

WRITING

ACROSS THE CURRICULUM

In the Disciplines and In the Workplace

2024



LSC-MONTGOMERY

INTRODUCTION

■ PURPOSE AND SCOPE OF THE JOURNAL

Welcome to the nineteenth edition (Fall 2024) of our journal of student writing at Lone Star College-Montgomery: Writing Across the Curriculum (WAC), In the Disciplines (WID) and In the Workplace (Vol. XIX). The purpose of the publication remains twofold: (1) to celebrate examples of discipline, field, and profession-specific student writing from across the college, and (2) to provide students and faculty examples of such writing to use in the classroom.

■ ORGANIZATION OF THE JOURNAL

The journal is organized by program or discipline and within the latter, by genre or kind of writing important in the field. In this way, the journal showcases students using the same skills and producing the same kinds of writing that faculty and other professionals produce to communicate successfully. We ask the faculty member who submits the writing from his/her class to include a brief introduction to each piece highlighting how the student selection reflects the kind of communication and specific writing skills important in that field or endeavor. The writing included represents a great range of experience and skill on the part of the student-writers.

■ WHO PUBLISHES THE JOURNAL?

The journal is underwritten by a faculty group, Communication Across the Curriculum (CAC). CAC encourages interdisciplinary and cross-disciplinary faculty dialogue and curricular experiments. It also supports the college's Writing Across the Curriculum Initiative and sponsors the annual CAC Student Presentation Conference.

■ WHO CAN SUBMIT WORK FOR PUBLICATION?

We publish student writing from both academic and workforce programs in the college. The course instructors select and submit writing on behalf of their students for consideration by the journal. Nevertheless, we encourage students who are interested in getting their work published to let their instructors know in revising and improving their work prior to possible submission by the instructor. It is the instructor, however, who decides whether to submit.

The instructor is the expert in the field. Therefore, the journal editors and advisors wish to emphasize that faculty who submit student writing accept responsibility for guiding the writer not only in the presentation of content but also in the process of revision, editing, and the correct use of the appropriate documentation style. Use of a particular documentation format is related to the discipline, the genre, and the preference of the instructor in each writing task.

■ WE WISH TO THANK

All the student writers and the faculty who submitted student work, and especially the journal editors, Professors Ron Heckelman (English), Nathalie Brandes (Geology), Kirk Cochran (English), Mark Whitten (Philosophy) and Nathan Zingleman (Coordinator, The Write Place) for putting it all together.

The writing consultants of The Write Place, the college's Writing Across the Curriculum-oriented writing center.

The organizers of the annual CAC Student Presentation Conference: Professors Melissa Dennis (English), Sunny Zhao (Speech Communication) and Mark Whitten (Philosophy).

■ SPECIAL THANKS

Dr. DeReese Reid-Hart, LSC-Montgomery President

Dr. Brandy Harvey, Vice President, Instruction

Kirk Bennett, Vice President, Administrative Services

Melissa King, Executive Director, PR MarCom

Instructional Deans: Roy Turner, David Benzel, Juan Lebron, Mischelle Hopper

■ VERY SPECIAL THANKS

Jackson Freese, WAC Journal Graphic Designer

Gabe Cedillo, Graphic Designer 1, PR MarCom

INTRODUCTION CONTINUED

■ CALL FOR SUBMISSIONS, VOL. XX (2024-2025)

We seek examples of discipline, field-specific and workplace writing for the twentieth edition of the journal (Vol. XX) to be published in the summer/ fall 2025. Faculty in all disciplines, professional and/or certificate and workplace programs across the college are invited to submit student writing. Students who would like to submit writing should let their instructor know of their interest.

Students will then revise their work under the guidance of their instructors before their instructors submit the writing to the journal.

Submissions must be submitted ELECTRONICALLY in Microsoft Word. No PDFs please. Use the one-step submission form at the following web address: https://lscmontgomery.formstack.com/forms/wac_submission_form_copy



All completed submissions include: (1) An online submission form provided at the above link and completed by the instructor. (2) The faculty member's introductory paragraph included in the online form; and (3) a student release form signed by the student-writer. The release is a separate document from the online submission form and is available at the following: https://lscmontgomery.formstack.com/forms/student_release_to_publish_writing_copy



The brief introductory paragraph (150-word limit) written by the submitting instructor must include the name and number of the course but most importantly, an explanation of how the submission effectively illustrates a kind of writing, and/or writing skills important in that form of expression in the discipline, field or profession.

Both online forms are available at the CAC website under Faculty Forms: <https://lscmontgomerycac.com/> Previous editions of the journal are also available at this site.



E-mail questions to: Ronald.J.Heckelman@lonestar.edu
LSC-Montgomery Writing Across the Curriculum
Initiative and The WAC Journal,
c/o: LSC-Montgomery Dept. of English

■ HOW SUBMISSIONS ARE SELECTED FOR PUBLICATION IN THE WAC JOURNAL

The faculty editors of the journal seek to present writing from as many academic disciplines and workplace programs as possible, limited only by the number of usable submissions and space available in the publication. As explained under "Purpose and Scope" and "Organization," the journal is organized first by discipline and then by genre. This is intended to show the variety of genres within a discipline or area, and to assist both faculty and students to use the selections as instructional models if desired.

Generally speaking, The WAC Journal does not include poetry, fiction, drama, photography and art per se. Additionally, it is not intended merely as a collection of assignments or "student writing." The writing published is intended to represent "real" discipline-linked expression and communication, akin to what is found with- in particular fields as well as professions. Most of the genres included are tradition- ally associated with specific disciplines; however, we also consider pieces that vary from the traditional forms. Submissions of mixed- genre and experimental writing are welcome.

The journal celebrates writing qua writing and we thus ask each faculty member who submits a piece to write an introduction to it. This introduction, as much as possible, presents the writing as an effective demonstration of discourse in a field and genre, and/or those notable cross-disciplinary skills useful for clear and precise communication. This introduction generally contributes significantly to the editors' and journal readers' understanding of the specific contributions the piece makes in illustrating communication style within a discipline. The faculty intro is not intend- ed to be an introduction to the course or program of study per se.

The degree of revision required after a piece has been submitted is a factor in the selection process. To minimize editorial intervention after a submission has been received, the editors ask the submitting faculty to work with the writer very closely to revise and prepare the piece for submission and consideration. This includes but is not limited to fullness of citations where needed as well as consistent and appropriate documentation style.

A WAC Journal Submission Guide is available at the CAC website to assist both faculty and students with this process. The LSC-Montgomery writing center, The Write Place (G103) is also available for help with all writing matters.

■ THE WAC JOURNAL ONLINE SLECTIONS

Some writing, especially that with a significant visual component, is available at the journal website. Links and QR codes are provided in the journal for these selections.

DEADLINE FOR SUBMISSIONS: MAY 31, 2025

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WAC JOURNAL 2024 SPECIAL WRITING COMMENDATIONS

The editors wish to commend the writers of the following work:

Outstanding Writing in English

- Maria Abreu, "The 'No Sabo' Generation," critical reflection and research essay, (C. Gonzales, instr.) p. 30
- Max Bobley, "The Irresistible Relatability of Dunkin's 2023 Super Bowl Commercial," critical analysis essay," (K. Cochran, instr.) p. 36

Outstanding Arts/Creative Work

- Gilbert Martinez, "*Miserere Mei, Deus*, original music composition, (M. Walsh, instr.) p. 76

Outstanding Writing in Art History

- Shelby Hastings, "Ishtar as a Gender Icon: An analysis of Gender Identity in Neo- Assyrian Cylinder Seals," research paper, (D. Longman, instr.) p. 10

Outstanding Writing in Nursing

- Sisi Xiong, "Scholarly Paper on a Public Health Issue: Drug Abuse" (J. Kendall, instr.) p. 90
- Teri Shapiro and Carly Clayton, "Teaching Plan on Elder Abuse" (P. Schwartz, instr.) p. 84

Outstanding Writing in Science

- Christian Krutilek, "Equilibrium," chemistry lab report, (M. Sundermann, instr.) p. 24
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- Tanja Martin, "The Impact of Artificial Intelligence in Radiology: Improving Diagnosis and Patient Care, research paper, (R. Volmer, instr.) p. 64

Outstanding Writing in Social Science/Government

- Mialexa Cruz, "Evaluating Statewide Fentanyl Policies: A Comparative Analysis of Texas and Colorado," research paper, (F. Ross, instr.) p. 46

Ishtar as a Gender Icon: An Analysis of Gender Identity in Neo-Assyrian Cylinder Seals

Research Paper by
SHELBY HASTINGS

ARTSH 1303: ART HISTORY - PREHISTORIC TO 14TH CENTURY (HONORS)

In "Ishtar as Gender Icon," Shelby Hastings examines the low-relief images carved into Mesopotamian cylinder seals to posit nuanced understandings of the goddess Ishtar and her vital role among gender non-conforming citizens in 8th-century Assyria. This research provides clear evidence for a direct connection between the goddess and her attendants (assinnu and eunuchs) by employing three key methodologies: 1) epigraphic/textual analysis of cuneiform tablets that outline several key identities, 2) formal and iconographic analysis of stone seals, and 3) social theories drawing from Mesopotamian gender studies. The result is a rich and poignant investigation into the relationships between text/image, art/function, and god/acolyte.

- Darren Longman

Abstract

This study examines the spiritual relationship between the Assyrian goddess Ishtar and her gender non-conforming followers as depicted in Neo-Assyrian cylinder seals to illuminate the complexity of Assyrian gender ambiguity in art. While several scholars have analyzed Ishtar's gender and the intricate identities of her effeminate male attendants, including the *assinnu* and eunuchs, few studies highlight the lure Ishtar had on such individuals and how they are represented in art. An explication of several 8th-century Neo-Assyrian cylinder seals allows for a more in-depth interpretation of Ishtar and the iconographic motifs associated with her followers. This visual investigation, coupled with sociocultural analysis of ancient Mesopotamian texts, reveals the significant relationship between Ishtar and gender-ambiguous Assyrians who worshipped her as a central religious figure and for her role as an icon for non-gender conformity. Because of her physical and psychological ambiguity, Ishtar was strongly sympathetic to those of all gender identities in Mesopotamia. Therefore, this study suggests that both *assinnu* and eunuchs embodied complex identities with varying social expectations and means of gender expression that manifested in cylinder seals commissioned to emphasize a connection between icon and acolyte.

Introduction

Artistic renditions of the Mesopotamian goddess of love and war, Ishtar, are crucial in understanding the unique relationship between her and Neo-Assyrian

gender-ambiguous individuals. Ishtar's gender identity is enigmatic—physically ambiguous in art and psychologically ambiguous in texts. Analyzing how the Neo-Assyrians provided crucial avenues for expressing gender in cylinder seals elucidates a connection between Ishtar's complex gender dynamics and her gender non-conforming attendants.

Past scholarship struggled to propose an objective view of Assyrian gender ideology as the concept was dictated by a male-oriented society. Rather than by their own accounts, the roles and experiences of women, eunuchs, and perhaps in-between identities were primarily interpreted through the perceptions of cisgender men in ancient to Modern institutions. Nonetheless, Mesopotamian eunuchs ostensibly commissioned artworks such as cylinder seals as a way to creatively express their gender identity.¹ Further exploration of these seals may offer new insights into the gender minority of the Neo-Assyrian Empire and Ishtar's influence on gender-ambiguous Assyrians and how it impacted art. This paper utilizes novel characterizations of Ishtar, a sociocultural perspective of *assinnu* and eunuchs, and an analysis of iconographic characteristics of 8th-century seals to explicate how Ishtar acted as a gender icon for other gender non-conforming groups in Neo-Assyria.

The Characterization of Ishtar

Analyzing ancient Mesopotamian texts reveals Ishtar's polarizing gender-specific traits, illuminating an ambiguous psychological and physical nature. The Assyrian goddess of love, fertility, war, and the heavens is widely believed by Assyriologists to be a later form of the Sumerian goddess Inanna, who the Sumerians worshipped during the Uruk period. Inanna's role as a young and beautiful fertility goddess contrasts with the Assyrian Ishtar's brash and promiscuous character as a goddess of war. Nonetheless, their gender identities are shrouded in ambiguity. Early Mesopotamian texts such as *The Epic of Gilgamesh* depict Ishtar as vindictive, hypersexual, and short-tempered. However, in later chapters of the same epic, Ishtar laments the oncoming destruction of her people—her compassion for her girls, her prostitutes, her courtesans, each standing out.² This excerpt is just one of many examples of a paradoxical Ishtar.

