in two

small samples in the United States in order to examine the effect of program changes. Their findings illustrated that almost two years after the implementation of several educational and rehabilitative programs, incarcerated individuals more positively viewed the correctional environment. Small sample sizes and the focus on examining perceptions of programs make this study limited in its use, however.

Wright (1985) utilized a survey instrument called the Prison Environment Inventory (PEI) to examine the correctional climate in U.S. prisons. His 80-item instrument was created to focus on the eight environmental issues mentioned by Toch (1977). Wright (1985) discussed the creation of the instrument and the procedures by which reliability and validity were assured. He concluded that the instrument "is an effective measure of prison environments" (p. 270), but he did not make any specific mention of what the incarcerated individuals in his sample actually thought about their prison environments. In 2006, Bradford utilized an adapted version of the PEI in his thesis at East Tennessee State University to examine the factor structure of the PEI and whether the eight dimensions discussed by Wright were still found in samples of incarcerated individuals from different security levels in the United States. Bradford (2006) wanted to know which of the eight dimensions was most important to the incarcerated and found that safety was the primary concern. Molleman and van Ginneken (2015) also used an adaptation of Wright's 1985 PEI in a study examining overcrowding in Dutch prisons, finding that prisoners who shared cells viewed the quality of the prison as lower than those who did not share cells.

Ross, Diamond, Liebling, and Saylor (2008) explored the prison social climate by administering questionnaires to incarcerated individuals in the United States and England in order to present a cross-cultural comparison. Their research utilized the Prison Social Climate Survey developed by the Federal Bureau of Prisons for the U.S. sample and the Measurement of Quality of Prison Life instrument developed by Liebling (2004) for the English sample. The researchers examined quality of life, perception of well-being in prison, and perceived safety of the facilities. Their research was on comparing the factor structures of the different surveys, though they concluded that the two incarcerated populations perceived their prison environments similarly.

Tonkin (2015) examined the data structures of 12 social-climate surveys in his research on prisons and psychiatric hospitals. Tonkin's goal was to determine the existence of questionnaires for this purpose and to examine their psychometric properties. Although he acknowledged the empirical support for the Essen Climate Evaluation Schema, he argued that this scale was not as in-depth as other scales regarding social climate. He did, however, note that those other scales were not yet sufficiently validated. Tonkin's (2015) work was focused on examining the reliability, validity, internal consistency, and factor structure of social-climate scales. He concluded that the surveys that he examined measuring social climate in prisons and psychiatric hospitals appeared to provide both reliable and valid portraits of the social climates in these settings.

Like Tonkin (2015), Stasch, Yoon, Sauter, Hausam, and Dahle (2018) also utilized the Essen Climate Evaluation Schema in their examination of incarcerated individuals in Germany. They wanted to know how prison climate was related to treatment motivation. Their study of 215 inmates indicated that the incarcerated individuals' perceptions of the prison environment were correlated with how the individuals felt about treatment. Those

who viewed the prison environment as more positive and had more positive attitudes toward treatment also had the most positive predictors of lowered risk factors as measured by the Level of Service Inventory–Revised (Stasch et al. 2018).

Another study of German inmates, by Woessner and Schwedler (2014), utilized a prison-climate scale from Ortmann (1987). Woessner and Schwedler (2014) found a significant correlation between perceptions of a positive prison climate and prosocial changes in some dynamic risk factors among violent and sexual offenders. They argued that more attention should be paid to creating a positive prison climate so prosocial therapeutic changes in risk factors could occur.

A different version of a prison environment or climate survey, the Prison Environment Scale (PES), was developed by Allison and Ireland (2010), who utilized the scale as part of their larger study on bullying in a UK prison. Their research indicated that perceptions of the prison environment, encompassing both physical and social factors, that were supportive of bullying were related to increased reports of being a bully or being a victim of a bully. Allison and Ireland (2010) created the PES specifically for this research "due to an absence of suitable questionnaires" (p. 46). Ireland et al. (2016) also utilized the PES along with the Prison Bullying Scale to investigate bullying in Canadian prisons.

Exploring the perceptions that inmates have of the correctional environment is important, given the large impact that this environment can have on rehabilitation as well as the idea that treatment is more effective when it takes place within a "safe and supportive environment" (Woessner and Schwedler 2014:874). Further, Ireland (2008, 2012) argued that the social environment of the prison should be thought of in terms of the "healthy community" concept, in which more should be done to develop "healthy prison communities" (2008: 22). Because previous research has focused primarily on examining the factor and data structure of prison environment surveys or has been conducted outside the United States, the current exploratory research focuses on how incarcerated individuals in a U.S. midwestern state perceive the prison environment by providing a descriptive account of their attitudes.

DATA AND METHODOLOGY

This research utilized data from a survey administered to male inmates incarcerated at three correctional facilities within a U.S. midwestern state. The research was approved by the Institutional Review Board at the author's university and by an internal review panel of the state's Department of Correction (DOC). Facilities A and C were medium-security facilities, and Facility B was a maximum-security facility. The DOC randomly selected incarcerated individuals who had been incarcerated for at least six months in their current facilities. A 2%–4% sample size was allowed, resulting in initial sample sizes of 140 at Facility A, 100 at Facility B, and 50 at Facility C. Data collection occurred in March 2017.

The randomly selected individuals were invited to attend a survey session to learn more about the project. These group sessions were held in auditoriums or chapels within the prison. Final response rates were calculated based on the number who participated out of the number who attended the survey session. This resulted in response rates of 62% (81/130) at Facility A, 74% (32/43) at Facility B, and 89% (41/46) at Facility C, with an aggregated response rate of 70% (154/219).

The survey included demographic questions as well as questions regarding several topics. The focus of this paper is on the results from the PES (Allison and Ireland 2010), a scale focusing on the physical and social environments within correctional facilities. For each item, individuals could respond with *Strongly Disagree, Disagree, Neutral, Agree*, or *Strongly Agree*, which were coded 1–5. The PES was selected over similar scales for several reasons. First, the PES was more recently created, more accurately reflecting applicable issues in institutional environments than scales created decades ago that have not been widely used since then. Second, although other contemporary scales exist, the PES specifically focuses on both the social and physical environments of correctional settings, which are of great importance in determining social climate. Third, the PES comprises only 40 items, and given concerns about respondent fatigue, this scale was deemed the best for this research. Last, the specific items on the PES are quite readable, an important consideration for a population known to have low education and literacy (Harlow 2003).

Although the PES has been utilized with samples of incarcerated individuals in the UK and Canada (Allison and Ireland 2010; Ireland et al. 2016), no evidence was located that it has been utilized in the United States. The current research is exploratory, with the goal of providing an initial description of the perceptions of the correctional environment held by those incarcerated in a U.S. midwestern state.

RESULTS

Table 1 shows the demographic characteristics of the sample. The largest age group was 40–44 years, with almost 20% of the sample, but more than half of respondents were under age 40. Most of the respondents (60%) indicated that they were White/Caucasian. Fewer than a third (28.6%) said they were Black/African American, and 5.8% indicated that they were Hispanic/Latino. Almost half indicated that their marital status was single, with 18.8% reporting that they were divorced, 18.2% indicating that they were in a relationship, and 14.3% reporting that they were married.

When asked about the offense type for their current incarceration, more than one-third indicated incarceration for a violent offense, with almost one-third indicating incarceration for a drug offense. Fewer than 20% reported that their current incarceration was for a property offense. The "Other" category was selected by more than 20% of the sample, which is unusual when compared to Bureau of Justice Statistics reports, in which less than 1% of state inmates reported their offense type as "Other" (Carson 2018). There may have been some confusion about what offenses truly belonged in the "Other" category. Almost 43% of the sample indicated that this was their first incarceration, 20% reported this was their second incarceration, and 22.1% indicated this was their third incarceration.

An examination of the PES provides an exploratory look at how incarcerated individuals in a midwestern state perceive the physical and social environments of the prisons in which they were incarcerated. Total PES scores were computed, with 11 of the 40 items reverse-coded as indicated by Ireland (personal communication, 2018). Higher scores indicate a greater perception of a negative environment. Total scores ranged from 109 to 170, with a mean of 135.26.

Table 1. Inmate Characteristics

Variable	*n* (%)
Age	
20–24	12 (7.8)
25–29	26 (16.9)
30–34	23 (14.9)
35–39	27 (17.5)
40–44	30 (19.5)
45–49	14 (9.1)
50–54	13 (8.4)
55–59	5 (3.2)
60–64	2 (1.3)
65 or older	2 (1.3)
Race/Ethnicity	
White/Caucasian	94 (61.0)
Black/African American	44 (28.6)
Hispanic/Latino	9 (5.8)
Other/Multiple Races/Ethnicities	7 (4.5)
Relationship status	
Single	73 (47.4)
Married	22 (14.3)
In a relationship	28 (18.2)
Divorced	29 (18.8)
Widowed	2 (1.3)
Offense for which currently incarcerated[a]	
Violent	51 (33.1)
Property	28 (18.2)
Drug	50 (32.5)
Public order	1 (.6)
Other	31 (20.1)
Including current incarceration, how many times in prison?	
1	66 (42.9)
2	31 (20.1)
3	34 (22.1)
4	6 (3.9)
5	8 (5.2)
6 or more	9 (5.8)
N	154

[a] Some inmates indicated multiple offense types, so these percentages do not add up to 100%.

Principle components analysis (PCA) was employed to examine the structure of the 40-item scale in order to more meaningfully analyze and examine the data. The suitability of the data for PCA was determined by examining the Kaiser-Meyer-Olkin Measure of Sampling Adequacy. This value was 0.627, exceeding the recommended value of 0.6 (Kaiser 1970; Kaiser and Rice 1974). Bartlett's test of sphericity was statistically significant. These indicate that the data are appropriate for PCA.

PCA revealed 13 components with eigenvalues above 1, explaining 68.14% of the total variance. The scree plot indicated between two and five components. Investigation into the variables loading onto each component in these configurations and previous research utilizing this scale (Allison and Ireland 2010; Ireland et al. 2016) were examined, leading to the decision to retain a five-factor solution. Variables loading at 0.3 or higher were retained, per Pallant (2013). The five-factor solution explained nearly 40% of the variance (39.88%). Every item loaded onto a factor. Cronbach's alpha was calculated for the full scale and each factor to demonstrate reliability. The full scale had a Cronbach's alpha of 0.695, slightly below Nunnally's (1978) recommendation of 0.7 or higher in exploratory research. Table 2 shows the items comprising each factor, the factor loadings, and the Cronbach's alpha for each factor.

Table 2. Factor Structure of the PES

Full Scale (alpha = .695)	**Factor Loading**
Factor 1: Power and Dominance (alpha = .778)	
Prisoners monitor what possessions other prisoners have.	.642
Possessions are a valuable form of currency.	.603
It's easy for prisoners to break the rules when there are lots of other prisoners about.	.596
There are too many prisoners for staff to supervise well.	.592
Prisoners at the top of the "pecking order" have the most power and dominance.	.564
Levels exist between prisoners based on how much control and influence they have.	.545
Prisoners that are seen as weak and vulnerable are at the bottom of the "pecking order."	.519
A "pecking order" exists between prisoners.	.482
Possessions are traded at high prices.	.470
There are lots of new prisoners coming onto and leaving this unit.	.470
Prisoners who bully receive respect.	.433
It is important for prisoners to be seen as "tough" by others.	.426
Prisoners won't back down if challenged.	.402
Staff supervision is predictable.	.316

Table 2. Factor Structure of the PES, concl.

Full Scale (alpha = .695)	**Factor Loading**
Factor 2: Activities and Space (alpha = .709)	
There are many meaningful activities to do.	.776
Prisoners feel bored because of the lack of activities to do.	−.679
There are no activities to keep prisoners occupied.	−.654
Possessions are always provided when needed/requested.	.528
There is not much physical space.	−.491
There is an emphasis on treating and releasing prisoners here.	.498
Rules telling prisoners what they can have are clear.	.390
Staff think about prisoners' circumstances when applying prison rules and regulations.	.345
Factor 3: Prisoner/Staff Interaction (alpha = .354)	
Prisoners always know where staff will be present.	.758
Prisoners always know when staff will be present.	.722
Prisoners talk to staff on a regular basis.	.498
There is enough personal space.	.497
Prisoners have nothing to lose by behaving badly.	.410
Prisoners know the other prisoners around them long enough to trust them.	.329
Factor 4: Security and Rules (alpha = .164)	
There is an emphasis on security and control here.	.633
The hierarchy seen in staff grades is seen between prisoners also.	.590
Prisoners generally follow prison rules and regulations here.	.542
There is an emphasis on prison rules and regulations here.	.414
Prisoners would tell a member of staff if another had broken a prison rule or regulation.	.385
There is a high turnover of prisoners.	.378
Factor 5: Prisoner Social Interactions (alpha = .460)	
Bullying is just part of prison life; nothing can be done to stop it.	.671
The opportunity to have social contact is good.	−.573
Bullying can't be stopped, so there is no point trying.	.464
Victims deserve to be bullied.	.382
Prisoners come into contact with many other prisoners every day.	−.378
Prisoners would help someone who is being bullied.	−.361

Note: PES=Prison Environment Scale (Allison and Ireland 2010).

Factor 1, "Power and Dominance," contained 14 items related to the hierarchy of prisoners, the importance of possessions, and the perception of inmates as "weak" or "tough." The Cronbach's alpha was .778, above the .7 threshold for exploratory research (Nunnally 1978). The number and percentage for each item can be seen in Table 3. Total scores ranged from 33 to 68, with a mean of 48.63, with higher scores indicating a more negative view of the prison environment. The means for individual items ranged from 2.49 to 4.00, with an average mean of 3.47. A score of 3 on an individual item indicated a response of *Neutral*, and a score of 4 indicated *Agree*, so many inmates responded between *Neutral* and *Agree* on items related to power and dominance.

An examination of the items indicates that the most common answer choice for eight of the 14 items was *Neutral*. Five items had the most inmates indicate *Agree*: "Prisoners monitor what possessions other prisoners have," "Possessions are a valuable form of currency," "Levels exist between prisoners based on how much control and influence they have," "A 'pecking order' exists between prisoners," and "There are lots of new prisoners coming onto and leaving this unit." For one item, the majority indicated *Strongly Agree*. This item was the statement "Prisoners that are seen as weak and vulnerable are at the bottom of the pecking order," to which more than 38% of inmates responded with *Strongly Agree*." None of the statements had a majority of inmates indicating *Disagree* or *Strongly Disagree*. These results indicate that on statements related to power and dominance, inmates find the prison environment more negative than positive.