Other ancient tablets, such as BM 23631, show Ishtar as naive and somewhat childlike, proclaiming she has no experience in kissing or sex.³ These contradictory traits make it challenging to gauge Ishtar's identity and behaviors.

1. Serdar Yalçın, "Men, Women, Eunuchs, Etc.: Visualities of Gendered Identities in Kassite Babylonian Seals (ca. 1470–1155 b.c.)" (*The American Schools of Oriental Research*, 2016), 121–150.

2. Sophus Helle, "Gilgamesh: A New Translation of the Ancient Epic" (Yale University Press, 2021), 43–53.

3. Samuel Noah Kramer, "BM 23631: Bread for Enlil, Sex for Inanna" (*Orientalia*, 1985), 127.

Perhaps Ishtar's confounding personality traits from different texts can simply be chalked up to different generations or groups of Mesopotamians invoking different characterizations based on their unique social and emotional needs in that time and place. That said, by observing the goddess's personality traits, these texts prove useful when analyzing Ishtar's gender identity.

Traditionally, only men could be warriors in the Neo-Assyrian Empire, and while predictable in a patriarchal society such as Assyria, Ishtar, a female deity, was depicted as a ferocious warrior and master of war in her own right. Additionally, Ishtar is assertive and often bloodthirsty, traits typically attributed to men during this period.⁴ In a hymn dedicated to Ishtar, the king of Assyria during the 7th century, Ashurbanipal describes Ishtar as "bearded" and compares her to Ashur, the distinctly masculine god of war.⁵ For a man of such high status to praise a female figure for her physical masculinity challenges preconceived views of her identity. King Ashurbanipal's praise of the goddess' masculinity is further proof that Neo-Assyrians embraced, or cultivated, Ishtar's gender fluidity. Although always referred to as female and with feminine pronouns, ancient cuneiform texts indicated Ishtar's androgyny. Her complexity seems to transcend the socially constructed gender binary, as seen in another translated hymn of Inanna in which she describes herself as a woman and a cheerful young man.⁶

Ishtar (or Inanna, in this particular hymn) presents herself as simultaneously woman and man: "a perfect figure."⁷ By referring to herself as this idealized figure, I argue that the original author believes a harmonious state between genders is an ideal state of mind or body. In Ashurbanipal's hymn to Ishtar, he praises her splendor and beauty in conjunction with her masculine nature, which can tie into *The Epic of Gilgamesh's* interpretation of Ishtar's 'masculine' personality. To that end, Inanna's hymn portrays Ishtar as appreciating her own feminine and masculine beauty. To her (or the author), they are the same, and the androgynous aspect of her beauty is seen as "perfect." The appreciation of an ambiguous Ishtar in these hymns further elucidates the Assyrian expression of complex gender identities. Ishtar is the embodiment of life's chaos and harmony, as told by Rivkah Harris⁸, and her gender identity seems to reflect the Assyrian appreciation of that paradoxical facet of life.

4. Ashleigh Pierce, "Inanna-Ishtar: Recognizing the Personality and Purpose of a Goddess" (Wittenberg History Journal, 2015), 33.

5. Theophile James Meek, "A Hymn to Ishtar, K. 1286" (The American Journal of Semitic Languages and Literatures, 1910), 160.

6. J.A. Black, et al. "A shir-namshub to Inana" (The Electronic Text Corpus of Sumerian Literature, 1998).

7. J.A. Black, et al., "A shi-manshub to Inana".

8. Harris, "Inanna-Ishtar as Paradox", 261–278.

The Cult of Ishtar

By evaluating the context behind certain members of Ishtar's cult, such as the *assinnu* and eunuchs, I determine that these gender-ambiguous individuals were drawn to Ishtar and her cult due to her own perceived gender-fluid identity. It is human nature to desire connection and collective identity, especially in queer communities. The concept of *assinnu*, in particular, revolves around embracing gender vis-à-vis Ishtar. According to Ilan Peled, *assinnu* was a Neo-Assyrian term adopted from the broader Mesopotamian gendered title *kulu'u* that referred to male effeminacy. *Assinnu* generally signified a figure or personified role dedicated to Ishtar. Many scholars interpret the *assinnu* to be homosexual male prostitutes within Ishtar's Sacred Cult of Prostitution; however, modern scholars are challenging those notions. Julia Assante and Ilona Zsolnay interpret the *assinnu* to be in martial or non-sexual positions or, simply put, masculine figures who are not feminized within Ishtar's cult. They attribute the connection between *assinnu*, Ishtar, and prostitution to skewed early Western scholarship and mistranslations. Peled, however, suggests that rather than being prostitutes, the *assinnu/kulu'u* were simply similar in social status to prostitutes. This claim could denote a sense of disdain from heteronormative Assyrians towards effeminate males or gender ambiguity in general.

For example, in Assyrian artworks, eunuchs are always depicted as beardless, perhaps to emphasize the eunuch's lack of virility and masculinity—a paramount concept in Neo-Assyrian society. The social attitude towards gender-ambiguous people in Assyria was ambivalent at most. Peled asserts there is little documentation of the social attitude of Assyrians toward *assinnu*, but other groups in Mesopotamia who expressed disdain for them certainly existed. In an Old Babylonian text, the word "*assinnu-ship*"¹² could be viewed negatively since the word was used in conjunction with other negative omens in the text. However, Peled is skeptical of this evidence, as previous scholarship regarding these texts failed to consider *assinnu's* apparent devotion to Ishtar, and the devotion of the attendant towards the deity is unlikely to be spoken of negatively.¹³ *Assinnu*

9. Stephen Valocchi, "Not Yet Queer Enough: The Lessons of Queer Theory for the Sociology of Gender and Sexuality" (Gender and Society, 2005), 750–770.

10. Ilan Peled, "kula'utam epēšum: Gender Ambiguity and Contempt in Mesopotamia" (Journal of the American Oriental Society, 2015), 752.

11. Julia Assante, "Bad Girls and Kinky Boys? The Modern Prostituting of Ishtar, Her Clergy, and Her Cults" (Tempelprostitution Im Alterum, 2009); Ilona Zsolnay, "The Misconstrued Role of the Assinnu in Ancient Near Eastern Prophecy" (Society of Biblical Literature Press, 2013)

12. Peled, "kula'utam epēšum", 761.

13. Peled, 762.

alone is rarely condemned for his/their dedication to the patron goddess and is not viewed through the lens of blasphemy for their gender identity or sexuality.

Certain Assyrian manuscripts suggest the existence of third-gender beings, not only in their mythology but in reality as well. In *Ištar's Descent to the Netherworld*, the Sumerian god Enki creates mythological beings sent to rescue Ishtar from the Mesopotamian realm of the dead.¹⁴ The Middle Assyrians refer to these beings as *kulu'u* and can be considered symbolic versions of Ishtar's attendants. Assyrian scribes referred to these beings as *kulu'u/assinnu* because Ishtar's cult had many dedicated "effeminate male" attendants.¹⁵ Moreover, in Neo-Assyrian manuscripts, *assinnu* appears synonymous with the term "man-woman."¹⁶ These texts also show that *kulu'u* was more parallel to terms like *assinnu* rather than directly synonymous. Textual evidence such as this implies third-gender figures who identified as such existed in Assyrian society, specifically within Ishtar's cult. Additionally, a Babylonian ritual text suggests that *kulu'u's* was sexually involved with their patron deity, Ishtar. Although this Babylonian text is one of the only instances of an implied sexual relationship between Ishtar and *kulu'u/assinnu*, Ishtar's non-conforming gender attributes should be taken into account. Peled claims, "her ambivalent gender image required that her sexual mates be ambivalent as well,"¹⁷ which adds to the argument on Ishtar's gender ambiguity and how that aspect of her patronage attracted other gender non-conforming people, such as *assinnu*, or even eunuchs. This text could also imply that *kulu'u* were not necessarily strictly homosexual but could fall somewhere else along the sexuality spectrum.

To the *assinnu*, eunuchs, and others, Ishtar was revered and served as an icon for those who struggled—whether internally or socially—with their gender identity. Ishtar spoke to traditional Assyrian femininity with her fertility and compassion, while her warrior status and hypersexuality spoke to conventional masculinity. Ultimately, her gender ambiguity/fluidity spoke to those like *assinnu* or anyone else who did not identify with their socially assigned gender role.

Ishtar and Eunuchs in Cylinder Seals

By closely observing 8th-century Neo-Assyrian seals, the physical appearance of the illustrated figures and the related iconography portray a significant and unique relationship between Ishtar and her gender-non-conforming followers. Mesopotamian cylinder seals were used to signify ownership and could be an artistic portrayal

of one's identity.¹⁸ Assyrian seals were typically made from minerals or rocks such as quartz, jasper, or granite and carved into cylindrical shapes. The artist would then carve designs around the cylinder in low relief before rolling the cylinder out onto semi-dry clay, imprinting the design into the softer material.

In most Neo-Assyrian seals depicting Ishtar, the worshiper before her is an androgynous figure, although the iconography mainly suggests they are eunuchs and, therefore, biologically male. The inclusion of eunuchs in many of these seals implies that gender-non-conforming people had a close relationship and bond with Ishtar, most likely due to her relatability to gender-ambiguous individuals. I suggest these eunuchs' depiction of their beloved goddess indicates that Ishtar's cult celebrated her gender expression, not merely because of her feminine and masculine qualities but because her inherent ambiguity became a source of power rather than distaste. Scholar Serdar Yalçın emphasizes the use of Mesopotamian cylinder seals' iconography as a way for eunuchs and other gender-non-conforming individuals to express their gender identity visually. Ishtar's followers used these cylinder seals not only to show their respect and admiration for her but to celebrate their shared gender fluidity.

When rolled out completely, one seal from 720-700 BCE creates an image of two date palms on the far left and right registers, framing Ishtar, a (perceived) male worshiper, and two male mountain goats (Fig. 1). The artist and title of the work are unknown, but the curator of the piece, Dominique Collon, believes the seal was commissioned under the reign of King Sargon II in the Neo-Assyrian Empire.¹⁹ The figure of Ishtar, located in the right register, is presented in full warrior regalia, holding her signature bow and arrows in her left hand. Her right hand is raised—the movement indicating her authoritative status. She stands on the back of a lion couchant, donned in a hexagonal-patterned robe and a tall, horned headdress. The headdress is unique to Ishtar's artistic portrayal throughout Mesopotamia and is an indicator that the female-presenting deity in this seal is indeed Ishtar.

Ishtar stands before her suppliant worshiper and appears to be more muscular by comparison. Although her short sleeves and kilt reveal more of her body than her modestly dressed patron, she has visible muscular definition. Her leg is toned with discernible calf muscles, and a contour line on her left arm also indicates muscle definition. Assyriologists assert that, through a patriarchal lens, women in the Neo-Assyrian Empire were not typically warriors but kept to the home or the palace.²⁰ For a feminine figure (albeit the goddess of war) to be

14. Andrew George, "Babylonian Texts from the Folios of Sidney Smith, Part Three: A Commentary on a Ritual of the Month Nisan" (Leiden: Brill, 2006), 176.

15. Peled, "kula'ūtām epēšum", 752.

16. Peled, 753.

17. Peled, 757.

18. Yalçın, "Men, Women, Eunuchs, Etc.", 121.

19. Dominique Collon, "Catalogue of the Western Asiatic Seals in the British Museum: Cylinder Seals II: Akkadian, Post Akkadian, Ur III Periods" (The British Museum, 1982)

20. Sarah C. Melville, "Neo-Assyrian Royal Women and Male Identity: Status as a Social Tool" (Journal of the American Oriental Society, 2004); Saana Teppo, "Agency and the Neo-Assyrian Women of the Palace" (Studia Orientalia Electronica, 2007)

visually portrayed as brawnier than a biological male gives insight into the artist's, or more specifically, her patron's appreciation for Ishtar and her unique gender expression. Similarly, King Ashurbanipal wanted to emphasize Ishtar's masculinity in his hymn.²¹ Bearded faces were typically attributed to masculine Neo-Assyrian ideals of beauty, while ideal feminine faces were soft, round, and shiny.²² Perhaps Ishtar's role as a woman was celebrated not simply because of her beauty or reproductive abilities but because she portrayed a type of primal femininity that appealed to Mesopotamian society.