Table 3. PES Factor 1: Power and Dominance

Variables	Strongly Disagree *n* (%)	Disagree *n* (%)	Neutral *n* (%)	Agree *n* (%)	Strongly Agree *n* (%)	Missing Response *n* (%)
Prisoners monitor what possessions other prisoners have.	13 (8.7)	16 (10.7)	42 (28.2)	48 (32.2)	30 (20.1)	5 (3.2)
Possessions are a valuable form of currency.	1 (0.7)	9 (6.0)	32 (21.5)	54 (36.2)	53 (35.6)	5 (3.2)
It's easy for prisoners to break the rules when there are lots of other prisoners about.	7 (4.7)	13 (8.7)	67 (44.7)	40 (26.7)	23 (15.3)	4 (2.6)

Table 3. PES Factor 1: Power and Dominance, concl.

Variables	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)	Missing Response n (%)
There are too many prisoners for staff to supervise well.	12 (8.0)	20 (13.3)	44 (29.3)	36 (24.0)	38 (25.3)	4 (2.6)
Prisoners at the top of the "pecking order" have the most power and dominance.	7 (4.8)	15 (10.2)	51 (34.7)	37 (25.2)	37 (25.2)	7 (4.5)
Levels exist between prisoners based on how much control and influence they have.	5 (3.4)	11 (7.4)	48 (32.2)	51 (34.2)	34 (22.8)	5 (3.2)
Prisoners that are seen as weak and vulnerable are at the bottom of the "pecking order."	8 (5.4)	11 (7.4)	30 (20.1)	43 (28.9)	57 (38.3)	5 (3.2)
A "pecking order" exists between prisoners.	3 (2.1)	8 (5.5)	43 (29.5)	47 (32.2)	45 (30.8)	8 (5.2)
Possessions are traded at high prices.	14 (9.5)	14 (9.5)	64 (43.2)	39 (26.4)	17 (11.5)	6 (3.9)
There are lots of new prisoners coming onto and leaving this unit.	5 (3.4)	11 (7.5)	43 (29.5)	57 (39.0)	30 (20.5)	8 (5.2)
Prisoners who bully receive respect.	34 (23.0)	41 (27.7)	49 (33.1)	14 (9.5)	10 (6.8)	6 (3.9)
It is important for prisoners to be seen as "tough" by others.	15 (10.0)	17 (11.3)	52 (34.7)	45 (30.0)	21 (14.0)	4 (2.6)
Prisoners won't back down if challenged.	13 (8.7)	31 (20.7)	52 (34.7)	37 (24.7)	17 (11.3)	4 (2.6)
Staff supervision is predictable.	14 (9.2)	22 (14.4)	44 (28.8)	41 (26.8)	32 (20.9)	1 (0.6)

Notes: PES=Prison Environment Scale (Allison and Ireland 2010). *N* = 154 respondents. Cronbach's alpha for this factor was .778.

The second factor, "Activities and Space," contained eight items related to activities, feelings of boredom, and physical space and had a Cronbach's alpha of .709, above the .7 threshold (Nunnally 1978). Table 4 shows the number and percentage of incarcerated individuals who responded in each answer category for each item. Four of the eight items were reverse-coded to calculate the total scores and means. Total scores ranged from 18 to 39, with a mean of 29.45, and as with Factor 1, higher scores indicate a more negative perception of the prison environment. Although the means for individual items ranged from 2.84 to 4.23, where 3 indicated *Neutral* and 4 indicated *Agree*, an examination of the answer categories illustrates that the most common answer choice to four items was either *Strongly Agree* or *Strongly Disagree*, indicating strongly felt perceptions about the prison environment related to activities and space. Three of the items requiring reverse coding had the largest number of inmates indicate *Strongly Disagree*, all of them positive statements: "There are many meaningful things to do," "Possessions are always provided when needed/requested," and "Staff think about prisoners' circumstances when applying prison rules and regulations." The item with a majority indicating *Strongly Agree* was the negatively worded statement "There is not much physical space here." Taking the reverse coding into consideration, these results indicate that inmates view the prison environment negatively when it comes to activities and space.

Factor 3 contained six items related to "Prisoner/Staff Interaction" and included items related to knowing where staff are, talking with staff, and being held accountable by staff. This factor had a Cronbach's alpha of .354, indicating that the items did not hang together very well. Table 5 displays the number and percentage of individuals who responded in each answer category for each statement. Scores ranged from 12 to 26, with a mean of 18.93, and as with previous factors, higher scores indicate more negative perceptions. The means for the individual items ranged from 2.31 to 4.35, and three items were reverse-coded. For two statements, a majority of individuals responded with *Strongly Disagree*. The first of these statements was "There is enough personal space," a positively worded item to which 65.8% of the incarcerated individuals responded with *Strongly Disagree*. A negatively worded item also had the largest percentage of inmates (36.4%) indicate *Strongly Disagree*, however. This statement was "Prisoners have nothing to lose by behaving badly," indicating that incarcerated individuals perceive there to be sanctions for misbehavior. For three items, a majority of individuals indicated *Agree*. Two of these were in relation to knowing where and when staff will be present, and the third was "Prisoners talk to staff on a regular basis." Taken together, incarcerated individuals indicated they knew where and when staff would be present and that prisoners talk to staff regularly, and they acknowledged that prisoners do have something to lose if their behavior is not appropriate. These items are open for interpretation in terms of what they really mean in the prison environment. For example, one could interpret knowing when and where staff will be present as either positive or negative. Given the wording of these two items and the scoring in which higher scores indicate negative perceptions of the environment, the intention of these items appears to be that they are negative, but these particular items may be problematic, in that it is not clear they are interpreted by incarcerated individuals in the way intended.

Table 4. PES Factor 2: Activities and Space

Variables	Strongly Disagree *n* (%)	Disagree *n* (%)	Neutral *n* (%)	Agree *n* (%)	Strongly Agree *n* (%)	Missing Response *n* (%)
There are many meaningful activities to do.[a]	54 (36.7)	39 (26.5)	35 (23.8)	14 (9.5)	5 (3.4)	7 (4.5)
Prisoners feel bored because of the lack of activities to do.	4 (2.6)	8 (5.3)	26 (17.1)	42 (27.6)	72 (47.4)	2 (1.3)
There are no activities to keep prisoners occupied.	17 (11.3)	39 (25.8)	30 (19.9)	34 (22.5)	31 (20.5)	3 (1.9)
Possessions are always provided when needed/requested.[a]	70 (46.4)	45 (29.8)	26 (17.2)	6 (4.0)	4 (2.6)	3 (1.9)
There is not much physical space.	3 (2.0)	7 (4.7)	23 (15.3)	36 (24.0)	81 (54.0)	4 (2.6)
There is an emphasis on treating and releasing prisoners here. [a]	30 (20.1)	24 (16.1)	61 (40.9)	23 (15.4)	11 (7.4)	5 (3.2)
Rules telling prisoners what they can have are clear.	27 (17.8)	38 (25.0)	38 (25.0)	31 (20.4)	18 (11.8)	2 (1.3)
Staff think about prisoners' circumstances when applying prison rules and regulations.[a]	60 (39.7)	39 (25.8)	28 (18.5)	13 (8.6)	11 (7.3)	3 (1.9)

Notes: PES=Prison Environment Scale (Allison and Ireland 2010). N = 154 respondents. Cronbach's alpha for this factor was .709.

[a] Item reverse-coded in the analysis. This table shows original responses.

Six items comprised Factor 4, "Security and Rules," which had a poor Cronbach's alpha (.164). Table 6 shows the number and percentage of incarcerated individuals who responded in each answer category for the six items. Two items were reverse-coded for the factor analysis and calculation of means. Scores ranged from 14 to 27, with a mean of 20.76, with higher scores indicating more negative perceptions of the prison environment. The means for the individual items ranged from 3.20 to 3.91, with a response of 3 indicating *Neutral* and 4 indicating *Agree*, so all six items had an average response between *Neutral* and *Agree*. As shown in Table 6, for four of the items, a majority of inmates indicated *Neutral*, and for two items, a majority responded with *Agree*. The *Neutral* items included statements such as "The hierarchy seen in staff grades

is seen between prisoners also" and the reverse-coded item "Prisoners generally follow prison rules and regulations here." The two items to which a majority of inmates responded with *Agree* were "There is an emphasis on prison rules and regulations here" and "There is a high turnover of prisoners." This factor had the lowest Cronbach's alpha, indicating that these items do not hang together very well. Because all the items had means above 3, incarcerated individuals generally had a more negative perception of the prison environment in terms of security and rules.

Table 5. PES Factor 3: Prisoner/Staff Interaction

Variables	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)	Missing Response n (%)
Prisoners always know where staff will be present.	12 (7.9)	25 (16.6)	46 (30.5)	47 (31.1)	21 (13.9)	3 (1.9)
Prisoners always know when staff will be present.	11 (7.3)	26 (17.2)	40 (26.5)	46 (30.5)	28 (18.5)	3 (1.9)
Prisoners talk to staff on a regular basis.[a]	11 (7.3)	10 (6.6)	45 (29.2)	60 (39.7)	25 (16.6)	3 (1.9)
There is enough personal space.[a]	100 (65.8)	26 (17.1)	14 (9.2)	3 (2.0)	9 (5.9)	2 (1.3)
Prisoners have nothing to lose by behaving badly.	55 (36.4)	37 (24.5)	27 (17.9)	21 (13.9)	11 (7.3)	3 (1.9)
Prisoners know the other prisoners around them long enough to trust them.[a]	29 (19.2)	22 (14.6)	64 (42.4)	25 (16.6)	11 (7.3)	3 (1.9)

Notes: PES=Prison Environment Scale (Allison and Ireland 2010). *N* = 154 respondents. Cronbach's alpha for this factor was .354.

[a] Item reverse-coded in the analysis. This table shows original responses.

Factor 5 encompassed six items related to prisoner social interactions, including bullying and social contact. This factor had a poor Cronbach's alpha (.460). Table 7 shows the number and percentage of incarcerated individuals who responded in each answer category for each item. Two items required reverse coding. The full factor ranged from 10 to 26, with a mean of 17.30, and higher scores indicate a more negative perception of the prison environment. The individual items had means between 1.84 and 4.14, indicating a wide variety of responses. The item with the lowest mean was "Victims deserve to be bullied," with the majority of individuals (53.4%) indicating *Strongly Disagree*, interpreted as a positive evaluation of the prison environment. The item with the highest mean was "Prisoners come

into contact with many other prisoners every day," with 42.7% of incarcerated individuals responding with *Strongly Agree* and an additional 38% responding with *Agree*.

Table 6. PES Factor 4: Security and Rules

Variables	Strongly Disagree *n* (%)	Disagree *n* (%)	Neutral *n* (%)	Agree *n* (%)	Strongly Agree *n* (%)	Missing Response *n* (%)
There is an emphasis on security and control here.	16 (10.7)	16 (10.7)	51 (34.0)	35 (23.3)	32 (21.3)	4 (2.6)
The hierarchy seen in staff grades is seen between prisoners also.	6 (4.0)	12 (8.1)	65 (43.6)	40 (26.8)	26 (17.4)	5 (3.2)
Prisoners generally follow prison rules and regulations here.[a]	24 (16.1)	28 (18.8)	59 (39.6)	30 (20.1)	8 (5.4)	5 (3.2)
There is an emphasis on prison rules and regulations here.	15 (9.9)	11 (7.2)	46 (30.3)	56 (36.8)	24 (15.8)	2 (1.3)
Prisoners would tell a member of staff if another had broken a prison rule or regulation.[a]	40 (27.2)	32 (21.8)	41 (27.9)	23 (15.6)	11 (7.5)	7 (4.5)
There is a high turnover of prisoners.	6 (4.0)	10 (6.6)	26 (17.2)	58 (38.4)	51 (33.8)	3 (1.9)

Notes: PES=Prison Environment Scale (Allison and Ireland 2010). N = 154 respondents. Cronbach's alpha for this factor was .164.

[a] Item reverse-coded in the analysis. This table shows original responses.

Incarcerated individuals indicated *Neutral* or *Disagree* for statements related to bullying, which indicated they may believe something can be done to stop bullying, all of which are more positive interpretations of the prison environment. For the statement "Bullying is just part of prison life, nothing can be done to stop it," 38.7% indicated *Disagree* or *Strongly Disagree*, with another 30.0% responding with *Neutral*. Similarly, 39.6% responded to the statement "Bullying can't be stopped, so there is no point trying" with *Disagree* or *Strongly Disagree*; however, 36.5% also responded to the statement "Prisoners would help someone who is being bullied" with *Disagree* or *Strongly Disagree*, with an additional 39.1% responding with *Neutral*, indicating that while many incarcerated

individuals agreed that bullying could be stopped, they disagreed with the idea that prisoners would currently help someone who was a victim of bullying.

Table 7. PES Factor 5: Prisoner Social Interactions

Variables	*Strongly Disagree* *n* (%)	*Disagree* *n* (%)	*Neutral* *n* (%)	*Agree* *n* (%)	*Strongly Agree* *n* (%)	**Missing Response** *n* (%)
Bullying is just part of prison life; nothing can be done to stop it.	30 (20.0)	28 (18.7)	45 (30.0%	29 (19.3)	18 (12.0)	4 (2.6)
The opportunity to have social contact is good.[a]	14 (9.3)	13 (8.6)	41 (27.2)	37 (24.5)	46 (30.5)	3 (1.9)
Bullying can't be stopped so there is no point trying.	24 (16.1)	35 (23.5)	47 (31.5)	24 (16.1)	19 (12.8)	5 (3.2)
Victims deserve to be bullied.	79 (53.4)	32 (21.6)	25 (16.9)	6 (4.1)	6 (4.1)	6 (3.9)
Prisoners come into contact with many other prisoners every day.	3 (2.0)	8 (5.3)	18 (12.0)	57 (38.0)	64 (42.7)	4 (2.6)
Prisoners would help someone who is being bullied.[a]	25 (16.6)	30 (19.9)	59 (39.1)	29 (19.2)	8 (5.3)	3 (1.9)

Notes: PES=Prison Environment Scale (Allison and Ireland 2010). *N* = 154 respondents. Cronbach's alpha for this factor was .460.