The lion Ishtar stands on and the jewels she wears are all common symbols associated with the goddess of war.²³ Ishtar and her lion are icons of sheer strength and power. Lions being the animal most closely connected to Ishtar is reasonable, as they can both be violent beings who are fiercely protective of what is theirs.²⁴ Additionally, the lion in the seal is male, its mane rendered with small drill holes. The repeated comparison between Ishtar and a "bearded"²⁵ strong male figure illuminates a pattern of a masculine Ishtar. Her expensive and elaborate jewelry is meant to signify her higher status. Her clothes and jewels are much more intricate and noticeable than the common worshiper she faces. As the Lady-of-Battle,²⁶ Ishtar had to be well-equipped with an arsenal of weapons and armor yet simultaneously show off her femininity and high status as a goddess.

Neo-Assyrian art is rich with motifs and symbolism, which some Assyriologists use to demonstrate a theme linking the iconography of agriculture with their interpretation of gender identity. For example, author Paul Collins argued for a link between trees in Neo-Assyrian art and their concept of gender.²⁷ Inanna is often associated with the fruiting date palm tree, as is Ishtar in Akkadian and Assyrian seals. Collins interprets the association of palms and Ishtar as the Mesopotamians connecting the feminine gender role with the fruiting of the date palms: fertility and abundance. Alternatively, conifer trees can most often be associated with males in Assyrian art due to their association with the Sumerian

god Ashur. Backed by Mehmet-Ali Ataç's visual formula of Neo-Assyrian art, the literature reveals agriculture's importance in Assyrian culture and symbolism.²⁸ In the throne room of Ashurnasirpal II's palace hangs a relief depicting the King worshipping the "sacred tree," which stands proudly in the center.²⁹ This interpretation could suggest that trees as a symbol in art are divine to the Assyrians, and the use of fruiting date palms and conifer trees could mean that the Assyrians held gender roles in high regard. Perhaps the distinction in trees means the distinction between man and woman is vital to the Neo-Assyrian Empire. Still, this divide could also be significant to gender-ambiguous figures as well.

To that end, two date palms frame Ishtar and her worshiper in the center of the seal, emphasizing her role as a feminine goddess (Fig. 1). Fruiting date palms, in particular, as seen in this seal, are most closely correlated with femininity and fertility. Collins posits that Sumerians believed Inanna was the one responsible for the growth of the dates on palm trees due to her role as the goddess of fertility.³⁰ Later iterations of Ishtar can also be seen with palm trees, almost always fruiting with dates. While her weapons and lion may depict her masculine side as the warrior goddess, the palms represent Ishtar's traditionally feminine side as the fertility goddess.

Most figures depicted in Assyrian seals alongside Ishtar are those whom scholars perceive to be eunuchs due to the iconography and their documented relationship with the goddess. In a sculptural relief of King Sargon II and his chief eunuch, the king stands tall with a full beard and muscular definition, while the eunuch by his side stands slightly shorter, with a bare face and rounded features.³¹ A visual analysis of a similar relief featuring a king and his chief eunuch made by Ataç reveals that Assyrian symbolism often works on a micro-scale rather than a macro. Small details and iconography in such pieces reveal the narrative and intention.³² The symbol of a bare face on an Assyrian male mainly indicates a castrated figure. Since the Neo-Assyrian Empire praised masculinity, one can assume that the lack of a beard emphasizes a lack of virility and strength. However, a bare face can just as well represent the eunuch's biological inability to grow facial hair.³³ In any case, when placed next to kings, gods, or goddesses, artists used a hierarchical scale to portray eunuchs as figures with more humble statures. The only other human figure depicted in the garnet

21. Theophile James Meek, "A Hymn to Ishtar, K. 1286" (*The American Journal of Semitic Languages and Literatures*, 1910), 160.

22. Amy Gansell, "Images and Conceptions of Ideal Feminine Beauty in Neo-Assyrian Royal Contexts" (*Critical Approaches to Ancient Near Eastern Art*, 2013), 402.

23. Pierce, "Recognizing the Personality and Purpose of a Goddess", 38.

24. Ataç, "Visual Formula and Meaning", 73.

25. Meek, "A Hymn to Ishtar, K. 1286", 160.

26. James B. Pritchard, "The Ancient Near East: An Anthology of Texts and Pictures" (Princeton University Press, 2011), 246–286.

27. Paul Collins, "Trees and Gender in Assyrian Art" (*Iraq*, 2006), 99–107.

28. Ataç, "Visual Formula and Meaning", 81.

29. Ataç, 81.

30. Collins, "Trees and Gender in Assyrian Art", 99.

31. N'Shea, "Royal Eunuchs", 215.

32. Ataç, "Visual Formula and Meaning", 72.

33. Yalçın, "Men, Women, Eunuchs, Etc.", 141.

seal is most likely a eunuch due to the aforementioned symbolism (Fig. 1). Like the goddess he stands before, he is beardless, and his hair is shoulder-length. He and Ishtar look very similar, if not for his simpler style of dress.

Figure 1. Unknown artist, "Ishtar and worshipper cylinder seal", 720BC-700BC, garnet cylinder seal, 1.8 cm x 4.3 cm. The British Museum, England (© The Trustees of the British Museum).

https://www.britishmuseum.org/collection/object/W_1835-0510-2



Another Neo-Assyrian cylinder seal made within the same century reveals a pattern regarding icon and acolyte (Fig. 2). In this piece, Ishtar and her patron are once again framed within the center register. On the left and right registers are two winged beings, in similar dress to Ishtar and the worshipper, protecting the sacred space in which the deity and her acolyte stand. Similar to the previous seal, Ishtar is donned in armor, her horned headdress, and also possesses her quiver and bow, jewels, and authoritative stance. Her right leg, which peaks out from her dress, shows a muscled calf on par with the presumably male-winged protectors. The goddess stands on a small pedestal to highlight her divine power over the other figures in the seal. The patron, this time, is kneeling before his goddess in a state of worship, and his beardless face, fringed clothing, and shoulder-length hair indicate his status as a eunuch. He holds his hands up and his chest is lifted towards Ishtar—his full attention and devotion on her. It is especially clear in this piece the respect Ishtar's attendants hold for her (Fig. 2).

Figure 2. Unknown artist, "Cylinder seal with cultic scene", late 9th–early 8th century BCE, quartz seal carving, 1.1 in x 4 in. The Metropolitan Museum of Art, New York.

<https://www.metmuseum.org/art/collection/search/327434>



Lastly, a seal made of jasper similarly portrays Ishtar and a eunuch follower flanked by the goddess' protectors (Fig. 3). While the impression left by the seal is a bit more unclear than the others, the deity represented in this seal is undeniably Ishtar due to her prominent iconography. In an almost identical stance, Ishtar stands on the back of a lion with her signature outfit, weapons, and headdress. Her right hand comes up to address the patron in front of her while

the patron, in turn, looks to Ishtar with his palms up in a deferential manner. The worshiper also looks considerably similar to the ones in the previous pieces, with the signature bare face, fringed clothing, and reverent stance. The modest, fringed robes all these eunuchs have in common are thought by Omar N'Shea to be the fashion trend for eunuchs in the Neo-Assyrian Empire at the time.³⁴ Fringed robes can also be seen being worn by the winged guardians framing the kneeling worshipper and Ishtar (Fig. 2). These "virile" demi-gods, known as *apkallu*, shared a similar style of fashion amid eunuchs and Assyrian monarchs.³⁵ This common fashion trend shared amongst these groups highlights that eunuchs could also participate in masculine roles and trends. Like Ishtar, eunuchs were capable of gender fluidity, as evidenced by the iconography.

Figure 3. Unknown artist, "Cylinder seal with cultic scene", 8th century BCE, jasper seal carving, 1.61 in. The Metropolitan Museum of Art, New York.

<https://www.metmuseum.org/art/collection/search/327317>



The commissioner and artist's use of a reverent theme between Ishtar and the follower is intentional. As the artistry of seals was used as an extension of identity and self-expression,³⁶ the patrons of these seals were most likely eunuch worshipers of Ishtar. While it must have been a privilege to be able to commission a seal identifying ownership, eunuchs still faced oppression in the face of a patriarchal, heteronormative society. By placing themselves in a state of worship and respect towards Ishtar, it can be inferred that these figures looked up to her because of their shared gender fluidity and metaphorical uprooting from society.

Conclusion

While gender-ambiguous and other fluid identities were not confined to the Cult of Ishtar, the deity is certainly famous for her gender ambiguity and her cult's integration of diverse identities. *Assinnu* and eunuchs came to represent Ishtar's union of femininity and masculinity, thus portraying a wide gender spectrum to her followers. These worshipers and followers during the Neo-Assyrian Empire

34. N'Shea "Royal Eunuchs", 216.

35. N'Shea, 216.

36. Yalçın, "Men, Women, Eunuchs, Etc", 141.

were drawn to Ishtar because of her relatability in defying normative gender roles and characteristics. As shown in the cylinder seals from the 8th century, Ishtar stood as a gender icon for those who identified differently from the socially constructed binary. She defied gender roles, as did her assinnu and eunuchs, which can be viewed through specific iconography and the social connotations of the commissioning of the seals. Eunuchs commissioned these seals not only as an indicator of ownership but also as a symbol of identity and self-expression. Through these seals, genderfluid figures could incorporate themselves as dutiful worshipers before their icon, Ishtar, to fully appreciate and respect her pertinent identity. They found comfort and solidarity within the goddess of war and fertility. The use of identity and self-expression through cylinder seals serves to establish the draw Ishtar had on gender-ambiguous people in the Neo-Assyrian Empire. Ultimately, Ishtar's followers used these cylinder seals not only to show their respect and admiration for her but also to celebrate their shared gender fluidity.

Future research could look deeper into claims made by Paul Collins³⁷ and Mehmet-Ali Ataç³⁸ about the importance of agricultural (trees, fruits, etc.) iconography concerning Assyrian gender identity. By closely analyzing symbols and motifs that were not only present in their artworks but physically present and nourished within their society, scholars can offer a more nuanced and culturally accurate approach to gender ideologies in ancient civilizations.

37. Collins, "Trees and Gender in Assyrian Art", 99–107.

38. Ataç, "Visual Formula and Meaning in Neo-Assyrian Relief Sculpture", 69–101.

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Equilibrium

Lab Report by
CHRISTIAN KRUTILEK

CHEM 1412: GENERAL CHEMISTRY II

A general chemistry lab report includes a prelab procedure that could be followed by anyone with sufficient expertise, the data obtained in the lab, and any post-lab questions and analysis. Christian Krutilek includes the title and date, lists the purpose of the experiment and safety hazards, and then the procedure. The procedure is precise and in the imperative mood, written in such a way that another researcher could repeat the experiment. He includes the data, which is of good quality, indicating good lab technique. He then performs the necessary calculations to fulfill the purpose of the lab. His answers to the post-lab questions show a solid understanding of the concepts of chemical equilibria.

- Michael Sundermann

Date: 7/26/23

Purpose: To find the equilibrium constant of the reaction below:



Prelab Procedure:¹

1. Calibrate a spectrometer at a wavelength of 447 nm.
2. Using a graduated pipet, add 10.00 mL of 0.10 M $\text{Fe}(\text{NO}_3)_3$ solution to a 100.00 mL volumetric flask. Fill the flask up to the line with distilled water. Cap and shake the volumetric flask so the solution mixes, and pour this solution into a beaker. The concentration of this solution is now 0.010 M.
3. Using a graduated pipet, add 1.00 mL of the 0.010 M $\text{Fe}(\text{NO}_3)_3$ solution to a cuvet or test tube. Add 1.00 mL of 0.0020 M KSCN solution, 2.00 mL of 1.0 M HNO_3 solution, and 2.00 mL of distilled water to the same cuvet. Mix the solution and measure the absorbance of the solution at 447 nm.
4. Repeat step 3, except use 2.00 of the 0.010 M $\text{Fe}(\text{NO}_3)_3$ solution, and 1.00 mL of water.
5. Repeat step 3, except use 0.50 of the 0.010 M $\text{Fe}(\text{NO}_3)_3$ solution, and 2.50 mL of water.
6. Repeat step 3, except use 2.00 of the 0.0020 M KSCN solution, and 1.00 mL of water.

7. Repeat step 3, except use 0.50 of the 0.0020 M KSCN solution, and 2.50 mL of water.
8. Place the cuvet used in step 3 in a beaker of boiling water. Allow the solution to warm up for 5 minutes. Take it out of the hot water, wipe the outside of the cuvet dry, and measure the absorbance of the hot solution.
9. Prepare another cuvet using the same amounts of compounds used in step 3. Slowly add AgNO_3 solution until there is a change in the solution.
10. Dispose of all chemicals in the proper waste container.

Data:

volume $\text{Fe}(\text{NO}_3)_3$	volume KSCN	volume HNO_3	volume water	absorbance
Room temperature:				
1.00 mL	1.00 mL	2.00 mL	2.00 mL	<u>.428</u>
2.00 mL	1.00 mL	2.00 mL	1.00 mL	<u>.754</u>
0.50 mL	1.00 mL	2.00 mL	2.50 mL	<u>.175</u>
1.00 mL	2.00 mL	2.00 mL	1.00 mL	<u>1.110</u>
1.00 mL	0.50 mL	2.00 mL	2.50 mL	<u>.191</u>
100 °C:				
1.00 mL	1.00 mL	2.00 mL	2.00 mL	<u>.145</u>

Observations after adding AgNO_3 to solution: White misty top, then solution became completely clear.

Post-lab Questions:

[1. In all cases, you used a total of 6.00 mL of solution. Calculate the initial concentration of Fe^{3+} for all five of the room temperature experiments, after dilution to 6.00 mL.]

$$\begin{aligned} M_1V_1 &= M_2V_2 \\ M_1 &= .01\text{M} \\ V_2 &= 6\text{mL} \\ M_2 &= x \end{aligned}$$

Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
$(.01)(1) = x(6)$	$(.01)(2) = x(6)$	$(.01)(.5) = x(6)$	$(.01)(1) = x(6)$	$(.01)(1) = x(6)$
$x = .00167\text{M}$	$x = .00333\text{M}$	$x = .00083\text{M}$	$x = .00167\text{M}$	$x = .00167\text{M}$

[2. Calculate the initial concentration of SCN⁻ for all five of the room temperature experiments, after dilution to 6.00 mL.]

$M_1V_1 = M_2V_2$	<u>Trial 1</u>	<u>Trial 2</u>	<u>Trial 3</u>	<u>Trial 4</u>	<u>Trial 5</u>
$M_1 = .002M$	$(.002)(1) = x(6)$	$(.002)(2) = x(6)$	$(.002)(.5) = x(6)$	$(.002)(1) = x(6)$	$(.002)(1) = x(6)$
$V_2 = 6mL$	$x = 3.33 \times 10^{-4}M$	$x = 3.33 \times 10^{-4}M$	$x = 3.33 \times 10^{-4}M$	$x = 3.33 \times 10^{-4}M$	$x = 3.33 \times 10^{-4}M$
$M_2 = x$					

[3. Determine the equilibrium concentration of Fe(SCN)²⁺ for all five room temperature experiments. Assume that the pathlength of the cuvet or test tube is 1.00 cm.]

In all cases below, A = absorbance, ϵ = extinction coefficient, b = pathlength, c = concentration. ϵ and b were given.

$A = \epsilon bc$	$\epsilon = 1.1 \times 10^4$	$b = 1 \text{ cm}$	$c = \frac{A}{1.1 \times 10^4}$		
<u>Trial 1</u>	<u>Trial 2</u>	<u>Trial 3</u>	<u>Trial 4</u>	<u>Trial 5</u>	
$c = \frac{.428}{1.1 \times 10^4}$	$c = \frac{.754}{1.1 \times 10^4}$	$c = \frac{.175}{1.1 \times 10^4}$	$c = \frac{.110}{1.1 \times 10^4}$	$c = \frac{.191}{1.1 \times 10^4}$	
$c = 3.9 \times 10^{-5}$	$c = 6.9 \times 10^{-5}$	$c = 1.6 \times 10^{-5}$	$c = 1.0 \times 10^{-5}$	$c = 1.7 \times 10^{-5}$	

[4. Using ICE tables, determine the value K_c for all five room temperature experiments. You may attach a separate piece of paper with calculations.]

In all cases below, I = initial concentration, C = change in concentration, and E = equilibrium concentration. Since the initial concentration of Fe(SCN)²⁺ is zero, x always equals the equilibrium concentration of Fe(SCN)²⁺

<u>Trial 1</u>			
	Fe ³⁺	SCN ⁻	Fe(SCN) ²⁺
I	.00167	.000333	0
C	- x	- x	+ x
E	.001631	.000294	.000039

$$K_c = \frac{(.000039)}{(.001631)(.000294)} = 90.575$$

Trial 2

	Fe^{3+}	SCN^-	Fe(SCN)^{2+}
I	.00333	.000333	0
C	$- x$	$- x$	$+ x$
E	.003261	.000264	.000069

$$K_c = \frac{(.000069)}{(.003261)(.000264)} = 80.148$$

Trial 3

	Fe^{3+}	SCN^-	$\text{Fe}(\text{SCN})^{2+}$
I	.00083	.000333	0
C	$-x$	$-x$	$+x$
E	.000814	.000317	.000016

$$K_c = \frac{(.000016)}{(.000814)(.000317)} = 62$$

Trial 4

	Fe^{3+}	SCN^-	$\text{Fe}(\text{SCN})^{2+}$
I	.00167	.000666	0
C	$-x$	$-x$	$+x$
E	.001569	.000565	.0000101

$$K_c = \frac{(.0000101)}{(.001569)(.000565)} = 113.9$$

Trial 5

	Fe^{3+}	SCN^-	$\text{Fe}(\text{SCN})^{2+}$
I	.00167	.0001667	0
C	$-x$	$-x$	$+x$
E	.0016526	.0001493	.0000174

$$K_c = \frac{(.0000174)}{(.0016526)(.0001493)} = 70.52$$

[5. Determine the average value of K_c at room temperature.]

$$\frac{90.575 + 80.148 + 62 + 113.9 + 70.52}{5} = 83.43 \quad \text{Avg. } K_c = 83.43$$

[6. Did the absorbance of the solution go up or down when it was heated? Is this reaction endothermic or exothermic? Explain how you know.]

Down, which means that there was less Fe(SCN)²⁺ so the reaction must be exothermic. If heat was added and the reaction went backwards that must mean the forward reaction is exothermic.

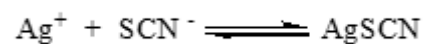
[7. How does increasing the concentration of Fe³⁺ affect the value of K_c ? Explain.]

The equilibrium constant does not depend on the concentration of the reactants so the concentration of Fe³⁺ does not affect the K_c .

[8. Does changing the temperature alter the value of K_c ? Explain.]

The equilibrium constant does depend on temperature so when we put our solution in boiling water the equilibrium constant was much lower than the room temperature solutions.

[9. Silver ion reacts with thiocyanate ion in the following reaction:



AgSCN , unlike $\text{Fe}(\text{SCN})^{2+}$, is colorless. Use Le Chatelier's principle to explain your observations when you added AgNO_3 to your solution.]

When the silver was added it reacted with the SCN^- lowering its concentration which caused a backwards reaction of $\text{Fe}(\text{SCN})^{2+}$ to turn into Fe^{3+} and SCN^- , which caused more SCN^- to be used until there was no more $\text{Fe}(\text{SCN})^{2+}$.

1. *Organic Chemistry Experiments*; Sundermann, M. J.; Follet: River Grove, IL, 2011

The “No Sabo” Generation

Research Paper by
MARIA ABREU

ENGL 1302: COMPOSITION AND RHETORIC II

In her Research Essay, Maria explains what it means to be a part of the “No Sabo” generation. Inspired by Gloria Anzaldua’s “How to Tame a Wild Tongue,” Maria adds to ongoing, scholarly conversations about language and identity. She proves that much of Anzaldua’s lived experience is supported with contemporary research, and Maria makes a 30-year old text new again by sharing her own anecdotal experience. In her research essay, Maria moves smoothly from one idea to the next, and she expertly balances her own voice with those of the scholars. Maria showcases a confident writing voice and strong syntax. Readers are easily engaged by Maria’s exigent insights, which prompt us to consider what’s at stake when one’s native language is threatened or disempowered.

- Chrisoula Gonzales

In the United States about 12.5% of the population speaks Spanish. This is about 41.7 million people. Most people in this category are immigrants, their families come from Spanish-speaking countries, and they have decided to make a life for themselves in the United States. By having a linguistic connection to their home country, people can maintain a strong connection and sense of self-identity to their roots. But what happens as later generations become more removed from their country of origin and assimilate further into American culture?

Spanish is not just a language; it’s an identity. It is multicultural, and it ascends borders. It brings cultures together, while granting the language different personalities. With many different Spanish-speaking countries, there is no one way to speak it. Gloria Anzaldua highlights this sentiment in the text “How to Tame a Wild Tongue,” when she recollects, “Ethnic identity is twin skin to linguistic identity - I am my language” (Anzaldua 81). In her text she writes about the struggles of Chicano Spanish and the implications that it brings to her identity; she writes about the struggle of not fitting into a specific mold of Mexican or American, but Chicano—its own identity altogether—and how “Chicano Spanish sprang out of the Chicano’s need to identify ourselves as distinct people” (Anzaldua 77). She comments on the alienation that comes with being a part of both American and Mexican descent, not quite fitting into one group. Through her own experience she extrapolates that through the incessant need of conformity placed on immigrants, they are forced to choose a side or be seen as different for embracing all parts of their heritage. This creates a very specific version of shame that most people may never have to face; there is shame

in not speaking your tongue because it’s too different, and there is shame in yielding to the controlling force. But one must win, and unfortunately, English will always have the upper hand. In her text, Anzaldua brings up a very important, yet unsettling, point in response to the assimilation into the American identity when she states, “[F]or a language to remain alive it must be used. By the end of this century English, and not Spanish, will be the mother tongue of most Chicanos and Latinos” (81). This shows that as generations of immigrants continue to assimilate, their ties to their origins will be watered down in favor of the prevalent culture.

In the past few years, a new term that encapsulates this growing fear is the “No Sabo” kid. It specifically references children of Hispanic immigrants that either speak no Spanish at all, or very little with incorrect grammar. They are typically the third generation immigrants or later, and they have grown up with very little ties to their predecessors’ origins.

There is no one reason they do not know the language, but a pattern seems to suggest this was bound to happen. In Richard Alba’s article, “Only English by the Third Generation? Loss and Preservation of the Mother Tongue among the Grandchildren of Contemporary Immigrants,” he presents the dilution of Spanish throughout the generations. When immigrants first arrive in America, it is almost compulsory for them to learn English out of the need to survive; most people would not be able to make a life for themselves or their families without this skill. By the second generation, English has made its way into the home, and these children are more likely to be bilingual, which means they are still able to bridge that gap between their parents’ home country and their own new country. But by the third generation and beyond, “the prevalent pattern is English monolingualism, and knowledge of the mother tongue for most ethnics is fragmentary at best” (Alba 467). As the lineage continues, there is no longer a necessity in learning Spanish since most of the family can communicate in English, the dominant language in American society. Learning English, an act that was once done out of necessity, is now expected of new family members.

Although the term to describe those of the later generations seems harmless enough, it is meant as a means of prejudice towards those it describes. It has created an almost cruel method of further alienating those who already struggle with embracing their roots due to a lack of connection or familiarity with their background. One’s language can be intrinsically tied to their identity. For the “No Sabo” kids, not being able to speak Spanish is analogous to not being able to fully identify with their culture—the belief that they aren’t a real Latino or Hispanic is embedded in them. Ruben G. Rumbaut conveys similar ideas in his article, “The Crucible Within: Ethnic Identity, Self-Esteem, and Segmented Assimilation among Children of Immigrants,” when he writes, “For children of immigrants, that developmental process can be complicated by experiences of intense acculturative and intergenerational conflicts as they strive to adapt in social identity contexts that may be racially and culturally dissonant” (753). There is a nagging pressure placed on this generation to identify themselves, but when both sides are reluctant to accept them, how are they meant to choose? On the one hand, their family can tease them for not speaking their language, saying

they are too much of a gringo or gringa, or that they have gone too far to fit into American culture. While the other side will never claim them as their own, no matter how hard they may try to fit in because they will never be white; they have too much history. In reference to this, Rumbaut states,

Ethnic self-awareness is heightened or blurred, respectively, depending on the degree of dissonance or consonance of the social contexts which are basic to identity formation. For youths in a consonant context, ethnicity is not salient; but contextual dissonance heightens the salience of ethnicity and of ethnic group boundaries, all the more when it is accompanied by disparagement and discrimination (754)

Those in this category are hyper-aware of their lack of ties to either group, and in most cases they feel that the only person to blame for their isolation is themselves. But is this really the case?