[a] Item reverse-coded in the analysis. This table shows original responses.

Several additional analyses were conducted to discover if bivariate relationships existed between two demographic variables (age and race/ethnicity) as well as security level (medium or maximum) and the full scale and Factors 1 and 2. Factors 1 and 2 had appropriately high Cronbach's alphas of .778 and .709, respectively, while the full scale was slightly below Nunnally's (1978) recommendation of .7 or higher, at .695. Due to the low Cronbach's alphas for Factors 3, 4, and 5, additional analyses for those factors were not conducted. One-way ANOVAs were calculated to examine the effect of age on the full scale, Factor 1, and Factor 2. Age was an ordinal variable, so one-way ANOVA allows a comparison of the mean on the full scale and on each factor by age group. As shown in Table 8, none of the ANOVAs were statistically significant; however, it should be noted that there were small sample sizes in each age group.

Race/ethnicity was also examined using one-way ANOVAs. The ANOVA comparing the means by each racial/ethnic group for the full PES was statistically significant ($F = 3.961$, $p < .01$). A post-hoc Tukey's HSD test was computed (results available upon request) and indicated that the difference is between the Other/Multiple Races/Ethnicities group and each

of the other racial/ethnic groups (White/Caucasian, Black/African American, and Hispanic/Latino), with the Other/Multiple Races/Ethnicities group averaging 151.8 on the total PES, compared to the low to mid-130s for the other three groups. Higher scores on the PES indicate a more negative perception of the prison environment, indicating that the Other/Multiple Races/Ethnicities group was significantly more likely than the other racial/ethnic groups to find the prison environment negative. It should be noted, however, that the Other/Multiple Race/Ethnicities group had seven individuals. This result should be interpreted cautiously, given the very low sample size for this group. The ANOVAs comparing the means of Factor 1 and Factor 2 by race/ethnicity were not statistically significant.

Table 8. ANOVA/*t*-Test Results for Age Groups, Race/Ethnicity, and Security Level on the Full PES, Factor 1, and Factor 2

Source of Variation—Age Groups	SS	df	MS	F
Between Groups—Full PES	1116.804	8	139.600	0.878
Between Groups—Factor 1	638.677	9	70.964	1.171
Between Groups—Factor 2	94.293	9	10.477	0.498

Source of Variation—Race/Ethnicity	SS	df	MS	F
Between Groups—Full PES	1746.259	3	582.086	3.961**
Between Groups—Factor 1	325.420	3	108.473	1.802
Between Groups—Factor 2	115.765	3	38.588	1.931

Source of Variation—Security Level	t
Full PES	−.0818
Factor 1	–2.329*
Factor 2	1.130

Note: PES=Prison Environment Scale (Allison and Ireland 2010).

*$p < .05$ **$p < .01$

Last, independent-samples *t*-tests were computed to compare the means on the full PES and Factors 1 and 2 by security level. Because security level had only two groups, an ANOVA was not necessary. Most ($n = 106$) participants in this analysis were housed in medium security, with only 25 housed in maximum security ($n = 131$, slightly lower than the overall total of 154). Although the full PES and Factor 2 were not statistically significant, the *t*-test comparing the means on Factor 1 by security level was statistically significant ($t = –2.329$, $p < .05$). This indicates that those in medium security were significantly more likely to find the prison environment negative in terms of power and

dominance, compared to those housed in maximum security (49.387 compared to 45.400). Again, given the small sample sizes, these results should be interpreted with caution.

DISCUSSION

Although scholars have acknowledged the importance of the prison environment (Schalast et al. 2008; Tonkin et al. 2012; Woessner and Schwedler 2014), most work in this area has focused on the creation and validation of scales (Ross et al. 2008; Saylor 1984; Tonkin 2015; Wright 1985). While several researchers include descriptions of what incarcerated individuals think about their prison environments, much of this research has taken place in countries other than the United States (Allison and Ireland 2010; Ireland et al. 2016; Molleman and van Ginneken 2015; Stasch et al. 2018; Woessner and Schwedler 2014) or is largely outdated (Saylor 1984; Waters and Megathlin 2002; for exceptions, see Bradford 2006 and Ross et al. 2008). The current research sought to provide an exploratory and descriptive account of what a sample of incarcerated men in three correctional facilities in a U.S. midwestern state thought about their prison environments in contemporary times. The results indicate that this incarcerated population perceived their environments more negatively than positively. Although these findings are not surprising, it is important to empirically measure these attitudes instead of assuming that incarcerated individuals find the prison environment negative.

Total scores on the PES ranged from 109 to 170, with a mean of 135.26. In their work on bullying in prison using the PES, Allison and Ireland (2010) found a mean of 125.68 in their inmate sample in the UK, and Ireland, Ireland, and Power (2016) found a mean of 132.9 for inmates in Canada. The U.S. mean is statistically lower than the UK mean ($t = 8.462$, $p < .001$) and the Canadian mean ($t = 2.085$, $p < .05$), indicating that incarcerated individuals in this U.S. sample may view correctional facilities as less hospitable environments than do inmates in UK and Canadian prisons. This finding may be situated in the differences in punishment philosophy and the high incarceration rates in the United States compared to those in the UK and Canada (Western 2006).

The five factors of the PES—"Power and Dominance," "Activities and Space," "Prisoner/Staff Interaction," "Security and Rules," and "Prisoner Social Interaction"—illustrate that incarcerated individuals hold more negative than positive perceptions of the prison environment. Incarcerated individuals were likely to agree with statements related to the existence of hierarchies among prisoners and the importance of possessions, indicating a more negative environment in terms of power and dominance. In terms of activities and space, the incarcerated held stronger views relating to negative prison environments, indicating that there were few meaningful things to do and little physical space. The items related to security and rules also indicated more negative perceptions of the environment. The acknowledgment of hierarchies, of few things to do, and of little physical space indicates that prison environments may be difficult ones in which to utilize rehabilitative programming or may even be an indicator that rehabilitative programming is not widespread or not viewed as useful, given that incarcerated individuals indicated there were not many meaningful things to do. Overcrowding, boredom, and a "pecking order" can create a hostile environment in which one must always watch one's back, making

engagement with rehabilitation programming more difficult. Correctional administrators must consider ways to improve correctional environments so rehabilitation programs can work more effectively. To that end, they must also work to provide more rehabilitative programming. Nearly all inmates will be released; their time in prison should be productive and prepare them for prosocial life in society.

The third factor, "Prisoner/Staff Interactions," contained items that could have differing interpretations. Prisoners knowing when and where staff will be and talking to staff regularly could be interpreted as contributing to either a positive or negative environment, depending upon how respondents interpreted the items. The reverse-coding instructions of the PES imply that these items are negative, but more research would shed light on how to best interpret them.

The fifth factor, "Prisoner Social Relations," indicated a promising avenue for improving the prison environment. Incarcerated individuals were likely to indicate that they did not believe other incarcerated individuals deserved to be bullied and that they didn't think bullying was just part of prison life or couldn't be stopped; however, most individuals either disagreed with, strongly disagreed with, or provided a neutral response to the statement that prisoners would help someone being bullied. These items indicate a useful place to target for change. If the incarcerated believe that bullying can be stopped and is not an inevitable part of prison life, they may be willing to help assist programming or interventions aimed at reducing bullying in the prison context. At present, incarcerated individuals indicated that they did not believe prisoners would help someone being bullied. Programming geared toward improving the social environment of prisons could be created to reduce bullying and other hierarchical conflicts between incarcerated individuals and to promote positive social relations within correctional facilities and as part of reentry programming aimed at helping the incarcerated to enact positive social interactions and relationships. Given the scholarship on difficulties of reentering society (Liem 2016; Petersilia 2003; Western 2018), such programming could be far-reaching inside and outside the prison. It should be noted that although bullying in prison has been examined in English prisons (Adams and Ireland 2018; Allison and Ireland 2010; Ireland 1999a, 1999b, 2000, 2001, 2002a, 2002b, 2003, 2005, 2008, 2012; Ireland and Archer 1996, 2002; Ireland and Ireland 2000, 2003; Ireland and Power 2004; Ireland et al. 1999, 2016), research on bullying in the United States seems limited to nonincarcerated children and adolescents and not focused on adult inmates. The participants in the current study indicated that bullying in prison was not inevitable, implying that it would be possible to intervene in this behavior. Correctional administrators and rehabilitative practitioners will need to create programming to address bullying in this specific population, which could be wrapped into larger programming to improve prosocial prison environments and relationships.

Although two statistically significant results were noted when comparing the means on the full PES, Factor 1, and Factor 2 across race/ethnicity and security level, the low sample sizes for these groups necessitate caution in interpretation; additionally, there is concern about Type I error, given the number of statistical tests computed. The significant result indicating that those responding that they were part of the group "Other/Multiple Races/Ethnicities" had more negative perceptions of the prison

environment is based upon a sample size of only seven individuals in that category. The sample sizes are a little better when considering the *t*-test result indicating that those in medium security ($n = 106$) have more negative perceptions than those in maximum security ($n = 25$) in terms of Factor 1 related to power and dominance. There are stark differences in these two security levels, notably in terms of housing design (single/double cells in maximum-security facilities versus dormitories in most medium-security facilities) as well as freedom of movement and ability to interact with others. It may be that those housed in maximum security are able to avoid or reduce their exposure to issues related to power and dominance because they are housed in cells rather than in the much more open environment of dormitories. More research is needed on this particular topic to flesh out whether these hypotheses are supported, though the researcher would anecdotally note that in her interviews with inmates in a different research project, several inmates made comments regarding their preference for being housed in maximum security because of the cell housing structure rather than being housed in dormitories.

Limitations and Future Research

There are several limitations that must be mentioned. The small sample size of 154 makes analyses unlikely to detect any statistical significance, such that the results presented here are necessarily exploratory and descriptive. Although a larger sample size was desired, this was not feasible because of the security restrictions within the facilities visited, so adjustments in sample size were made downward. Increasing the sample size is critical in future research so multivariate analyses can be conducted. All participants were male and confined within three correctional facilities within one midwestern state, thus limiting generalizability, given that different populations, such as incarcerated females, those housed in minimum-security facilities, and incarcerated individuals in other states, were not included. Expanding the number of facilities and the types of incarcerated individuals is necessary. Because the sample size was small, it was not feasible to split the sample by security level, but security levels may affect how the incarcerated perceive the prison environment. This study included close-ended quantitative survey questions, so more in-depth explanations were not possible to obtain. Scholars should consider expanding this type of research by utilizing qualitative interviews or open-ended questions on surveys in order to gain a more complete understanding of the perceptions of the physical and social environments of the prison held by incarcerated individuals. Given this type of research typically involves low sample sizes—often lower than the sample size of 154 in the present research—the attempt here was to provide a descriptive overview of how incarcerated individuals in this particular sample viewed the physical and social environments of the prison. There were also aspects of the prison environment that were not part of the PES that would be interesting to examine. The PES was selected for a variety of reasons already specified, such as its brevity, given concerns about survey fatigue, but including survey items related to sound, lighting, housing (cell versus dormitory), and other topics would provide additional insights.

Although bullying in prison has been heavily examined in England, particularly by Ireland and colleagues (Adams and Ireland 2018; Allison and Ireland 2010; Ireland 1999a,

1999b, 2000, 2001, 2002a, 2002b, 2003, 2005, 2008, 2012; Ireland and Archer 1996, 2002; Ireland and Ireland, 2000, 2003; Ireland and Power 2004; Ireland et al. 1999, 2016; South and Wood 2006), no research on this topic in the United States was located. Bullying is a major topic in research on children and adolescents, particularly in school and online contexts, and bullying in prison has been examined since the late 1990s in England, but so far, little research has been conducted examining bullying in American prisons. Given the results of the current research indicating that incarcerated individuals did not believe bullying was inevitable in the prison environment, future research should focus on bullying in prisons in the United States both to gain an idea of the nature of scope of bullying in American prisons and to provide cross-cultural comparisons with the research that has been conducted in English prisons.

CONCLUSION

In the years since the "nothing works" rhetoric of the 1970s, criminologists have found that many rehabilitative programs do, in fact, produce positive results (Latessa et al. 2002; Lipsey and Cullen 2007; Wilson et al. 2000), with scholars finding that positive therapeutic relationships can yield positive treatment outcomes such as reduced recidivism (Dowden and Andrews 2004; Stasch et al. 2018) and that a positive prison climate can reduce attitudes toward offending (Woessner and Schwedler 2014). This research sought to provide a descriptive analysis of how incarcerated individuals in a U.S. midwestern state think about the prison environment on physical and social dimensions. Given that the incarcerated are the ones who are living, working, recreating, and engaging in rehabilitative programming within the correctional environment, their perceptions are necessary for a full understanding of what that environment means to them. This is especially necessary in the United States, where prisons are viewed as harsh, Spartan environments and the public expect and policymakers have worked toward making those environments even more punishing. If effective treatment is more likely when the environment is perceived as safe and supportive (Schalast et al. 2008; Tonkin et al. 2012; Woessner and Schwedler 2014), however, then we need to understand how the incarcerated perceive the correctional environment and whether that environment is viewed as safe and supportive. The results of this exploratory research indicate that incarcerated individuals in this sample generally viewed prisons negatively, perceiving the environment as having hierarchies, little physical space, and few activities.

Devising ways to promote a more positive prison environment is key to creating the kind of environment in which rehabilitation programming can be more effective. In addition to reducing overcrowding, prisons need to provide meaningful activities that promote prosocial and constructive behavior. Given the responses that the incarcerated provided to questions regarding the bullying of inmates, particularly their indication that other inmates do not deserve to be bullied and they don't think bullying is just a part of prison life, changes in prison climate are possible. There appears to be at least one specific aspect of prison life in which interventions may be welcomed or at least considered by inmates: interventions that target a reduction in inmate bullying. Further, the culture of Therapeutic Communities (TCs) that promote supporting one another

within a structured and supportive community environment has been adopted within many prisons as a model for some prison housing units, often to assist with substance abuse recovery. While the effects of TC involvement on measures such as recidivism vary (Davidson and Young 2019), correctional administrators may want to consider expanding the TC culture to entire prisons as a way of improving the correctional environment in order to promote rehabilitative efforts, reduce institutional misconduct, and facilitate successful postrelease outcomes.