The question must then be asked, who is at fault if these “No Sabo” kids aren’t able to feel a sense of community in their homes or the outside world? The answer seems simple enough; it’s the parents’ fault for not enforcing Spanish at home. Such a conclusion cannot be made so easily, though. There are many different factors that can affect a child’s retention of the language, if they begin to learn, or if they are even introduced to the idea of bilingualism. It’s not just the parents’ influence that affects their child’s learning. Whether the children can make the effort in their learning is dependent on culture, school environment, socioeconomic status, geography, and many more diverse factors. Rumbaut says that “[b]oth family and community contexts play important roles in determining whether children will be bilingual: when both are supportive of the use of the mother tongue, the probability of bilingualism is high; when neither is so, then the probability is low” (479). If a child is raised in an ethnically diverse neighborhood and their family speaks Spanish, then they will be more likely to not just learn the language but also have a higher connection in their self-identity with their heritage. If there are fewer of these factors, or, perhaps, none, in a child’s life, their chances of learning their mother tongue are reduced. When looking at geographical context, it becomes clear that children raised in cities that are hotbeds for Latino immigrants, such as Miami or Los Angeles, will have a greater chance of being immersed in the language; they don’t really have a chance to lose their bilingual abilities because Spanish speakers are so abundant. They go to school with them, they reside in Hispanic neighborhoods, and that sense of community is allowed to thrive, just as Alba suggests, “The communal context is also important, and bilingualism is substantially higher among children living in ethnic neighborhoods in regions where a biethnic culture has emerged” (480). But what happens the further out you go from these hubs?

The further one moves away from their home country, the weaker that tie grows, and this distance consequently strengthens the power of the assimilating force. When a person is living in a dominant culture, they feel the need to assimilate, whether one is conscious of it or not. This becomes most prevalent in the school setting with English Learning Proficiency (ELP) assessments. Though a harmless test to make sure children can communicate and advance in a school setting, it can create negative connotations about one’s mother tongue. When a child first identifies that their first language is anything other than English, schools place them in a specific classroom environment that teaches them English along with the set curriculum. From there, these children are basically separated from the rest of their classmates and required to take an ESL or ELL test annually to measure how much English they have learned. Depending on the school district, these environments can range from as young as kindergarten and even up to 12th grade. In my own personal experience, I remember having to take these tests in my early elementary years, but I never understood why. At that point in my life, I was already speaking fluent English, probably even more so than Spanish, and these assessments were so simple that it almost felt as if the school and teachers were mocking me; I had to be pulled out of class to see if I could translate a few simple words into English, and when I inevitably passed, I was expected to do the same again the next year. I had gotten so fed up with the belittling, despite that not being the intention, so requested to be moved out of the Spanish classes and into the English ones; I was finally ready to move up in my education and take on more advanced classes. Yet this sentiment was merely an illusion. Looking back, I realized I was practically getting the exact same education as the kids in the Spanish class, but because I was now learning in English, the same classes had the appearance of being more rigorous. In a child’s early years, they experience more pressure to fit in, and the school environment can truly make or break the way a child sees themselves. According to Ruben Rumbaut, “[f]or children of immigrants, that developmental process can be complicated by experiences of intense acculturative and intergenerational conflicts as they strive to adapt in social identity contexts that may be racially and culturally dissonant” (753). This can be a time when a child chooses to let go of their mother tongue in the hopes of fitting in. They may also begin to resent their identity because they are not like the rest. Thankfully, I did not lose my ability to speak Spanish or feel the need to have English dominate my vernacular in favor of fitting in with my new English-speaking classmates. This may not be the case for everyone, especially for those further removed from their first-generation immigrant ancestors.

“No Sabo” kids are the future of the Hispanic and Latino communities in America. If they are constantly being criticized and mocked for not being able to speak Spanish, then they will never learn the language or take pride in their heritage. They will never be able to accept all parts of themselves if they are shunned from that side before they can even fully contextualize what it means. Finding one’s identity is difficult enough, and when you don’t even have all the pieces, that struggle can be unimaginable. As Rumbaut asserts, “the process is

one in which all children of immigrants are engaged - defining an identity for themselves, i.e., a meaningful place in the society of which they are its newest members” (790). There are a myriad ways to convey our thoughts and feelings, but language is more than a means of communicating, it’s who we are; it’s what ties us together and what makes us all unique.

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The Irresistible Relatability of Dunkin's 2023 Super Bowl Commercial

Research Paper by
MAX BOBLEY

ENGL 1301: COMPOSITION AND RHETORIC I

Max's rhetorical analysis of Dunkin's 2023 Super Bowl commercial addresses a seemingly flippant commercial and unpacks Dunkin's subtle use of jargon, sloganeering and celebrity endorsement. Max's examination of how Dunkin' utilizes economic terminology to appeal to budget-conscious consumers is outstanding and is evidence of his scrupulous observation of the advertisement. His commentary addressing Dunkin's slogan is also noteworthy and his analysis of the celebrity cameos in the advertisement eschews trite conclusions in favor of a thought-provoking exploration of the cultural complexities of work, coffee, domestic relationships, and the American economy. This remarkable essay thoughtfully reminds readers that simple advertisements are often loaded with rich cultural context. Max's work is a masterclass in cultural studies and rhetorical analysis.

- Kirk Cochran

Dunkin' is an extremely popular American coffee and doughnut chain that generates approximately 1.4 billion dollars in yearly revenue (Zippa). Since 2006, Dunkin' has been successfully running their "America Runs on Dunkin'" advertisement campaign (Relations). In February of 2023, Dunkin' debuted their latest commercial during the 2023 NFL Super Bowl, and it was watched by approximately 113 million viewers (Nielsen). To this day, hardworking Americans still look forward to seeing Dunkin's latest commercials. This year, when Dunkin' Donuts released its latest commercial, Americans were struggling financially and emotionally due to inflation (Iacurci). Dunkin' eased consumers' worries by bringing levity in the form of beloved global celebrity couple Ben Affleck and Jennifer Lopez, whom they selected to star in their television ad. In an attempt to empathetically appeal to budget-conscious Americans, and position their brand as America's go-to choice for coffee, Dunkin' alludes to inflation through economic jargon, repeatedly invokes their witty slogan, and normalizes celebrities.

In this 30-second commercial, several customers are seen pulling up in their cars, one by one, to a Dunkin' drive-thru window in Medford, Massachusetts. As each customer approaches the window, they are greeted by Affleck, dressed in Dunkin' employee gear. He keeps busy taking orders, having fun with customers, and promoting the "Dunkin' Run" offer (Dunkin' 0:01 – 0:19). This is a new promotion that allows customers to purchase a doughnut for only \$1.00 when buying a medium or large-size coffee. Most customers recognize Affleck,

but not all. Later in the advertisement, Lopez unexpectedly arrives at the drive-thru window and scolds her husband for secretly working at Dunkin'. She demands Affleck go home, but not before commanding Affleck to "grab [her] a glazed [doughnut]" (Dunkin' 0:19 – 0:30).

As the commercial begins, Dunkin' capitalizes on current inflation by utilizing economic jargon to appeal to their frugal audience. Affleck persuasively announces, "If you get a medium or large coffee, you get a doughnut for an incremental dollar." He follows up by emphatically asking, "How can it be this inexpensive, but this good?" (Dunkin' 0:00-0:07). By choosing to describe the dollar as "incremental," Dunkin' invokes the sunk cost fallacy. This is a subconscious tactic where people are inclined to continue investing in something to protect their initial investment and avoid feeling like they may have just wasted it (Gould). Dunkin's subtle implementation of this tactic works because it presents the purchase of a doughnut as a logical next step after the initial purchase of a coffee. Furthermore, this appeal to the sunk cost fallacy becomes even more significant against the backdrop of inflation, as frugal consumers try to find more ways to save money.

According to Google's English Dictionary, provided by Oxford Languages, inflation is defined as the "general increase in prices and fall in the purchasing power of money." This means that during inflationary times in the economy, people become more budget-conscious by necessity, not by an internal desire to not to spend money. By triggering this delusion, Dunkin' connects with viewer's desire to protect the value of their initial investment (the coffee) and avoid feeling as if they wasted their money. This reinforces the notion that the additional dollar spent on the doughnut is affordable, cost effective, and reasonable. As a result, this choice of financial terminology gives viewers the impression that they are getting more for less, which is extremely attractive to budget-conscious consumers trying to survive in a time of high inflation. Additionally, when inflation affects an economy, the typical response is for people to immediately lower discretionary spending and only pay for the things they need. Although coffee and doughnuts are not necessities, Dunkin's clever slogan, "America Runs on Dunkin'," reframes these items as essential for America—and those who work to keep it "run[ning]."

Further developing their message that coffee is a vital resource for Americans, Dunkin' persistently employs their witty slogan throughout the commercial. The phrase 'America Runs on Dunkin',' deftly amplifies the importance of coffee in the American workplace. For instance, many Dunkin' customers pick up their morning coffee at the drive-thru window, presumably on their way to work. This reinforces the notion that coffee is not just a mere beverage but also an integral part of a daily morning routine for many working Americans. This aligns with the fact that coffee has been ranked as the number one beverage in America (NCA), which highlights its widespread importance. Dunkin's pithy slogan reveals an empathetic understanding of how coffee sustains and enhances workday productivity, and they strategically leverage American's inherent reliance on coffee develop credibility with viewers. The

concept of optimizing productivity resonates deeply in our capitalistic society, considering that America is known for being one of the hardest working and highest manufacturing nations, with longer workday hours and fewer vacation days compared to other countries (Miller). By consistently repeating their slogan, “America Runs on Dunkin’,” Dunkin’ motivates viewers to choose Dunkin’ coffee over other brands.

In addition to their famous catchphrase, the company also capitalizes on the image of recognizable celebrities, portraying them in a down-to-earth manner to advertise their products to working-class consumers. In an effort to establish a sense of relatability with everyday Americans, Dunkin’ normalizes celebrities to establish themselves as America’s premier coffee choice. Dunkin’s choice of Ben Affleck, well-known for his Boston roots, directly resonates with their popular demographic of blue-collar workers. This also coincides with casual research that shows the number of Dunkin’ stores per capita for each state, with the top nine states all being on the east coast. Affleck’s home state, Massachusetts, is number two on the list with one Dunkin’ store per 6,600 people (u/JaimeraCosta). Similarly, Jennifer Lopez’s widespread popularity also enhances the commercial’s national appeal. During the span of the commercial, Dunkin’ effectively utilizes Affleck’s and Lopez’s presence in two distinct ways to underscore the idea that Dunkin’s coffee is a part of everyone’s daily routine. Initially, Dunkin’ portrays Affleck willingly working as a cashier at one of their drive-thru windows. By showcasing a high-profile celebrity like Affleck engaging in a regular, everyday job, Dunkin’ seeks to bridge the gap between the average consumer and the glamorous world of celebrities. This important casting element emphasize that the idea that the need for Dunkin’ is a shared experience among everyone, regardless of one’s fame or status. Subsequently, the commercial depicts Affleck experiencing disappointment and embarrassment when Lopez pulls up at the drive-thru, catches him secretly working for Dunkin’, and demands he return home. Dejectedly, Affleck says, “I gotta go, guys.” (Dunkin’ 0:21-0:27). This scene reinforces the notion that Dunkin’ is an integral part of people’s lives, even for celebrities. It also emphasizes Affleck’s relatable reaction to being “caught” by his wife. By exaggerating these elements of Affleck and Lopez’s relationship on screen, Dunkin’ aims to establish a sense of empathy and familiarity between viewers and the Dunkin’ brand.

To further reinforce the normalization of celebrities, Dunkin’ juxtaposes everyday people with celebrities, indicating that Dunkin’ products are meant to be consumed by any demographic. For example, during the advertisement, numerous ordinary customers are engaging in typical interactions at the drive-thru, highlighting Dunkin’s role in the daily lives of average consumers. This consistent portrayal of everyday life establishes normalcy and approachability within the viewer; however, the commercial takes a compelling turn with the unexpected arrival of Lopez at the climax. Her appearance provides a striking counterpoint to the earlier scenes. While the initial customers represent the general Dunkin’ demographic, Lopez, a globally recognized celebrity, brings a contrasting element of glamour and fame. This intentional contrast captivates

viewers and powerfully illustrates Dunkin’s wide-reaching appeal. Furthermore, when Lopez appears, it marks the apex of Dunkin’s advertising strategy; the scenes with Lopez solidify the merger of the daily lives of regular customers and celebrities. Ironically, by weaving together scenes of typical customers with the Ben Affleck and the unexpected appearance of Lopez, Dunkin’s normalization of celebrity stars deepens empathy with the audience and vividly conveys the message that their products are a staple in American, regardless of a person’s social status.

At the end of the commercial, Lopez commands Affleck to “grab [her] a glazed [doughnut].” Thus, even Lopez, who is at first offended by her husband’s secretive behavior of working at Dunkin’ without her knowledge, does not let this news distract her from her original mission of obtaining Dunkin’ products for herself. Lopez’s appearance allows Dunkin’ to enhance relatability with viewers by associating not just one, but two celebrities with the daily incorporation of Dunkin’ products into their daily routines. Moreover, Dunkin’ subtly guides viewers to deduce that Affleck will fulfill his wife’s request for a doughnut, suggesting that in this context, the doughnut serves to maintain harmony in their relationship. By creating relatability, Dunkin’ sends the message that their doughnuts are reliable comfortable food that can ease stressful situations. This subtle messaging also hearkens back to the stressful economic situation that many viewers are dealing with, due to inflation, and makes customers more prone to accept Dunkin’s offer to purchase “a doughnut for an incremental dollar.”

In summary, Dunkin’ leverages economic jargon to address the inflationary concerns of their customers, making their offer of a doughnut for an incremental dollar seem like a smart, budget-friendly choice. The repeated invocation of their witty slogan, “America Runs on Dunkin’,” underscores the brand’s crucial role in energizing America’s workforce. Additionally, normalizing celebrities like Affleck and Lopez in an everyday scenario adds a touch of humor and familiarity. As a result of Dunkin’s thoughtful advertising choices, commercial resonates with consumers’ everyday experiences and subtly reminds them that Dunkin’ should be their go-to choice for coffee.

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Building Sympathy and Inspiring Action: A Rhetorical Analysis of the NFL Playbook Character Foundation's 'MENTALGAME' Commercial

Research Paper by
ANGELA VALE GONZALEZ

ENGL 1301: COMPOSITION AND RHETORIC I

Angela's essay offers a profound analysis of the NFL's 'MENTALGAME' 2024 Super Bowl advertisement by exploring its use of traditional rhetorical devices and presenting a poignant cultural commentary on bullying. Her meticulous examination uncovers the advertisement's nuanced portrayal of mental health issues among students, and Angela's thesis deftly addresses the advertisement's incorporation of situational irony, statistical data, and association. Angela's writing has clear claims and well-thought-out commentary that crafts a compelling argument. Her skillful use of transitions seamlessly connects her ideas and guides readers through her line of reasoning. Angela's essay is a remarkable example of strong critical thinking skills and thoughtful analysis; it is an exemplar of scholarly writing in English and the humanities.

- Kirk Cochran

In 2023, the Boys and Girls Club of America conducted a study of over 130,000 children and found “40% of youth reported being bullied at school” (Forbes ¶1-3). Bullying is a widespread problem that requires widescale institutional efforts, with help from individuals to help kids feel safer, happier, and stronger in their minds—how could you contribute to this vital mission? The NFL Playbook Character Foundation makes it easier for everyone to participate in this essential endeavor through their digital education program that has already helped more than 2 million students by providing them with the tools needed to create healthier relationships (About Character Playbook ¶1). The NFL Playbook Character Foundation's 2024 Super Bowl commercial, “MENTALGAME,” was aired amidst a concerning backdrop of increased bullying among children, and the heightened isolation brought about by the COVID-19 pandemic. As schools transitioned to online learning and social interactions moved predominantly to digital platforms, children became more vulnerable to the harmful effects of cyberbullying. The prolonged periods of screen time and virtual engagement during the pandemic led to heightened exposure to online harassment, and intimidation. With the rise in technology use among children, cyberbullying emerged as a pressing issue, amplifying existing concerns about bullying and children's mental health. Consequently, overall instances of bullying surged, contributing to a pervasive sense of fear, isolation, and anxiety among children. (Reynolds ¶2).

Against this backdrop, the NFL Playbook Character Foundation sought to

leverage its platform to raise awareness of the mental health challenges facing children. Through its “MENTALGAME” commercial, the Foundation aimed to appeal to the audience's emotions and mobilize action to address these urgent issues, emphasizing the importance of collective effort in safeguarding the well-being of our nation's youth. In this sympathetic commercial for educational professionals and concerned parents, the NFL Character Playbook Foundation depicts NFL players voicing children's depressive thoughts, provides statistical data about anxiety in children, and associates the NFL with compassion in order to evoke a sense of sympathy in the audience and persuade them to implement the Character Playbook program in more schools.

In the NFL Character Playbook Foundation's commercial, which aired during Super Bowl LVIII, NFL players Solomon Thomas and Saquon Barkley are shown expressing the inner struggles of children dealing with depression and anxiety. After this emotionally charged scene, NFL legend, Steve Young, provides statistical data that reveals nearly a third of children are dealing with mental health problems, then he reinforces the NFL's commitment to work on resolving this issue. The next scene showcases Steve Young assisting young adolescents in a school classroom and closes by providing information on the number of children that have been assisted through this program (Dabitch, 0:00-0:25). This scene showcases the program's effectiveness, the commercial ends with a closing scene on a black background, prominently displaying the logo of the program and the phrase “Get your school involved at no cost” (Dabitch, 0:25-0:27).

The NFL Character Playbook Foundation employs situational irony by depicting NFL players voicing children's depressive thoughts in order to cultivate a sense of sympathy in the audience and emphasize the gravity of children's mental health struggles. At the beginning of the commercial, NFL players Solomon Thomas and Saquon Barkley are shown stating depressive phrases like; “No one cares about me, so why should I care about myself” (Dabitch, 0:00-0:03) and “I feel like a failure, every day” (Dabitch, 0:10-0:13). By showing the perceived strength of athletes alongside vulnerability, the commercial elicits a feeling of sympathy and prompts viewers to recognize the gravity of mental health issues like anxiety and depression. This ironic situation underscores the stark reality that mental health challenges can affect anyone, regardless of outward appearance. After showcasing NFL players expressing depressive thoughts, the NFL legend Steve Young reveals that the authors of such phrases are children grappling with mental health issues; “These are the stories of kids struggling with mental health” (Dabitch, 0:13-0:16). These “stories” often go unnoticed, as bullying often occurs in ways that many adults may least expect. According to a survey conducted by the National Bullying Prevention Center, 42% of students who reported being bullied experienced bullying directly inside the classroom (Forbes ¶7). It is very concerning that the one place where students should feel safe is also the second most common place where they reported being bullied. The occurrence of bullying in the classroom ranked second only to hallways and stairwells, with 43% of respondents citing incidents in those areas (Forbes ¶7). In a similar twist of irony, the NFL's

decision to unexpectedly voice students' depressive thoughts through NFL players humanizes students' mental health struggles, highlights their severity, and subtly challenges assumptions the audience may have about the prevalence of bullying and their effects on mental health. This ironic revelation also exposes these issues to a wider audience of viewers, who might not otherwise be aware. This situational irony ultimately serves to evoke a sense of sympathy and emphasize the critical need for bringing awareness and action toward addressing children's mental health.

To further develop their argument that children's mental health must be taken seriously, the NFL Character Playbook Foundation provides statistical data to instill a sense of urgency about children's anxiety and depression disorders; additional data also highlights the program's effectiveness and impact. After revealing the stories of children dealing with mental health, Steve Young states "Anxiety affects nearly a third of them" (Dabitch, 0:15-0:18). By offering this statistic, the program seeks to increase understanding of the prevalence of anxiety among children. This statement also emphasizes how common anxiety is among children, and the high prevalence of anxiety evokes a sense of urgency in the audience. At the same time, this also validates the necessity for mental health assistance for children experiencing anxiety, which promotes proactive steps to address this issue in communities, schools, and households. The NFL Character Playbook Foundation makes a statement about the number of students they have helped with their program previously when the screen shows the phrase, "The NFL Character Playbook has helped more than 2 million students" (Dabitch, 0:22-0:25). By providing these statistics, the program aims to demonstrate its success and effectiveness in reaching and assisting a significant number of children. This statement serves to build a deep sense of trust and credibility with the audience by showcasing tangible evidence of the program's ability to have a positive impact on children's lives.

Although the NFL Character Playbook Foundation firmly establishes their argument with situational irony and statistics, they appeal to the audience's sense of sympathy, credibility and trust by associating the NFL with compassion. Even though this program was created in partnership with two companies; the NFL, and EVERFI, the author only references the NFL and emphasizes their association with the program in the commercial. This is evident when Steve Young states, "That's why the NFL is working to give kids the tools to be stronger and more resilient" (Dabitch, 0:18-0:22). The deliberate emphasis on the NFL's association with the program, and the increased exposure of the Super Bowl commercial, help bolster the credibility and trust of the program. By associating the program with the NFL during this prestigious football event, the author strategically leverages the league's immense popularity and influence to enhance the program's legitimacy. This is reinforced by the image of the NFL legend Steve Young helping and guiding children in a classroom full of students (Dabitch, 0:21-0:26). Associating the NFL with a mental health program for kids aims to evoke sympathy among the audience. By showing the NFL's involvement in supporting children's mental health, the author aims to connect with the audience through

sympathy, which is likely to inspire them to take compassionate action.

The commercial ends with the NFL Character Playbook Foundation's bold message, "It takes all of us" (Dabitch, 0:27-0:30), resonating with a sympathetic audience and emphasizing the collective effort required to address children's challenges with mental health. By depicting NFL players voicing the inner struggles of children and providing statistical data on the prevalence of anxiety disorders among young people, the commercial underscores the urgency of the issue and the need for collaborative action. Through this rhetoric, viewers are not only made aware of the severity of mental health struggles among children, they are also empowered to take action. The rhetor's call to action urges the audience to implement the Character Playbook program in schools, emphasizing the potential benefits of proactive mental health support for children. By providing tools and resources to children at school, the program seeks to foster healthier relationships and create a more supportive environment for children facing mental health challenges. This call to action extends beyond mere awareness-raising; it mobilizes individuals to actively participate in addressing the issue at hand.

By heeding this call to action, individuals can contribute to increased awareness, understanding, and support for children's mental health needs. Beyond implementing the Character Playbook program in schools, viewers are encouraged to advocate for mental health awareness and resources in their communities, fostering a culture of support and understanding. Through collective effort and empowerment, we can work towards a future where all children have the resources and support, they need to thrive emotionally and mentally.

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Responses to the Fentanyl Epidemic

Research Paper by
MIALEXA MARIAE CRUZ

GOVTH-2306: TEXAS GOVERNMENT (HONORS)

Drawing on four semi-structured interviews with high-level policymakers, Mialexa Cruz integrates her primary data with an impressive body of published work to deliver an important research paper on the fentanyl epidemic. Cruz's detailed analysis is founded on a comparative case study methodology, an approach that requires both substantial knowledge and access to equivalent information across two areas. Analyzing statewide mitigation approaches to the fentanyl crisis in Texas and Colorado, the success of Cruz's research rested on her ability to gain interviews with frontline policymakers in both states. It says much about Cruz's initiative and professionalism that she was able to achieve this feat as a first year LSC student. Her final research paper exemplifies methodological awareness, painstaking research, categorization, primary data collection, and skilled presentation.

- Fiona Ross

The Fentanyl Epidemic

As of 2022, fentanyl fatalities accounted for 70% of the 110,000 drug overdose deaths in the US, leading the CDC to deem it the primary cause of death among 18 to 45 years old (DEA, 2023). While fentanyl is a federally regulated Schedule II-controlled substance, government databases show substantial variation in fentanyl-related death rates across the states (US Department of Justice, 2023). In 2020, fentanyl overdose deaths accounted for 23.95% of all drug poisoning deaths in Texas compared to approximately 67.67% in Colorado (Fentanyl Trends, 2023; Whittington et al., 2021). By the end of 2022, fentanyl fatalities accounted for 44% of all overdose deaths in Texas and 51% in Colorado (Aguilar, 2023; CDPHE, 2022). While fatality rates remain lower in the Lone Star state, possibly owing to population size and fentanyl related laws, Texas's rates show an alarming 20 percent increase to Colorado's a 16 percent decline.