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Defining a Region: The Great River Road in Missouri[*]

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ABSTRACT

The Great River Road (GRR) is an established roadway along both the east and west banks of the Mississippi River that serves to connect people to the geography of this area. In this study, the socioeconomic characteristics present in Missouri are analyzed to determine if a more formal GRR region exists in Missouri. County-level data from a five-year estimate (2014–2018) conducted by the United States Census Bureau are used to give greater insight on any unifying characteristics the GRR may have in Missouri. Social, economic, housing, and demographic information combined with spatial pattern analysis help identify evidence of a "region" based around the GRR in Missouri. This spatial data analysis provides information to confirm the presence of a more accurate GRR regional border with a subsequent proposal of subregions.

KEY WORDS Great River Road; Missouri; Mississippi River; Getis-Ord; Region

In the 1950s, the federal government allocated funding for a set of scenic byways to be constructed, repaired, and maintained along the entire extent of the Mississippi River (Disque 1967). This set of roads would become known as the Great River Road (GRR), and the Mississippi River Parkway Commission (MRPC) was tasked with overseeing this network of roads. The GRR follows the Mississippi River on both east and west banks from Minnesota to Louisiana. The state of Missouri maintains 395 miles of the GRR along the western bank of the Mississippi River.

The GRR was intended to encourage and promote the movement of motor vehicles through the ten states along the Mississippi River by showcasing the natural, historical, and cultural characteristics therein (Miller 1987). In Missouri, a state statute sets an arbitrary border of the GRR based solely on proximity, including all counties contiguous to the

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Mississippi River ("Missouri State Statutes" 1979) but lacks a regional designation based on social, economic, housing, or demographic characteristics. Overall, the GRR's impacts on states along the Mississippi River are generally understudied. This study explores those counties in Missouri currently included in the GRR designation, to determine whether they are uniquely "regional." Spatial analysis of county-level census data is conducted to determine if sociodemographic variables within the counties adjacent to the Mississippi River are unique in defining a GRR region. Through this exploration, the study also examines whether defining characteristics exist that would expand the GRR region to counties beyond those adjacent to the river or whether "subregional" characteristics exist within the current GRR designation.

LITERATURE REVIEW

History of the Great River Road

The headwaters of the Mississippi River begin in Lake Itasca (central Minnesota). The river then crosses the central United States, moving south before emptying into the Gulf of Mexico. The Mississippi–Missouri River drainage basin is the fourth largest in the world among river systems. Historically, this waterway has been used for the transportation of goods and people throughout the midwestern United States. The unique culture of this region inspired Mark Twain to write his novel *The Adventures of Huckleberry Finn*. The Mississippi River's economic and cultural identity also inspired the creation of the GRR as a means to preserve and promote this historic waterway and its surrounding areas. The GRR's history begins in 1936, when the Missouri Planning Board proposed a river road along the full extent of the Mississippi River (Smith 1998). This plan eventually connected ten states and two Canadian provinces, spanning nearly three thousand miles. The MRPC, founded in 1939, adopted many of the same ideas for the river road put forth by the Missouri Planning Board. In the same year, the river road concept gained popularity, and talk began of authorizing studies on the logistics of creating such a road (Smith 1998). Discussion of the river road project ceased until the conclusion of World War II, but in 1951, an official report by the Bureau of Public Roads (BPR) was presented to Congress, outlining the plausibility of a river road (Smith 1998). The recommendation by the BPR favored repairing, widening, and connecting existing road along the Mississippi River as an alternative to new construction projects along the entire extent of the Mississippi River (Smith 1998).

With a clear goal set for the scenic route along the Mississippi River, federal funds were set aside for the river road in the Federal Highway Act of 1954. Over the next two decades, state agencies worked on finding suitable routes for the scenic drive. Even though federal funds were allocated for the GRR, no federal aid was provided; states allocated funding for the project in these early years. In 1976, the Federal Highway Administration finally distributed federal funding to states that followed federal guidelines for the scenic road (Smith 1998).

Since the 1970s, the Great River Road has experienced dwindling federal interest and development. Most travel articles give details for only small sections of the GRR.

Berlin and Chu (2006) photographed locks and dams, barges, homes, watersports, boating, and more along the upper Mississippi River. In 2008, Bures documented several music studios and art museums from Minneapolis, Minnesota, to Davenport, Iowa, insisting that these showed the possible start of a "Midwestern Renaissance." Measells and Grado (2008) researched the economic impacts of two birding festivals in the state of Mississippi, looking at visitor spending habits at these festivals, as well as general travel expenses. One of these festivals is located along the Great River Birding Trail, which coincided with the GRR's path within Mississippi.

Despite a change in the nature of visitation along the GRR, Mueller (1998) emphasized the unique opportunity that the entire GRR provides: the ability to see a major world river from headwaters to mouth. The only three river systems in the world that are larger—Amazon, Congo, and Nile—are unable to boast such experiences because of lack of infrastructure. The Mississippi River dominates North America, and any individual with a vehicle can experience it in its geographic entirety. From these examples, it appears that although there is a desire to continue a unifying coherency across the GRR in its entirety, most tourism-related uses of the GRR entail emphases at narrower geographical scales. This lends itself to the postulation that, at least today, the GRR might not necessarily possess unifying and unique socioeconomic characteristics to give it a "marketable" geographic coherency as initially intended. Indeed, using regional taxonomies referenced by Noronha and Goodchild (1992), it appears that the original GRR designation might be better described as "descriptive," as its definition was founded in cultural and economic heritage.

Regional Approaches

Using Missouri as a baseline, this research attempts to determine if the current GRR designation as defined by Congress (proximity to the Mississippi River) resembles a coherent region based on an evaluation with sociodemographic variables. Regions are defined as areas with similar characteristics that set places apart from neighboring locations based on a high level of functional integration. Criteria used to determine a region can vary widely, using multiple variables or a single variable covering geographic, social, economic, and/or historic aspects of a space (Castree, Kitchin, and Rogers 2013). The purpose of creating a region can ultimately affect how that region's boundaries are set and interpreted, as well as the allocation of federal funds or forms of policy.

Formal and functional classifications can serve as the foundations for creating specific regions. These regional designations can create significantly different outcomes in the overall purpose or practical outcomes that a region may experience. These "regional taxonomies" (Noronha and Goodchild 1992) can begin to tie measurable variables to regions for better assessment of needs. For example, utilizing variables of poverty to create a coherent region may allow economic policy to specifically address areas that adhere to such criteria, thereby geographically targeting areas in need. Kasala and Šifta (2017) discuss in more detail the nature of creating and defining regions as they explore the historical progression of formal and functional regions, noting the complexities ruminated on by others, such as Sauer (1925) and Hartshorne (1939), as regional definitions are,

invariably, products of both natural and cultural landscapes. These authors also discuss the historical progression of formal and functional regional analysis.

A *formal* region is generally defined by measurable characteristics (e.g., political, economic, or climate regions). Noronha and Goodchild (1992) discuss the formal region by citing Minshull (1967), who describes a formal region as "the largest area over which a generalization remains valid." Formal regions can allow for decision-makers to benchmark based on specific sociodemographic or physical variables and for regional boundaries to be defined by a more quantitative spatial variable. Outcomes defining regions as such can fall short, as they might be based on "individual expertise" opinions (Noronha and Goodchild 1992) or rely heavily on too few variables. Kasala and Šifta (2017) explore the notion that formal regional definitions in more recent times have yielded to more functional definitions such as those of Paasi (2010) and Nir (1990), who base their theory on social constructs and systems theory.

Functional regions differ from formal regions in that they are often seen as derivations arising from human activity and cannot be bounded by a "uniformity of characteristics, but a network of social and economic" characteristics (Noronha and Goodchild 1992). In this sense, "internal diversity" exists within such regions, juxtaposing them against the intended goals of formal regions. The authors go on to note that although bonds within a functional region may derive from shared attributes, in this case, such attributes are not directly relevant to the functionality or existence of the region. The strength of this regional designation is based on networks, interactions, and end-outcome goals of those defining the regional boundaries. While Kasala and Šifta (2017) emphasize that functional regions tend to be viewed as a "new regional geography," they also underscore both advantages and weaknesses to this functional approach. The notion of a functional region taps into processes and political and social themes, increasing the potential practicality of such a definition; however, issues such as complexity and "transferability" often render functional regions isolated, hindering comparability and practicality beyond their own boundaries.

Regional Overviews

Regions are important in identifying and addressing problems affecting large areas (Coanen, Hanson, and Rekers 2015). The Appalachian Regional Commission (ARC) and the Lower Mississippi Delta Development Commission (LMDDC) are congressional commissions and federally funded organizations focused on functional regions. These regions are functional in the sense that they are created by formal governing bodies based on perceived networks, not on a set of clearly defined criteria. Often, this focus includes studies to identify problems (usually concerning economic development) and resultingly encourage economic growth. As this research seeks to determine if the GRR can be defined as a formal region with coherent socioeconomic foundations, it is important to analyze other regions with similar attributes.

The Appalachian region is a good example of a functional sociocultural region with economic development underpinnings. The ARC was established by Congress to help identify and address slow economic growth in the geographic highlands of the eastern

United States, including more than four hundred counties in thirteen states. Joshi and Gebremedhin (2012) conducted a study using the regional boundaries set by the ARC to explain poverty rates and wealth disparities in the Appalachian region using variables such as education rates, minority populations, urban/rural distinctions, and workers in industries. Gerbremarian, Gebremedhin, and Schaeffer (2011) also conducted an economic review of the ARC, demonstrating correlations between employment and poverty through variables of employment, migration patterns, and median household income.

The Mississippi River Delta is another functional region in the United States with economic development underpinnings. Like the ARC, the LMDDC focuses on identifying and addressing a lack of regional economic growth. Latanich (2001) assesses the LMDDC region, identifying education rates, lack of infrastructure, poor incentives for outside investment, and a lack of new industries as some of the reasons for stagnant economic growth. Reeder and Calhoun (2002) review the Delta Regional Authority (DRA), which identifies 219 counties in the lower delta region in need of economic stimulation. Of these counties, 188 are identified as rural. Reeder and Calhoun (2002) find that, based on unemployment and household income data, urban counties benefit more through federal funding and programs than do the region's rural counties.

It must be noted that the current delineation of the GRR appears to align with the definition of a functional region, in which the initial function was to promote tourism and economic activity through ties to cultural and economic heritage. Two key elements underscore this connection:

1. congressional designation without a strictly defined formal data basis and
2. a focus on human networks based on cultural ties and economic uses of the Mississippi River.

In many ways, this region is formalized with physiographic (Mississippi River and its alluvial plain), cultural (historical tourism), and economic-development ("westward expansion" and barge commerce) underpinnings, further stressing the network of dynamic variables (both human and physical) that interplay with its boundaries. Such a designation grounded in tourism and economic development is not unique, as areas such as the Tennessee River Valley, Lakes to Locks Passage, Columbia River Gorge, and Route 66 National Scenic Byway are all bases for comparison.

Areas identified above have served as coherent regions for applying economic development through tourism or other means, although they generally appear to be without strict formal designations. It is important to review beyond such functional regions to determine if key socioeconomic variables might also define a region based on those variables observed in spatial coherency such as within formal regions. Because of the complexities involved in crafting regions (Kasala and Šifta 2017), experts functionally or perceptually grouping a region for larger purposes can unintentionally obscure subregional needs, thereby hampering more efficient economic development. Additionally, regions such as the GRR, with economies shifting because of globalization, may over time become

out of sync with present needs. It should be noted that the GRR initially was promoted via economic and cultural coherencies that have changed significantly over the past 50 years.

In review, we observe the GRR to be a functional region based on historical networks and bounded by geographic proximity. The observed outcomes of waning interest in the GRR might be a result of a misalignment from the initial criteria to define the GRR and the historical evolution of the sociodemographic situation throughout the GRR region. Knowing this, we seek to determine if any underlying sociodemographic variables exist that would lend a potential to craft the GRR in Missouri as a formally defined region based on characteristics existing today. In doing so, we look to identify the potential for expansion of the region based on a formal variable or whether formal subregions exist within the larger mystique of Missouri's GRR as it exists today.

The Great River Road in Missouri

Missouri was chosen for this study as a microcosm of the Mississippi River for several reasons. Missouri's Mississippi riverfront represents both urban (St. Louis) and rural populations. The geographic distinction between the upper and lower Mississippi River is normally based in the state of Missouri. This location is often designated at either the confluence of the Mississippi and Ohio Rivers (southeastern Missouri) or the confluence of the Mississippi and Missouri Rivers (east-central Missouri). Regardless of the chosen inflection point, Missouri is situated in both the upper and lower portions of the Mississippi River, which is a significant guiding factor in economic development. For example, two federally funded commissions—the DRA and LMDDC—both set the boundaries of the delta south of St. Louis, encompassing most of southeastern Missouri (Latanich 2001; Reeder and Calhoun 2002).

METHODOLOGY

Study Area

The geographic limits for this study are established by the political boundaries for the state of Missouri. Missouri contains 114 counties and one independent city, the City of St. Louis. For this study, the City of St. Louis is treated as another county within Missouri. Emphasis is placed on the 17 eastern counties encompassing the GRR ("Missouri State Statutes" 1979). Table 1 lists these counties from north to south along the Mississippi River in three economic regions based on designations given by the Missouri Economic Research and Information Center (MERIC).

Figure 1 highlights the 17 GRR counties on the eastern side of Missouri determined by the Missouri state statute ("Missouri State Statutes" 1979). These counties act as a border for Missouri's GRR region as defined by the MRPC. The distinction between GRR counties and non-GRR counties is based on founding MRPC article 226.455, section 3, which states, "To advise the governor and the general assembly when, in the judgment of the commission, action should be taken which will better promote the development of

commerce and trade in counties contiguous to the Mississippi River in Missouri" ("Missouri State Statutes" 1979).