The above data suggests differences in the states' approaches to the epidemic may play a role in the disparity of fentanyl death rates to annual overdose rates in each state. Existing research has investigated policies enacted in the peak stage of the epidemic; however, their results have notable inconsistencies. Furthermore, while quantitative data indicates the scale of the problem, there is a lack of qualitative research concerning the relative effectiveness of multi-pronged state solutions and none specifically comparing Texas and Colorado. To help fill this

gap, this paper conducted four primary interviews with high-level policymakers to evaluate the logic and effectiveness of multiple strategies adopted by these two states, focusing on healthcare, education, harm reduction, and law enforcement.

Methodology

This research first addresses the current significance of the fentanyl epidemic nationwide and its statewide impacts in Texas and Colorado. The following critical literature review consists of a brief history of fentanyl prior to and after COVID-19, federal responses to drug epidemics, and a comparative analysis of solution strategies. This includes fentanyl medication availability, telemedicine solutions, penalty enhancements, and harm reduction policies.

Subsequently, the paper offers a detailed review of the rich, qualitative evidence based on four investigative interviews. The interviewees include one fentanyl expert, two drug enforcement experts, and one lawmaker, allowing for multiple perspectives relating to the policy and political dimensions of addressing the epidemic: Senior Communications Professional of the Colorado Consortium for Prescription Drug Abuse Prevention, Michael Davidson, the Director of Houston High-Intensity Drug Trafficking Areas, Houston, Texas, Mike McDaniel, a Drug Intelligence Officer in HHIDTA, Wendell Campbell, and lastly, Texas House of Representatives lawmaker Gene Wu who has sponsored and critiqued fentanyl bills. All interviews were conducted between November 3-10, 2023. Ultimately, this methodology was best suited to reveal an in depth understanding of optimal and possible solution alignments across the two states as well as evaluate the relevancy of the wider literature to Texas and Colorado.

Literature Review

Researchers Elizabeth Gardner and her co-authors credit Dr. Paul Janssen for synthesizing fentanyl, a potent analgesic, in the 1960s (2022, p. 57). Initially imported from China, the drug soon found a way to infiltrate the US through smuggling operations along the U.S.-Mexico border as well as illicit pill mills that spread across the country. The supply chain was soon varied and complex, preventing singular solutions. As Gardner et al (2022, p. 61) acknowledge, "border closures reduced trafficking operations" during 2020, yet fentanyl fatalities surged nationwide. In short, solving this epidemic is not as simple as closing the southern border and doing so is unlikely to significantly impact the flow of fentanyl in proximate states (Gardner et al., 2022, p. 61).

Understanding policy failure is essential to identifying viable solutions. From the late 1970s to the early 2000s, numerous researchers published papers questioning ineffective federal opioid policies and the growing overreliance on opioid medications that was fueling the surge in both abuse and misuse (Jones et al., 2018). A policy solutions study led by Caulkins and Humphreys (2020) provides insight as to why drug policies established before the opioid crisis in the 1960s have ceased to be effective in the United States. The authors claim that prevention programs in educational institutions were only mildly effective during

the era of heroin use in the 1960s and 1970s and that wider alternatives should be applied to the opioid crisis, such as enhanced monitoring and prosecution of the legal opioid industry as well as illicit drug cartels (Caulkins & Humphreys, 2020, p. 3). They also recommend that healthcare systems should be rapidly redesigned to adjust to the opioid crisis.

These studies imply that federal policy can, for better or worse, impact the fentanyl epidemic. As a response to the continuous increase in opioid-related deaths, the federal government enacted the Drug Addiction Treatment Act of 2000. However, the national opioid epidemic persisted despite additional policy changes. To tackle the high number of opioid deaths, former President Donald Trump signed the SUPPORT Act in 2018, consisting of Medicaid provisions and programs for overdose prevention, intervention, rehabilitation, and criminal punishment (Musumeci & Tolbert, 2018). Yet, the US Department of Health and Human Services' most recent data shows a subsequent increase in opioid mortality rates following what appeared to be a pattern of stabilization in 2018 and 2019, leading researchers to investigate the impact of the COVID-19 pandemic.

The COVID-19 Pandemic's Correlation to the Fentanyl Epidemic

Before the COVID-19 pandemic, synthetic opioids (primarily fentanyl) gradually doubled the number of annual overdose deaths in the US within the nine years from 2010 (38,329 deaths) to 2019 (70,360 deaths) (Ghose et al., 2022). However, from 2019 to 2021, the COVID-19 pandemic exacerbated synthetic opioid deaths nationwide with a 125% increase (CDC, 2023).

The statistical effects of the pandemic in Texas and Colorado can be seen in Figures 1 and 2 below. The rise of fentanyl death ratio to overdose deaths in Texas rose from approximately 11.47% in 2019 to 23.95% in 2020. Figure 2 shows the results for Colorado, which experienced an increase from 50.68% in 2019 to 67.67% in 2020 (Fentanyl Trends, 2023; Whittington et al., 2021).

Figure 1 indicates fentanyl rates compared to annual overdose rates from the Texas Department of State Health Services (2023).

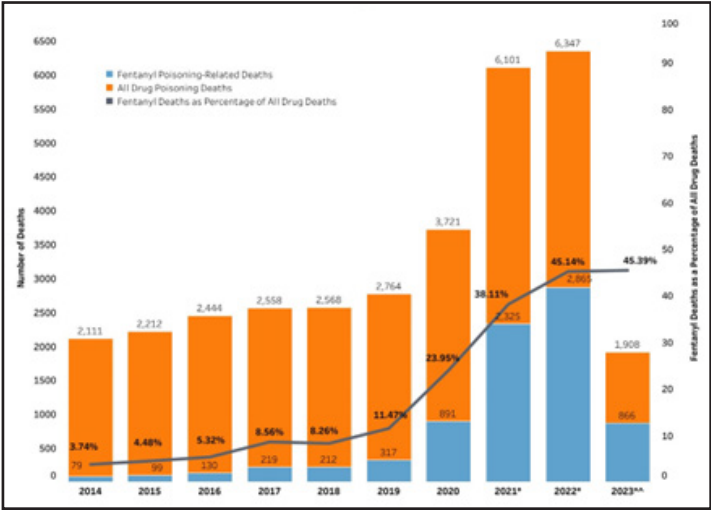
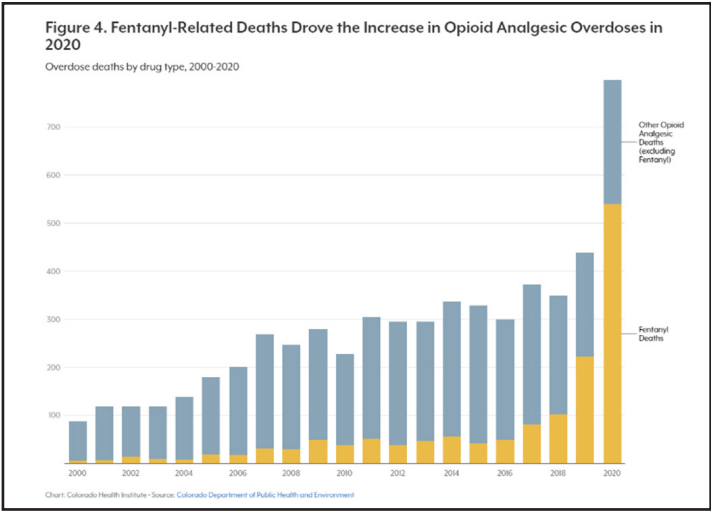


Figure 2 indicates fentanyl rates compared to annual overdose rates from the Colorado Health Institute (2022).



Accounting for the surging numbers, researchers Rina Ghose et al., explain how the lockdown shifted in-person interventions to virtual ones, limiting physicians' control over medications. The authors also note how social distancing increased the likelihood of an overdose during isolated drug use. Furthermore, since the government's focus was firmly on mitigating COVID-19, attention on synthetic opiate harm reduction and medication programs was limited (Ghose et al., 2022). Most existing research on fentanyl laws also note how pandemic impacted the necessary research. Consequently, the most recently published results are based on limited census data, geography, and demographics.

Fentanyl Medication Availability

When policymakers from Colorado passed crucial laws relating to fentanyl medication availability, scholars Amura et al. (2022) identified a direct correlation to fentanyl fatality rates. In 2017 and 2019, Colorado Senate bills 17-074 and 19-001 extended the duration of the MOUD (medication for opioid use disorder) program and expanded access to opioid medication, such as naloxone and buprenorphine, to all public domains in several counties (Amura et al., 2022, p. 2). The authors found substantial benefits to these programs in reducing opioid abuse levels.

In 2023, Texas passed two broadly similar fentanyl medication bills: Texas Senate Bill 867 and Senate Bill 629 (*US Official News*). Like Colorado's bills, their purpose was to increase access to the lifesaving opioid antagonist Narcan throughout educational institutions owing to the inconsistent and steadily declining supply from the Texas Targeted Opioid Response (TTOR) program (*Fentanyl Trends*, 2023). Despite clearing Texas' biennial legislature years after the fentanyl crisis had taken hold in the state, the legislation remained limited to educational and healthcare institutions. Due to its recent enactment, the impact of the legislation on opioid fatalities remains unknown. In contrast, the legislation

passed four to six years prior in Colorado boasts solid evidence of its effectiveness in reducing fentanyl death rates. Despite these achievements, it is important to note that fentanyl death rates remain substantially higher in Colorado than Texas.

Telemedicine Consultations

Two contrasting studies conducted by Cara Hall from Texas (2022) and Anderson et al. from Colorado (2022) regarding telemedicine availability analyze its correlation with the decline in opioid use disorders and fatalities. Hall investigates both her hypothesis and null hypothesis through a regression analysis of data across all 254 counties in Texas, finding that the availability of telemedicine services has no statistically significant relationship with opioid mortality rates in the state (Hall, 2022, p. 61). Contrary to Hall's results, Anderson et al. conclude that telephone consultations between an opioid specialist and a trained medical care provider led to a decline in opioid exposure and overdose deaths in Colorado. The authors find that "87% of the members had their monthly average morphine milligram equivalent reduced to less than 200" after approximately six months (Anderson et al., 2022, p. 1). Although Hall's Texas study failed to uncover a correlation, this may have been due to the low quality and lack of investment in Texas' telemedicine programs. Consequently, an increase in accessibility and reduced stigma of telemedicine "could decrease the number of fatal overdoses in Texas" (Hall, 2022, p. 31). Notably, Texas did not prioritize the fentanyl crisis until the COVID-19 era. Still, it should be reiterated that the state's rate of fentanyl deaths remains lower than Colorado's.

Fentanyl Incarceration Policies

Penalty enhancements involving fentanyl incarceration laws are a core category in fentanyl policies. Authors Cranney (2022), Jurecka et al. (2023), and Savinkina et al. (2023) contribute similar stances on this subject and investigate its impacts on fentanyl death and misuse rates in Colorado. Cranney's research examines how the Colorado House Bill 19-1263 contributed to the rise of fentanyl deaths from July 2018 to October 2021 because it enforced fentanyl possession as a "misdemeanor instead of a felony" (Cranney, 2022, p. 1). Ultimately, he estimates that the law was responsible for 600-700 casualties, noting the strong correlation between the legislation's passage and the rise in prison fatalities (Cranney, 2022, p. 6). Furthermore, Jurecka et al. state that Colorado House Bill 22-1326 significantly evolved the criminal penalty of possessing 1g of fentanyl to a level 4 felony in response to the increase in fentanyl deaths (2023, p. 1).

In addition, Savinkina et al.'s study estimates the long-term effects of stricter fentanyl possession laws on the opioid epidemic and incarceration rate. When the researchers reduced the drug possession threshold in their simulation model from 4g to 1g, it increased opioid overdoses and imprisonments (Savinkina et al., 2023). They also note that prison intervention programs alleviated some of these variables

but did not have sufficient impact on them. Finally, the authors conclude that increasing the severity of criminalization policies exacerbated opioid-related fatalities. Their analysis implies this is a likely factor in the high fentanyl mortality rates in Colorado.