Table 1. Missouri Counties Located along the Mississippi River, North to South

Northeast Region	St. Louis Region	Southeast Region
Clark County	St. Charles County	Ste. Genevieve County
Lewis County	St. Louis County	Perry County
Marian County	City of St. Louis	Cape Girardeau County
Ralls County	Jefferson County	Scott County
Pike County		Mississippi County
Lincoln County		New Madrid County
		Pemiscot County

Figure 1. Map of Missouri Counties and the GRR
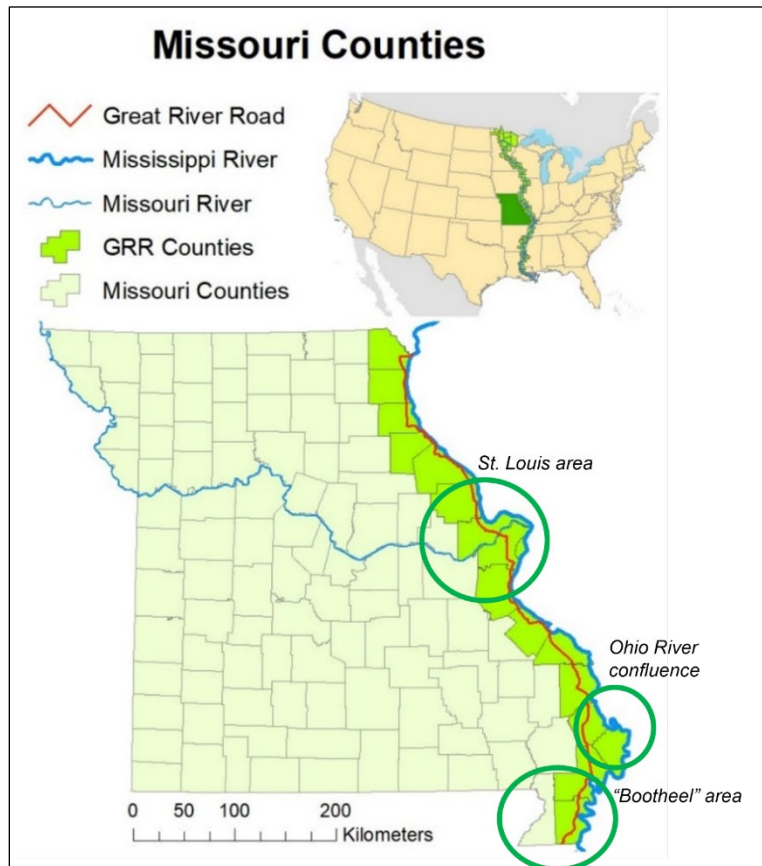
Missouri categorizes counties into ten regions based on the categorization of the MERIC, which distinguishes ten regions, with each border based on general labor needs and dominant industries for local economies in each county (Figure 2). These economic regions are defined based on labor demands, coupled with unemployment and prevalent industries in each county. Data are centralized geographically to create contiguous regions of similar labor and economic makeup to better assess and assist economic growth within the state (MERIC 2020). The GRR crosses three MERIC economic regions in eastern Missouri: the Northeast, St. Louis, and Southeast regions. None of these regions exists exclusively within the GRR designation. The three easternmost regions of Missouri may help to set a new boundary for the GRR, but it is challenging to presume that all counties in these regions are congruent with a GRR region.

Figure 2. The Ten Regions of Missouri as Defined by MERIC

Data Collection and Analysis

U.S. counties are used in many regional studies and are an appropriate level of analysis for determining the socioeconomic characteristics along the Mississippi River. Previous

reviews have focused on regions with boundaries based upon political, economic, or geographic indicators, or a combination of the three. Using county boundaries to delineate regional borders gives regions a better ability to handle environmental, social, and economic issues facing those areas (Coanen et al. 2015). Regional incorporation can prove to be invaluable in assessment of future problems such as climate change, aging populations, and economic stagnation, among other concerns.

This research is exploratory in that it seeks to determine if a spatial set of socioeconomic variables applies to the current GRR area within Missouri. Previous studies mentioned (Gerbremarian et al. 2011; Joshi and Gebremedhin 2012; Latanich 2001; Reeder and Calhoun 2002) review socioeconomic variables such as education, labor, unemployment, race, income, and home value to determine the economic condition within an existing formally defined region. This study has no luxury of a clearly defined border other than a state statue based on proximity to the Mississippi River. Such an arbitrary border does not adhere to economic or historical aspects and only broadly adheres to a single geographic characteristic: proximity to the Mississippi River. In the absence of a well-studied and -understood border, it is necessary to collect, review, and analyze a wide range of available data pertaining to social, economic, housing, and demographic characteristics to determine if any unknown regional patterns are present. Because of this, we analyzed 24 variables to provide a more comprehensive overview of potential socioeconomic patterns within the GRR area.

County-level census data for the state of Missouri were obtained from the Office of Social and Economic Data Analysis (OSEDA), housed under the University of Missouri in Columbia, Missouri. OSEDA reformatted data released by the American Community Survey (ACS) (overseen by the U.S. Census Bureau), specifically the five-year estimates from 2014 through 2018. The 2014–2018 data collected by the ACS was the most current five-year estimate available at the start of this study. Of 41 variables in the data set, only 24 variables were identified for further analysis. These 24 variables cover social, economic, housing, and demographic data to determine which variable characteristics are most appropriate when defining a GRR region (Table 2).

Table 2. ACS Variables Analyzed in This Study (Alphabetical)

Age	Home Value	Origin of Birth
Citizenship Status	Household by Type	Other Income
Class Worker	Household Income	Race
Disability by Age	Housing Characteristics	Residence 1 Year Ago
Education	Housing Occupancy	School Enrollment
Employment Status	Insurance Coverage	Workers by Industry
Family Income	Internet Use	Workers by Occupation
Heating Fuel	Marital Status	Year Structure Built

Using census data for economic reviews of specified regions is established in previous research (Brasington, Hite, and Jauregui 2015; Daly, Jackson, and Valletta 2007;

Vinje 1977). Daly, Jackson, and Valletta (2007) study the income gap in the United States based on education attainment and age compared to unemployment. A study of "Indian reservations" by Vinje (1977) analyzes per capita income as it relates to labor in manufacturing, agriculture or government industries, unemployment, labor participation, and geographic characteristics. Brasington, Hite, and Jauregui (2015) study housing prices based on race and education attainment of homeowners to correlate which individuals and neighborhoods have higher-valued homes.

The primary method for analyzing the data is spatial analysis software. Quantile classification is utilized for data representation to account for the broad variety of variables in this study (Brewer and Pickle 2002). Quantile classification places the same number of samples (counties) in each category, which allows for a more accurate comparison between variables that do not share the same scaling method (e.g., USD, population, number of households). For this study, 115 counties are divided into five groups, placing 23 counties in each sample group.

Additional spatial analysis is performed using the autocorrelation method Getis-Ord GI. Getis-Ord GI is a hot spot analysis GIS tool used to determine "hot" and "cold" spots in a study area (Songchitruksa and Zeng 2010). "Hot spots" represent sections of the study area that have higher values in the data set. For example, the total population data hot spot represents a spatially significant area with higher populations, compared to the rest of the study area, centered around urban counties (St. Louis and Kansas City). "Cold spots" represent sections of the study area with lower values based on the data set. A "cold spot" concerning total population represents a spatially significant area with low populations compared to other parts of the study area (northern Missouri). This analysis considers not only the cell (county) value being analyzed but also the neighboring cells'(counties') values. Using this method of analysis, Getis-Ord GI finds spatially significant hot and cold spots within a data set. It calculates the numerical value of the variable with 90%, 95%, and 99% confidence for both spatially hot and cold value points in the study area.

Although the GRR is designated as a national scenic byway and possesses certain unique characteristics pertaining to its history, culture, and relevance to the Mississippi River, its ability to be classified as a formal region based on socioeconomic standards is unknown. In this study, we asked if the GRR in Missouri has distinctive socioeconomics that allow it to be defined as a coherent region. Additionally, we analyzed this further to determine if there existed socioeconomic-based subregions within the Missouri GRR in its current extent. We further analyzed whether any coherent area(s) should extend beyond the immediate counties adjacent to the river. In answering these questions, we used three basic reviews to act as guides while analyzing the data:

1. Is the data category representing a product of a GRR distinction or an urban/rural dichotomy? This distinction is made by looking at the percentage of a county's population living in urban areas in addition to the percentage of the county's land area classified as urban (Figure 3).

2. Is the data category representing a GRR region or another Missouri subregion such as those defined by MERIC (Figure 2)?
3. Is the data category predictive of national-level regionalization beyond Missouri, such as that of a lower/upper Mississippi River distinction? Geographically, the upper-lower Mississippi River divide is close to the Missouri border. Socially and economically, several federal commissions include southern Missouri in studies and programs to help the Mississippi Delta region.

Figure 3. Percent Urban Area and Population by County
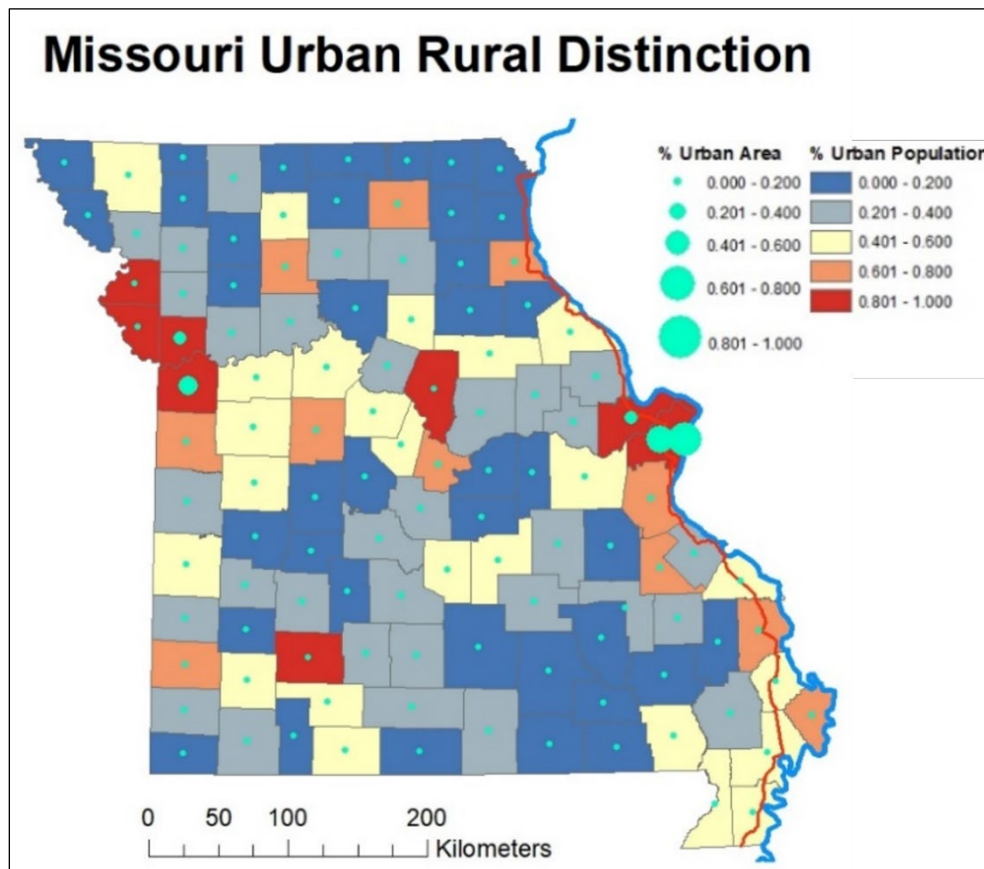
RESULTS AND DISCUSSION

Data are segmented into four categories: social, economic, housing, and demographic. This grouping system is taken from the U.S. Census Bureau's classifications of the data.

Each variable is assessed based on urban and rural counties, Missouri subregions, and a north/south Missouri distinction outlined in the methodology section. Quantile representations and hot spot representations are analyzed simultaneously to reduce visual errors when identifying spatial patterns. Every variable mentioned in this study is assessed; however, only variables deemed spatially significant for the development of a regional analysis are listed in this section. Within figures representing quantile categories, the legend is displayed in decimal percent to the thousandths (one tenth of one percent); within figures representing the GI statistic, all red and blue shades represent spatially significant outcomes, with the gradation of color indicating 90%, 95%, or 99% confidence in data results.

Social Characteristics

Figure 4 shows the quantile representations and Getis-Ord GI hot spot analysis representations for educational attainment. The first variable pertains to the percentage of the population without a high school diploma, which is much higher in southern Missouri.

Figure 4. Quantile and Getis-Ord GI Representations of Education Attainment
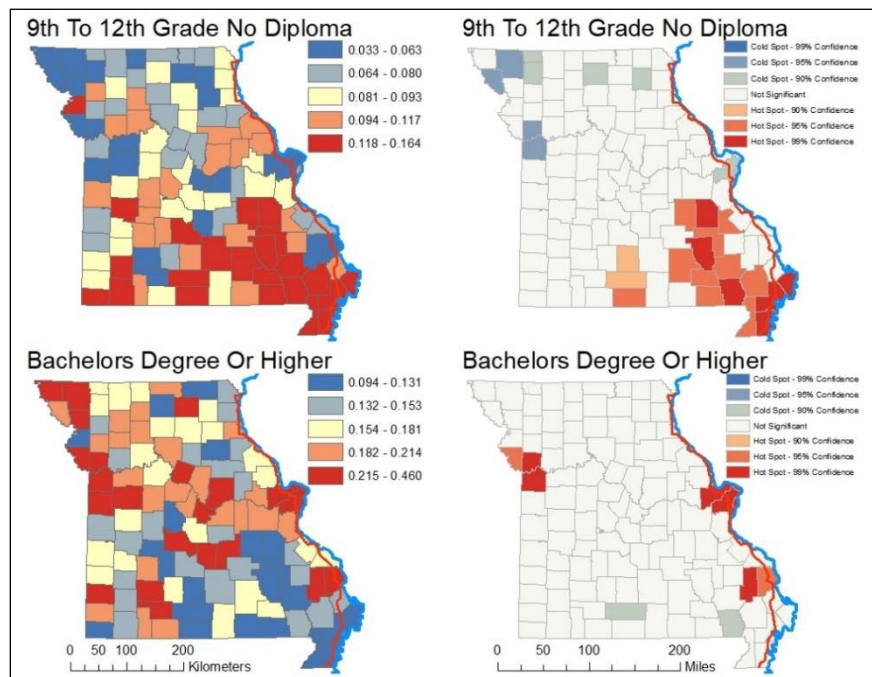
Note: Quantile categories are displayed in decimal percent to the thousandths (one tenth of one percent).

The hot spot analysis confirms a spatially significant hot spot in the Southeast and South Central regions of the state. Also a part of this hot spot is the "bootheel" region,

including three GRR counties adjacent to the Mississippi River. Other areas, including urban centers (St. Louis and Kansas City) and the Northwest region of Missouri, indicate a higher percentage of the population with at least a high school diploma, evident by the cold spots shown in these counties. The second variable, "bachelor's degree or higher," indicates that more of the population in urban areas and in counties with educational state institutions (Greene County's Missouri State University, Cape Girardeau County's Southeast Missouri State University, Boone County's University of Missouri, and Nodaway County's Northwestern Missouri University) has obtained college degrees, although only three spatially significant hot spots are identified: St. Louis, Kansas City, and Cape Girardeau County.

Internet use variables are normalized by the total number of households in each county. Figure 5 shows the quantile representations and Getis-Ord GI hot spot analysis representations for Internet usage. Higher percentages of households in urban areas have access to broadband Internet. These same areas show a lower percentage of households without Internet access. The South Central and Southwest regions in particular have higher percentages of households with no Internet access, compared to other regions in Missouri. These trends and hot spots are centered on the borders of Missouri with Arkansas and Oklahoma; further study over these border counties may show that this trend crosses state lines. These variables are predominately an urban/rural distinction while also showing some regional variations.

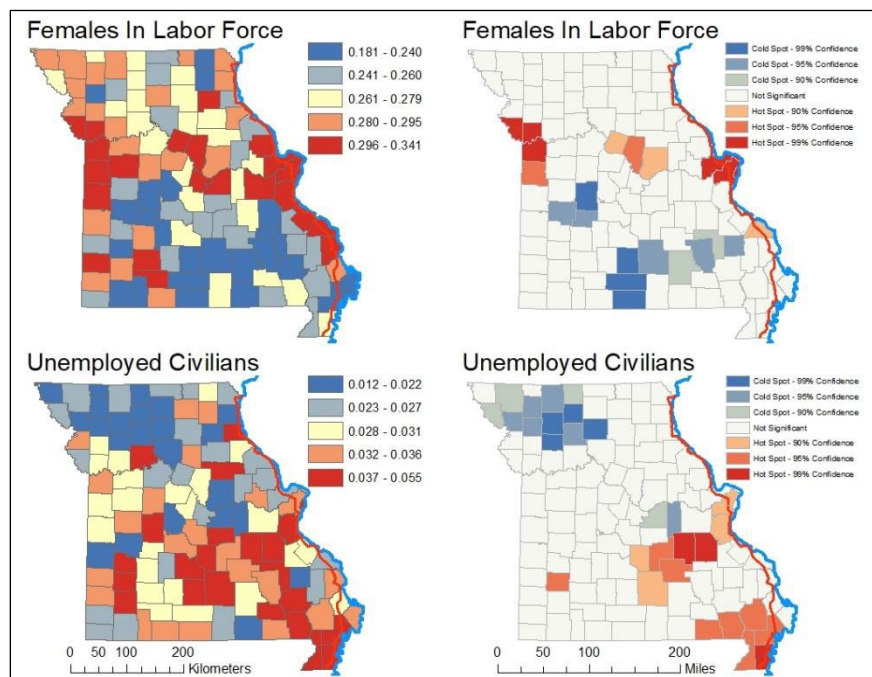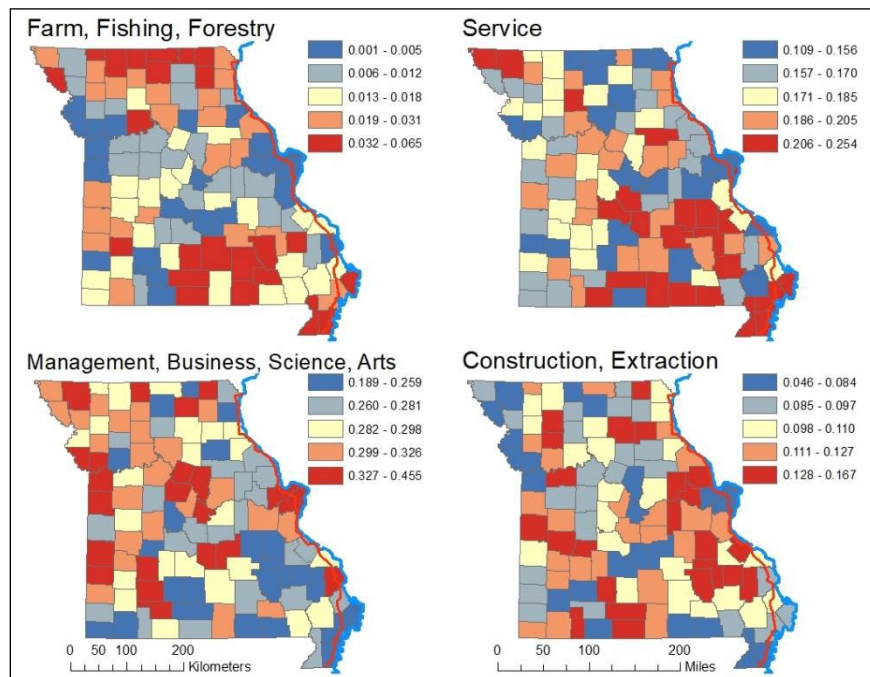**Figure 5. Quantile and Getis-Ord GI Representations of Internet Use**
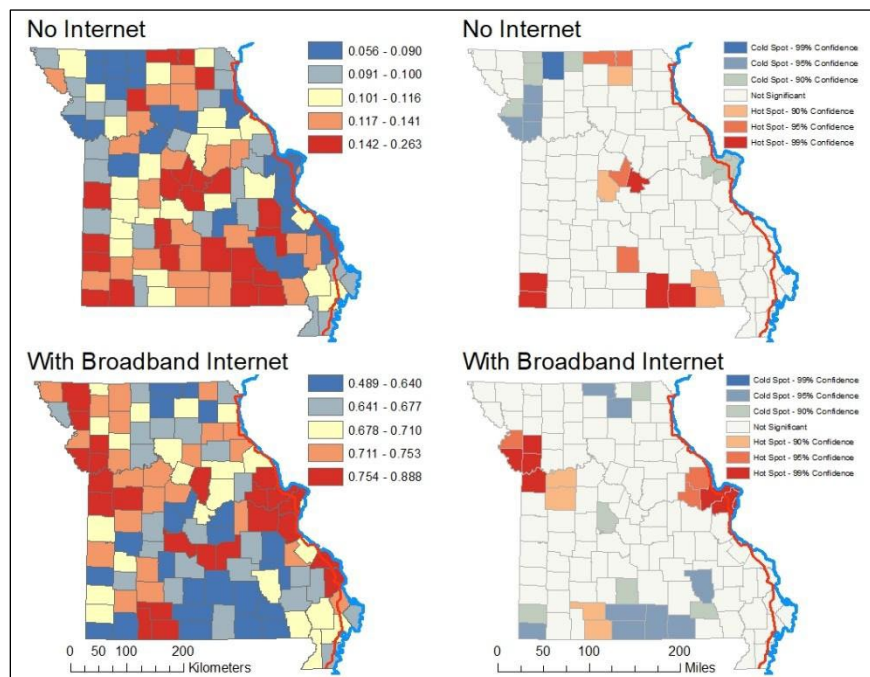
Note: Quantile categories are displayed in decimal percent to the thousandths (one tenth of one percent).

Economic Characteristics

Figure 6 shows the quantile representations and Getis-Ord GI hot spot analysis representations for employment status. Higher percentages of "females in labor force" are located in urban areas and in the Northwest region. This is in contrast to the South Central and Southeast regions representing lower percentages of female workers. GRR counties in the Southeast region are outside of this trend with higher percentages seen in other regions. This can be disputed, however, when looking at the spatial analysis detecting hot spots in St. Louis, Kansas City, the Jefferson City area, and Perry County.

Unemployment in the state is more prevalent in the South Central and Southeast regions. St. Louis has higher unemployment compared to other urban counties. The spatial analysis shows a trend of hot spots in the bootheel and St. Louis areas, as well as the southern portion of the state crossing into both the Central and South Central regions. The Northwest region exhibits a large cold spot, indicating lower percentages of unemployed individuals.

Figure 6. Quantile and Getis-Ord GI Representations of Employment Status
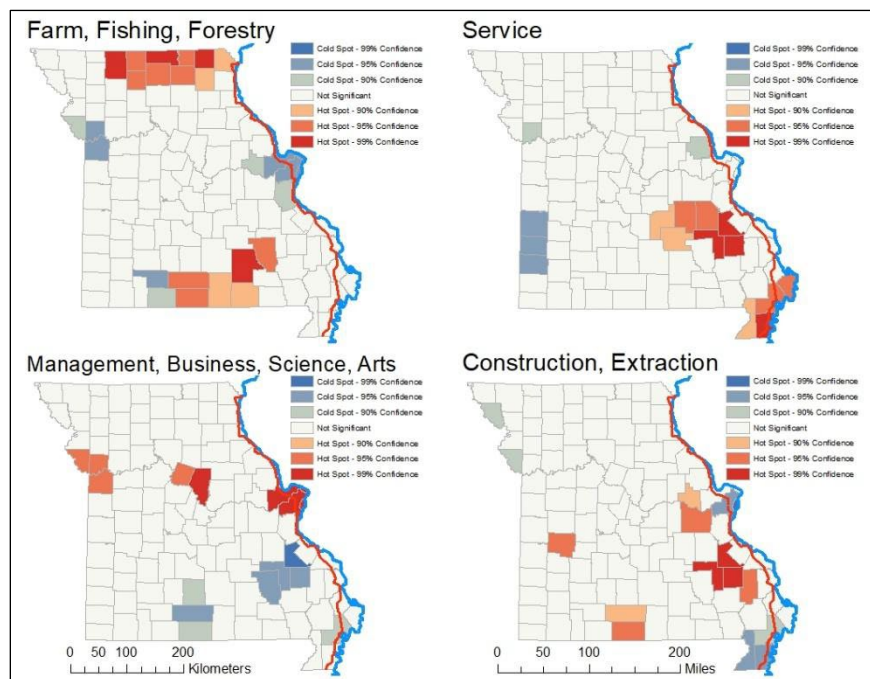

Note: Quantile categories are displayed in decimal percent to the thousandths (one tenth of one percent).

Workers-by-occupation variables examine the number of workers in varying occupations and are normalized by the population over the age of 16 in each county. Figures 7 and 8 show the quantile representations and Getis-Ord GI hot spot analysis representations for workers by occupation. Farming, fishing, and forestry occupations

are prevalent along the northern border counties as well as in the South Central and Southeast regions. Hot spots indicate a pattern of rural counties having a higher percentage of the workforce in these occupations. Service jobs are again prevalent in the South Central and Southeast regions. The bootheel counties are especially high in service jobs; hot spots appear in the bootheel and other counties in the Southeast region. Management, business, science, and arts occupations are centered around urban areas, with spatially significant hot spots centered on St. Louis and Kansas City. Construction and extraction occupations are more prevalent in rural areas surrounding urban centers. There is a drop in the percentage of workers in this occupation in bootheel counties, including the three most southern GRR counties. This may be evidence of lack of new development within this area of the GGR region.

Figure 7. Quantile Representations of Workers by Occupation

Note: Quantile categories are displayed in decimal percent to the thousandths (one tenth of one percent).

Workers-by-industry variables reflect the number of workers in each industry and are normalized by the population over the age of 16 in each county. Figures 9 and 10 show the quantile representations and Getis-Ord GI hot spot analysis representations. Agriculture, forestry, fishing, and mining industries have similar patterns with farm, fishing, and forestry occupations. "Agriculture, forestry, fishing, mining" represents hot spots in rural counties in the South Central region and in northern border counties. Wholesale trade shows an interesting pattern of higher

percentages of workers in the labor force along the GRR, with the exception of Clark County in the north and several counties in the bootheel. Hot spots are present along the Mississippi River north of St. Louis and in the Ozark and Southwest regions. Finance, insurance, and real estate industries are prevalent in the urban areas of St. Louis, Kansas City, and Springfield. Hot spots are centered around St. Louis and Kansas City, with a large cold spot in the southern portion of the Central region and parts of the South Central region. Finally, construction industry jobs, similar to construction and extraction occupations, are centered in counties close to urban centers, including St. Louis and Kansas City. A larger cold spot can be seen in the bootheel, again indicating a lack of development in this area of the state.

Figure 8. Getis-Ord GI Representations of Workers by Occupation

Household income consists of many variables covering income and is normalized by the total number of households in each county. Figures 11 and 12 show the quantile representations and Getis-Ord GI hot spot analysis representations. Households making less than $10,000 are more prevalent in the south, particularly the South Central and Southeast regions. Hot spot analysis confirms a spatially significant hot spot along the southern border of the state.

Figure 9. Quantile Representations of Workers by Industry
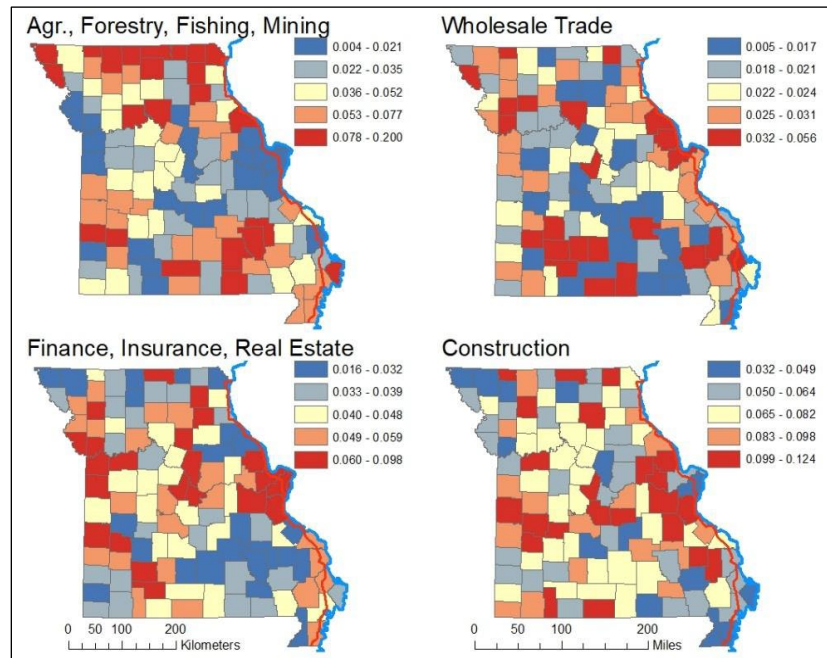
Note: Quantile categories are displayed in decimal percent to the thousandths (one tenth of one percent).

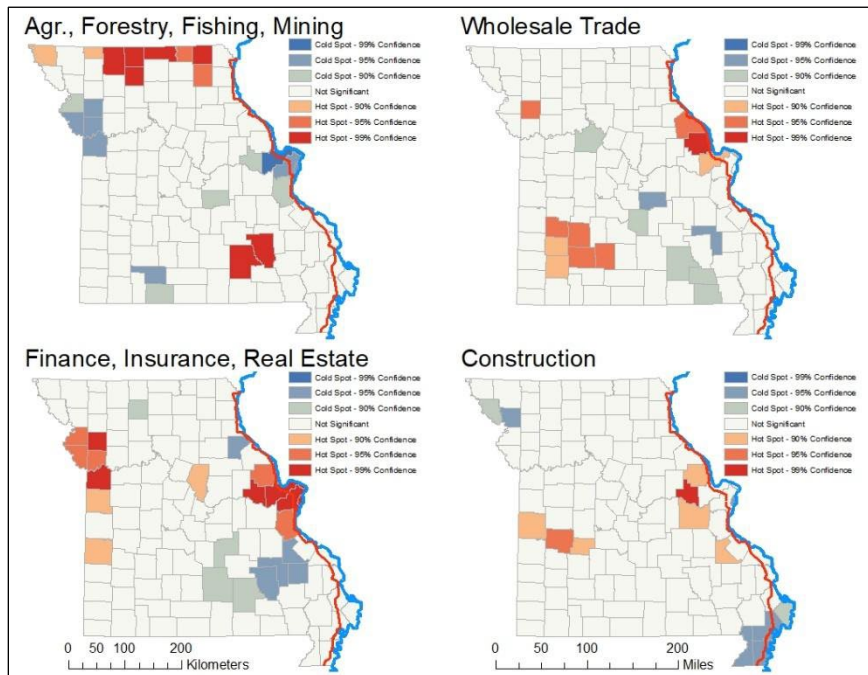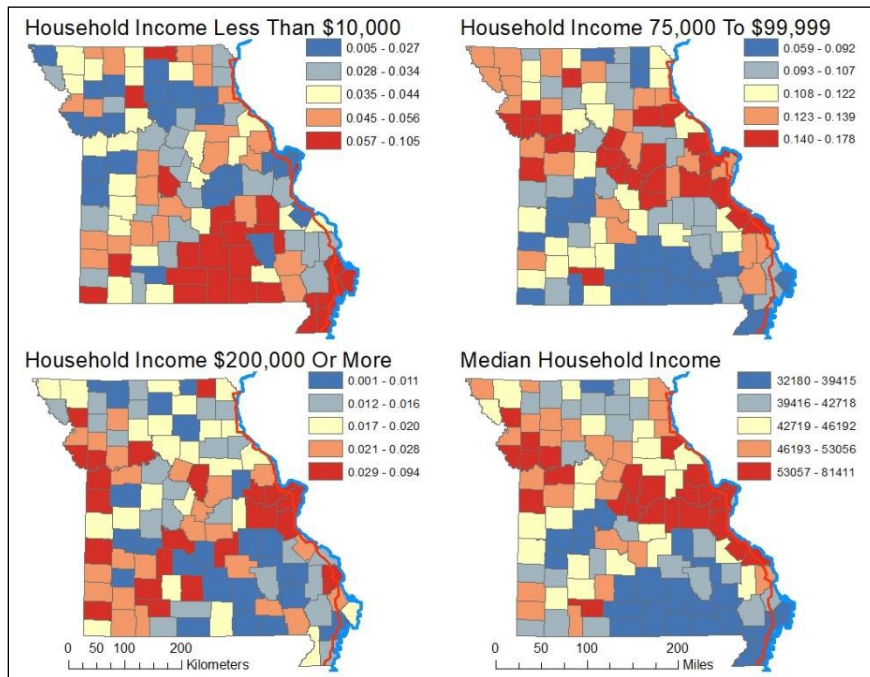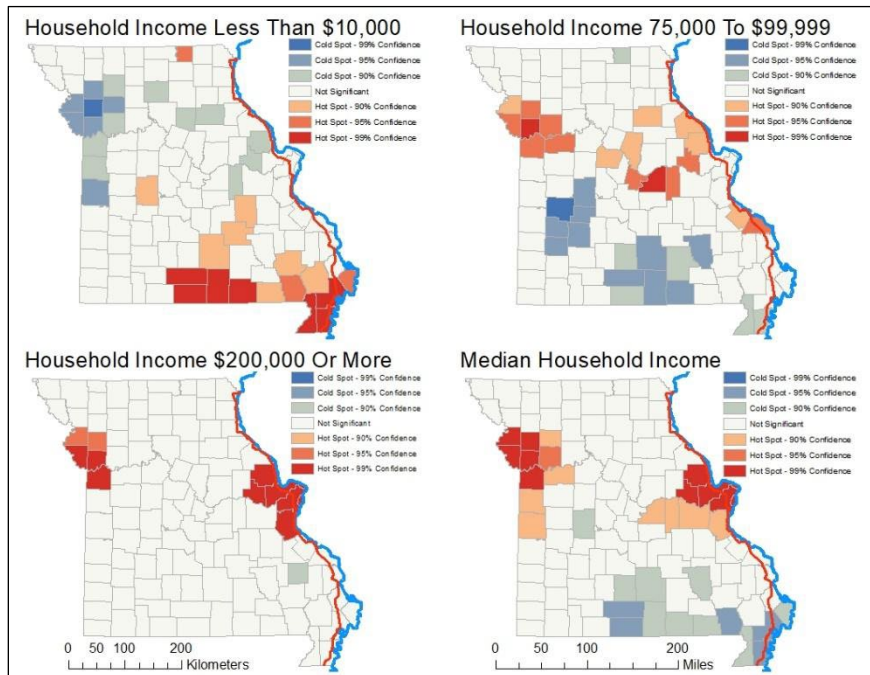**Figure 10. Getis-Ord GI Representations of Workers by Industry**

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Figure 11. Quantile Representations of Household Income

Note: Decimal percentages are shown to the thousandths (one tenth of one percent).

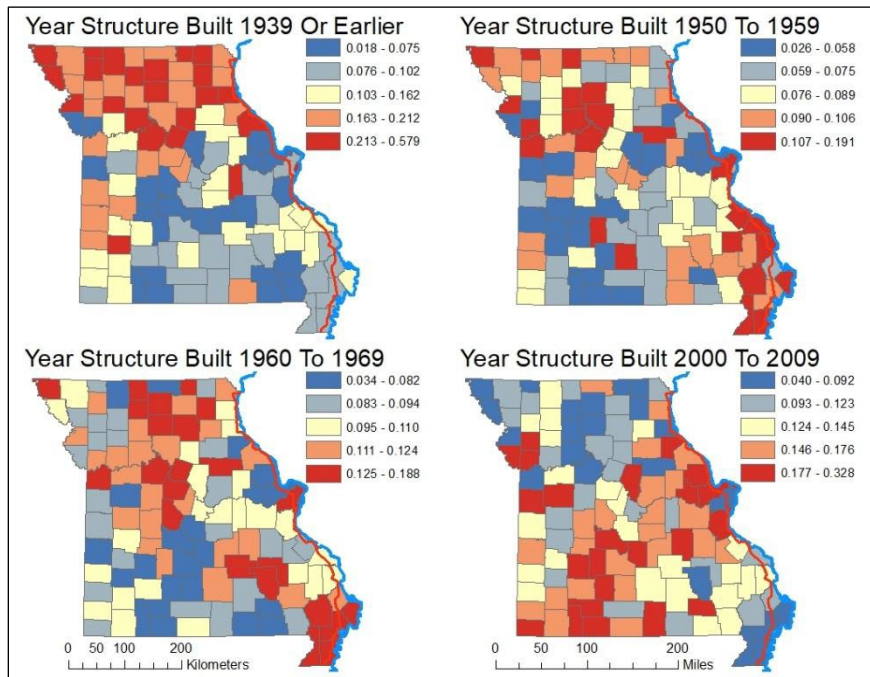**Figure 12. Getis-Ord GI Representations of Household Income**

"Household income $75,000 to $99,999" shows patterns of higher percentages in urban counties and in counties along the Mississippi and Missouri Rivers. Counties clustered around Kansas City also create a large hot spot in western Missouri. Households with income greater than $200,000 are clustered around urban counties and the Southwest and Ozark regions, although St. Louis and Kansas City and surrounding counties are the only spatially significant hot spots. Finally, "median household income" shows hot spots in the St. Louis and Kansas City areas. A significant cold spot can be seen along the southern border in both the South Central and Southeast regions. Counties along the GRR have higher median household incomes than do counties farther to the west. This trend stops in Scott County and south, into the bootheel. This area is a part of the cold spot mentioned previously, indicating lower average household income.

Housing Characteristics

"Year structure built" variables in this section cover the decades in which homes of each county were constructed. These variables were normalized by total housing units in each county. Figures 13 and 14 show the quantile representations and Getis-Ord GI hot spot analysis representations. Structures built before 1939 are clustered in the Northeast and Northwest regions as well as the City of St. Louis and the Kansas City area. Structures built in the 1950s show two hot spots, one of which is located in the Southeast region of the state. This may imply population shifts and a lack of new housing developments in the region. Structures built in the 1960s show a westward spread, away from the Mississippi River. The bootheel has spatially significant hot spots with higher percentages of structures built in this decade. Finally, a higher percentage of structures were built in the 2000s in the center of Missouri, including the Central, South Central, and Ozark regions. Counties outside of urban centers exhibit higher numbers of structures from that decade as well. Counties outside of St. Louis and the Ozark region are spatially significant hot spots. The bootheel is a large cold spot for the same decade, indicating a lack of new construction in the area during the period.

Home value is broken up into separate categories that represent the number of homes in that value bracket. The variables in this section were normalized by occupied housing units in each county. Figure 15 shows the quantile representations and Getis-Ord GI hot spot analysis representations. Home values less than $50,000 are found more in rural areas, in both the north and south. Urban areas, including St. Louis, Kansas City, Springfield, and Jefferson City, show separate cold spots throughout the state. The cold spot in eastern Missouri extends south of St. Louis along the Mississippi River. Median home value shows a similar distinction between urban and rural counties. Urban areas have higher home values, with hot spots in the St. Louis, Kansas City, Ozark, and Central regions. The trend of higher home values follows the Mississippi River south of St. Louis. This is not the case in the extreme northern GRR counties or the extreme southern GRR counties, with cold spots being present in both areas.

Figure 13. Quantile Representations of the Years Structures Were Built

Note: Decimal percentages are shown to the thousandths (one tenth of one percent).

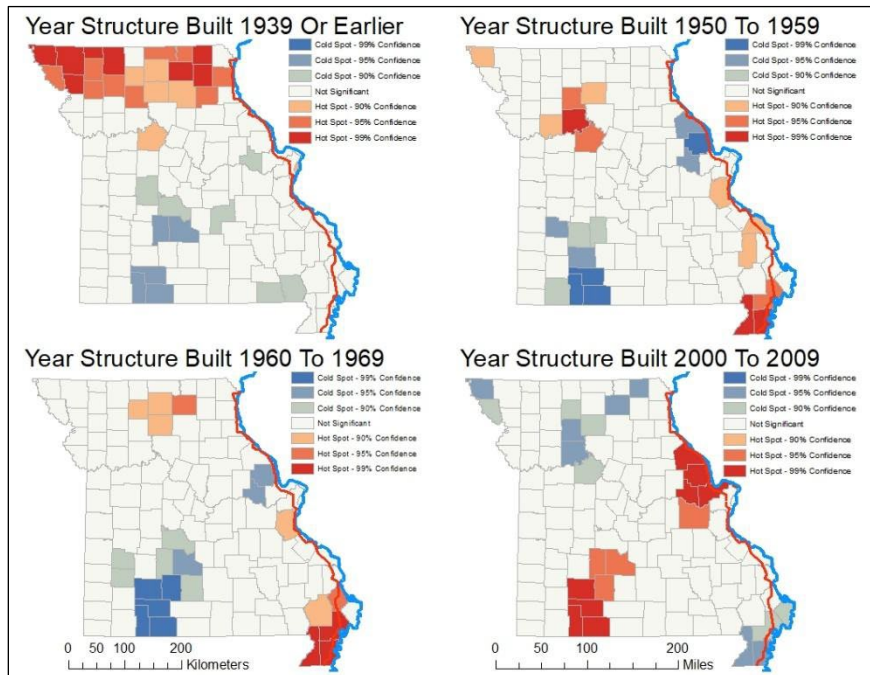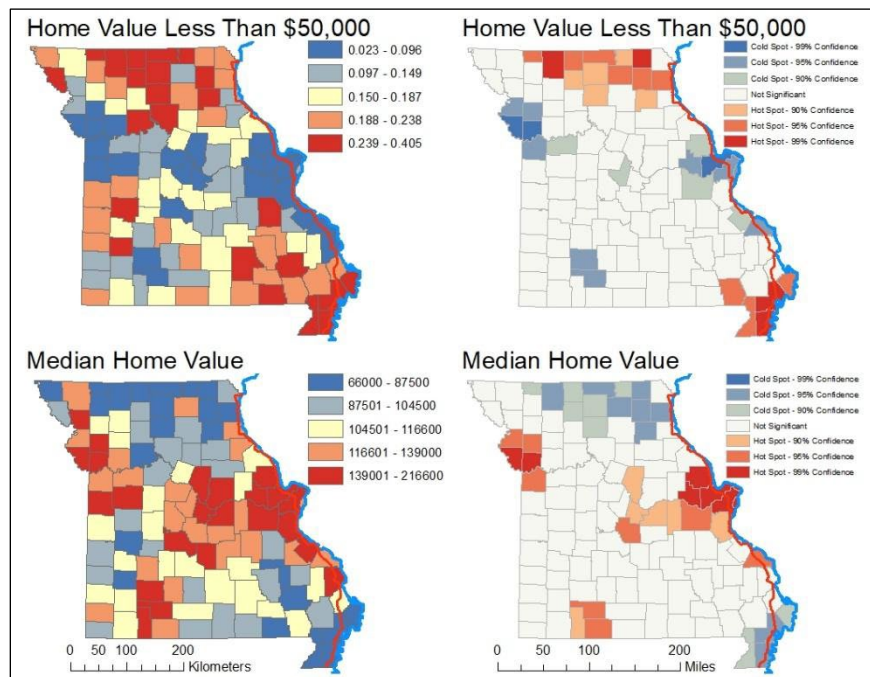**Figure 14. Getis-Ord GI Representations of the Years Structures Were Built**

Figure 15. Quantile and Getis-Ord GI Representations of Home Values

Note: Decimal percentages are shown to the thousandths (one tenth of one percent).

Demographic Characteristics

Race variables are normalized by total population in each county. Figure 16 shows the quantile representations and Getis-Ord GI hot spot analysis representations. The "female" variable appears to be somewhat random when looking at the quantile representation. Urban areas are often characterized by more than 50% of the population being female, but this is also true in many rural areas. There is some difference shown in the Northeast and Northwest regions, with lower percentages of female populations. This is contrasted with the generally higher values in the Southeast, South Central, and Ozark regions. The hot spot analysis shows two cold spots, one in the Northwest region and one in the Southeast region.

African American populations are similar to female populations, with no major urban or rural distinction shown in the quantile representation. Higher percentages of African American populations in the Southeast and Central regions are notable; however, hot spot analysis shows that only the counties in the bootheel along the GRR are spatially significant hot spot rural counties. The urban counties of St. Louis and Kansas City also show up as hot spots for African American populations.

Figure 16. Quantile and Getis-Ord GI representations of Gender and Race
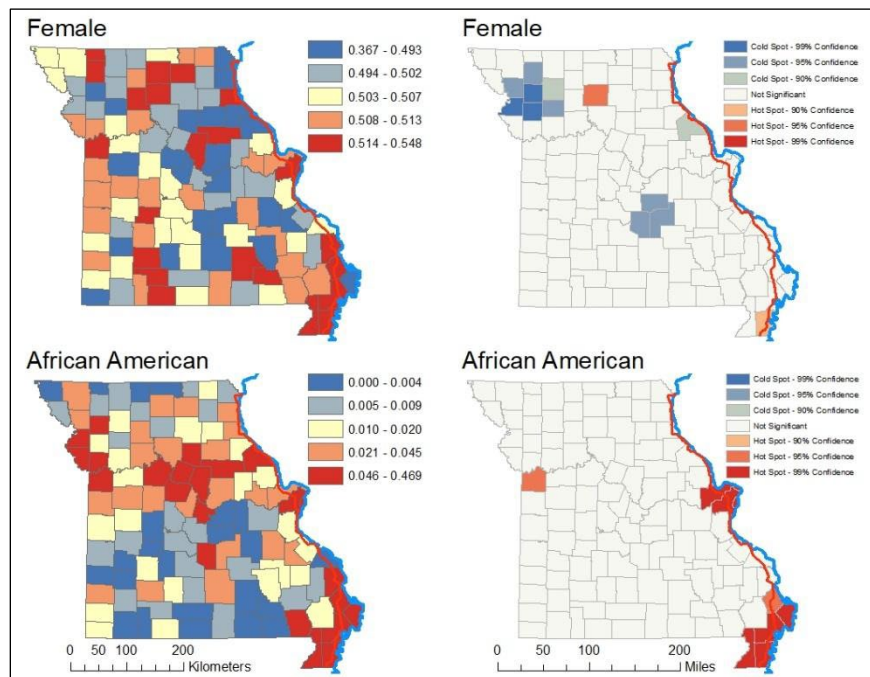
Note: Quantile categories are displayed in decimal percent to the thousandths (one tenth of one percent).

CONCLUSION

The results of this study have brought to attention a significant number of patterns and spatially based trends that help with better defining and understanding the Missouri GRR area as it is today. The overall coherency of these variables seems to be observed, not at a spatial regional representation of the GRR, but at other geographic levels. Notably, distinct sociodemographic disparities exist between rural and urban (St. Louis) counties. Additionally, differences exist in the rural counties north of the St. Louis metropolitan area and those south, indicating more regional representation beyond an urban/rural dichotomy. Differences in sociodemographic variables within a grouping of rural counties north and south of St. Louis are prominent in terms of education (Figure 4), unemployment (Figure 6), household income (Figures 11 and 12), and gender and race (Figure 16).

Exploring our initial regional assessment of the GRR, however, leads us to conclude that no unifying sociodemographic characteristic, or apparent combination of characteristics, in the assessed data allow for a formal region to be established, though additional variables and analysis are needed to strengthen this assumption. That said, based on the variables used in this study, it appears that, structurally, the GRR area resembles a functional region based on its initial (Congress-approved) designations: proximity to the Mississippi River, with the theoretical foundation of establishing a coherent area based on social and cultural heritage, and economics. Looking more at formal designations requires

future research in spatial modeling and a factor-type analysis to determine if a coherent combination of socioeconomic variables might allow for a better designation as a formal region designation.

The presence of a single GRR region within the state of Missouri is difficult to determine. With that said, the spatial analysis in the research did lend credence to the ability to identify three subregions we feel are worth note. Based on visual patterns represented through quintile classification and confirmed as spatially significant through Getis-Ord GI hot spot analysis, we propose that the GRR region in Missouri be split into three subregions, two of which require adding breadth, by the inclusion of adjacent counties. We term these Missouri subregions the North GRR, the Greater St. Louis GRR, and the South GRR. Figure 17 shows each subregion, as well as original GRR region.

Figure 17. Proposed Missouri GRR Subregions
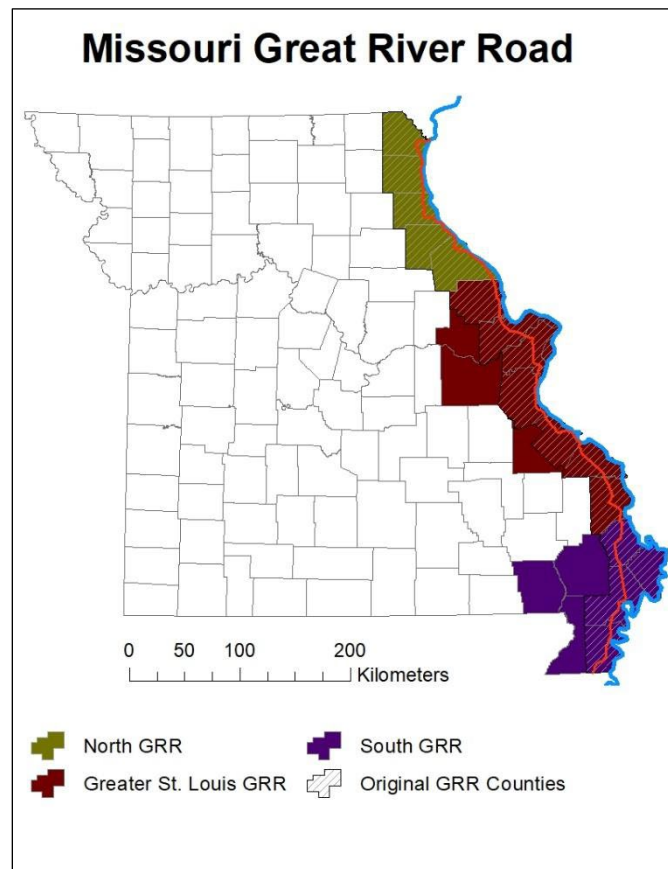
The North GRR subregion begins with Clark County, bordered by Iowa to the north and extending southward to Pike County's southern border, approximately 60 miles north of St. Louis. Only the five counties adjacent to the Mississippi River are included in this subregion. With no spatially significant patterns, it is difficult to place additional counties west of the original GRR into this subregion. Counties in the Northeast region along the

Missouri–Iowa border appear to share more similarities than other GRR-based regions or subregions. Resultingly, counties west of the original GRR region in northern Missouri are not added as part of a GRR region or subregion. This new region's southern extent, Pike County, is seen as separate from the Greater St. Louis GRR subregion using spatial representation and hot spot analysis of the variables "household with broadband Internet"; "females in labor force"; "fishing, farm, forestry"; "agr., fishing, mining"; "finance, insurance, real estate"; "household income $200,000 or more"; "median household income"; "year structure built 1939 or earlier"; "year structure built 1960 to 1969"; "home value less than $50,000"; and "median home value." These variables all show a spatial distinction between the St. Louis area and the North GRR subregion.

The Greater St. Louis GRR begins in Lincoln County in the north and extends to Cape Girardeau County in the south. This subregion consists of eleven total counties, three of which (Warren, Franklin, and St. Francois) were newly added to the GRR region. The addition of these counties is grounded in data within this study but is also consistent with the St. Louis Missouri statistical area designation (U.S. Census Bureau 2020) These counties are more comparable with the demographics and socioeconomic makeup of St. Louis than with those of other regions in Missouri, including the North and South GRR subregions. Several variables help define the Greater St. Louis GRR region, including "bachelor's degree or higher"; "no Internet"; "with broadband Internet"; "females in labor force"; "finance, insurance, real estate"; "median household income"; and "median home value." These variables show a clear divide from the North GRR, above Lincoln County, and the South GRR, south of Cape Girardeau. These variables also show that three counties (Warren, Franklin, and St. Francois) share similar characteristics with the St. Louis area and the greater St. Louis GRR subregion.

The South GRR subregion begins in Scott County and includes the Missouri bootheel counties, extending to the southern border with Arkansas. A total of seven counties is included in this subregion, with three counties (Stoddard, Butler, and Dunklin) added beyond the original GRR designation. These seven counties closely associate with one another based on the variables "9th to 12th grade no diploma"; "unemployed civilians"; "construction, extraction"; "construction"; "households less than $10,000"; "median household income"; "year structure built 1960 to 1969"; "year structure built 2000 to 2009"; "home value less than $50,000"; "median home value"; and "African American." These variables indicate unique characteristics separate from the Greater St. Louis GRR and North GRR subregions.

Data analysis of the GRR in Missouri provides an interesting look into not only the GRR but also the entire state of Missouri. Three subregions are identified as stated above, each with unique characteristics. St. Louis is a large urban center along the Mississippi River, with rural counties to the north and the south; however, an urban/rural distinction cannot be definitively proven, as within Missouri, northern rural counties and southern rural counties along the Mississippi River show different unifying characteristics based on the spatial analysis. These lead to a conclusion that the North GRR and South GRR in Missouri are distinct regions, with the urban center of St. Louis dividing the two. Finally, the data suggest that the economic regions of Missouri as denoted by MERIC are not conducive measures for attempting to define a GRR region or subregions.

This research completed within Missouri does not give a clear formal boundary for the GRR based solely on sociodemographic data from the U.S. Census. Data in this realm are helpful in identifying subregional patterns and urban and rural distinctions but, in general, fall short in identifying significant differences between Missouri counties and GRR counties. Additional analysis based on physical features along the Mississippi River, including topography, climate, vegetation, and wildlife, may help strengthen or dispute findings from this study.

The Great River Road is a distinctive feature in the heartland of the United States, but the cities, towns, and country it passes through are all unique. We have found that understanding this "region" requires an interplay of different regional approaches. Kasala and Šifta's (2017) model for regional analysis consists of three approaches to understanding regions: (1) with objectivity, using contextual understanding; (2) with personality, through phenomena and specificities; and (3) with identity, through sense of place and subjective experience. Based on this model, the originating regional nature of the GRR might best be defined functionally as a coherent whole through its personality (#2)—that of a "Twainesque" cultural reflection within proximity of the Mississippi River. Undoubtedly, though, subregions within the GRR exist today. More formally defined subregions within Missouri were identified in this paper using objective sociocultural data (#1) and spatial analysis.

Finally, though not directly explored in this research, it is apparent that this regional analysis would be aided by further analysis of subjective experiences shaped by personal sense of place (#3). Such analysis of how, culturally, today's GRR and its subregions shape and have been shaped by its historical "persona" will provide for a successful path toward sustainable development policy within a redefined GRR region.

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Nicolas Santos, Marketing and Management, Creighton University

Daniel E. Saros, Economics, Valparaiso University

D. Eric Schansberg, Economics, Indiana University Southeast

Dulce Maria Scott, Sociology and Criminal Justice, Anderson University

Jeanelle Sears, Social Work, Bowling Green State University

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Monica Solinas-Saunders, Sociology, Indiana University Northwest

Arun Kumar Srinivasan, Economics, Indiana University Southeast

Melissa Stacer, Criminal Justice, University of Southern Indiana

Cliff Staten, Political Science and International Studies, Indiana University Southeast

Anne Statham, Sociology, University of Southern Indiana

Jonathan Swarts, Political Science, Purdue University Northwest

Rajiv Thakur, Geography, Missouri State University

James C. Thomas, Business, Indiana University Northwest

Kathleen Tobin, History and Philosophy, Purdue University Northwest

Joseph Trendowski, Management, Valparaiso University

Mary Twis, Social Work, Texas Christian University

Sapna Varkey, Nonprofit Management and Leadership, University of Missouri St Louis

Paul Vasquez, Political Science, University of Central Florida

Jacqueline R. Wall, American Psychological Association, Washington, DC

Junfeng Want, Public Administration, University of Illinois Springfield

Zack Ward, Health Administration, University of Southern Indiana

Diane E. Wille, Psychology, Indiana University Southeast

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Jeffrey Woods, Economics (formerly of the University of Indianapolis)

Lissa Yogan, Sociology, Valparaiso University

Litao Zhong, Business and Economics, Indiana University East

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