In contrast to the Colorado-based studies, a testimony from Sarah Reyes, a Texas Center for Justice and Equity policy analyst, to the House Public Health Committee explains the significance of the fentanyl crisis in Texas and incorporates recommendations to lessen the stringency of incarceration policies. She prioritizes proposals moving towards drug use decriminalization and eliminating "substance abuse felony punishment programs" to enhance the existing harm reduction policies (Reyes, 2022, p. 3). In a similar vein, she favors lawmakers enacting legislation prohibiting "bookings for Class C misdemeanors and citation-eligible offenses" as current policies have led to long-term adverse effects on employment and necessities (Reyes, 2022, p. 3). A further recommendation by Reyes concerns expanding Texas Senate Bill 292 to reduce incarcerations for those with mental illness and SUDs (Substance Abuse Disorder). Contrary to Colorado, there has yet to be research conducted on Texas House Bill 6 and Texas Senate Bill 645 relating to the increased criminal penalties for fentanyl, including its designation as murder on death certificates.

Harm Reduction

Fentanyl-related harm reduction policies in Texas and Colorado have been investigated by a limited number of studies. Jurecka et al.'s (2023) article highlights several harm reduction programs, including "syringe service programs (SSPs), overdose education and naloxone distribution (OEND), and overdose prevention sites (OPSs)." The authors explain their cost-effectiveness as individual solutions (Jurecka et al., 2023, p. 2). They also discuss the importance of the MOUD program in Colorado, which had previously been analyzed by Amura et al. and Sorrell et al., and how program interaction impacts implementation challenges. Likewise, notable barriers to harm reduction policies in Texas have been investigated by Claborn et al. (2023). Obstacles include negative stigma and discriminatory behavior within the healthcare and incarceration systems towards drug users, lack of treatment distribution to minority groups, unspoken abstinence-only philosophy in the treatment and recovery settings, and a lack of government funding (Claborn et al., 2023, pp. 7-8).

Both Claborn et al. and Sarah Reyes mention the inadequacy of Good Samaritan Laws, such as the Texas House Bill 1694, which excludes protection from prosecution for those who have a criminal record or drug users who contact 9-1-1 for a drug-related emergency (Claborn et al., 2023, p. 9; Reyes, 2022, p. 4). Experts suggest that expanding protections are crucial to improving fentanyl harm reduction policies. Additionally, an article by Dr. Wagner (2023) discusses how low health literacy rates and patient safety guidelines contribute to drug-related harm. Wagner states that 25% of those prescribed opioids misunderstand their medication instructions and misuse them (NIDA, 2015). To combat health illiteracy, programs such as Healthy People 2030 and One Pill Kills (Texas Health

& Human Services Commission, 2023) have been established for healthcare providers to improve patient understanding and selfcare. The SaferCare Texas program also responds to Texas Senate Bill 867; its mission is to train individuals to utilize lifesaving Narcan alongside improving patient health literacy (Wagner, 2023). However, based on current state laws, there is no guarantee of consistency in the distribution of Narcan across state lines.

Since fentanyl falls under the category of synthetic opioids, scholarly sources reference it alongside opioid monitoring programs and disorder services that directly alleviate fentanyl abuse and overdose rates. According to Ighodaro et al., the over-reliance on opioids to treat chronic pain evolved into illicit fentanyl addiction as increased opioid control was enforced. The authors state that opioid abuse rates in Texas have been historically low compared to other regions, including Colorado (Ighodaro et al., 2019, p. 2). Cance et al. (2023, p. 317) make a similar claim regarding the exposure of fentanyl to drug users in Austin, Texas. However, Ighodaro et al. advise that reporting rates should be analyzed cautiously due to possible errors with under-reporting and self-reporting. The authors also suggest that Texas should continue to monitor prescription fentanyl use alongside misuse of pharmaceutical and illicit fentanyl (Ighodaro et al., 2019, p. 7).

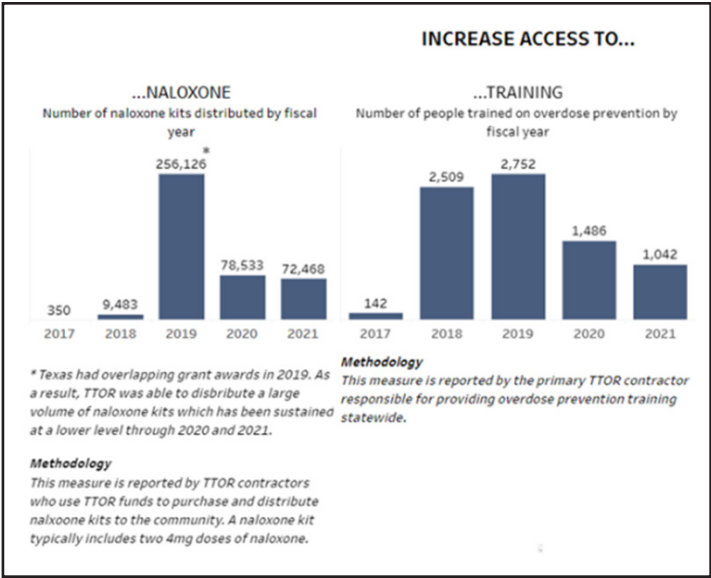
With changes in patient addiction behavior have come changes in prescription opioid distribution monitoring. As opioids with a pattern of high misuse in a region have been reduced, the number of alternative opioids distributed have often escalated. Such changes include “increases in buprenorphine and codeine but decreases in meperidine and hydrocodone” (Ighodaro et al., 2019, p. 9). A study by Jaffe and O’Keefe indicates that increased access to buprenorphine could lead to the synthesis of new

pharmaceuticals, thereby alleviating the fentanyl epidemic. The federal Drug Addiction Treatment Act of 2000 legalized trained medical workers in the US to be exempted from certain federal regulations, including the requirement to have a Drug Enforcement Administration license to distribute buprenorphine to patients (Jaffe & O’Keefe, 2003, p. 1).

Likewise, a study by Sorrell et al. discusses how the MOUD program in Colorado allows doctors to provide buprenorphine and naloxone to their patients. Buprenorphine is an opioid substitute predominantly supplied in Colorado to mitigate opioid addiction levels, while naloxone is an opioid antagonist meant to counteract an overdose. Unlike MOUD, the Texas Health and Human Services Commission (2016/2023) distributed primarily naloxone (NARCAN) through the Texas TTOR program to prevent fentanyl overdoses and reduce deaths. However, its distribution pattern shows a sudden peak in 2019 and a drastic drop during the following years, similar to the decline in the number of individuals trained in preventing overdoses and providing medications, as seen in Figure 3 on the previous page.

Since the fentanyl epidemic is relatively recent, limited research and regulations are in place to address it and recommendations are often founded on general opioid data. Consequently, several fentanyl research gaps remain. This study is designed to advance existing research concerning state government responses to the fentanyl epidemic in Texas and Colorado. Much of the existing research primarily focuses on quantitative data. The following qualitative analysis adds important detail and an in-depth understanding to large-N data studies by drawing on expert interviews.

Figure 3:
Texas
Health
data
provided
by TTOR
contractors
(2023,
Sept. 7)



Summary of State Policies and Programs Referenced in the Literature Review

	Texas	Colorado	Key Points
Fentanyl Medication Availability	SB 867 and 629 One Pill Kills	SB17-074 and SB19-001 MOUD Program	<ul style="list-style-type: none">The bills from Colorado were enacted six to four years earlier than the bills from Texas.Unlike the Colorado bills that expanded the MOUD program throughout public institutions in several counties, the bills from Texas are limited to only public educational institutions.Texas and Colorado prioritize fentanyl-related education and awareness campaigns through programs such as One Pill Kills in Texas and the Colorado Consortium for Prescription Drugs Prevention.

Telemedicine Consultation Programs	In Texas	In Colorado	<ul style="list-style-type: none"> In Texas, scholars conclude that the programs did not correlate with opioid death rates (Hall, 2022, p. 61). In contrast, researchers from Colorado conclude that their programs led to a decline in opioid fatality rates (Anderson et al., 2022, p. 1).
Fentanyl- related Incarceration Policies	Texas SB 292	Colorado HB 19-1263	<ul style="list-style-type: none"> In Colorado, existing research shows a strong correlation between the bill and increased prison fatalities (Cranney, 2022, p. 1). No existing research has been found based on the recently enacted laws in Texas. They are more focused on reducing incarcerations for those with mental illness and addiction.
	Texas HB 6	Colorado HB 22-1326	
Harm Reduction	Texas SB 867	Colorado HB 22-1326	<ul style="list-style-type: none"> Negative stigma, abstinence philosophy, and lack of funding are the notable barriers for harm reduction in Texas. In Colorado, implementing and improving harm reduction programs is also difficult. However, these programs are noted to be cost-effective if implemented individually. Better health literacy rates in Texas are prioritized. Opioid monitoring programs directly affect the levels of fentanyl abuse and overdose death rates in both states.
	Texas HB 1694	MOUD Program	
	SafeCare		

Analysis

Although the fentanyl epidemic began six years before the COVID-19 pandemic, its prioritization has been slow, with several key initiatives only adopted between 2020 and 2023. It is a complex issue that requires multifaceted approaches across governmental sectors, including healthcare, harm reduction, education, law enforcement, and criminal justice. The importance of a multi-step mitigation strategy was emphasized by all four interviewees in this study: Michael Davidson, Mike McDaniel, Wendell Campbell, and Gene Wu.

Davidson, an expert from Colorado, emphasized that harm reduction centers and “getting people into treatment if they have opioid use or substance use disorders into the public health system is crucial” (personal communication, November 3, 2023). Mike McDaniel noted the importance of law enforcement adapting and redesigning their strategies to mitigate the crisis, arguing they “can no longer just throw out arrest and seizure stats and quotes...and take the same approach of just getting dope off streets” (personal communication, November 7, 2023). Campbell supported the multipronged nature of solutions, stating “it has got to be a federal approach to it as well because of the resources the federal government can apply to that” (personal communication, November 7, 2023).

Campbell supported the multipronged nature of solutions, stating “it has got to be a federal approach to it as well because of the resources the federal government can apply to that” (personal communication, November 7, 2023). Reflecting the complexity of the policy challenge, McDaniel and Campbell’s organization, the HHDITA, now closely coordinates with state officials regarding mitigation strategies such as drug awareness, demand reduction, increasing education, and no locks on distribution.

From a policy and political perspective, Texas House Member Gene Wu suggests that mitigation strategies should be dealt with caution because “just like the crack epidemic back in the 80s and early 90s, there is a lot of intentional deception for people to use this as a political weapon...politics gets in the way of good policy” (personal communication, November 10, 2023). Based on Wu’s responses, the fentanyl epidemic is also a legislative issue because of the criminalization of drugs, as it led to the criminal justice system primarily handling drug problems instead of the healthcare system. He states that the issue should be the priority of the healthcare system with a focus on harm reduction (personal communication, November 10, 2023).

The COVID-19 Pandemic’s Correlation to the Fentanyl Epidemic

In line with the literature review, the effects of COVID-19 on the fentanyl epidemic were observed by interviewees Davidson, McDaniel, and Campbell. For instance, Davidson from Colorado stated that “when fentanyl was emerging, the death toll was increasing through 2018 and 2019. However, in 2019, in 2020, it surged. I think it went from 400 to over 900 fentanyl-related deaths. That certainly makes it feel like there was a correlation to COVID-19” (personal communication, November 3, 2023). Similarly, Drug Intelligence Officer Wendell Campbell emphasized the higher levels of fentanyl abuse during lockdown, “specifically as it came out into the community and started to get into the hands of individuals sitting at home” (personal communication, November 7, 2023). The responses of the above interviewees closely aligned with one another, confirming that experts from strikingly different states observed similar impacts of the COVID-19 pandemic on fentanyl-related overdoses.

Fentanyl Medication Availability

With respect to fentanyl medication availability, the interviewees’ responses implied that increased access to opioid antagonists such as Narcan were successful in reducing overdoses. Wendell Campbell from Texas stated that, “the application of Naloxone education and having it on campus is very significant, very positive...a move that was very well done by the Texas state legislative body” (personal communication, November 7, 2023). However, Texas House Representative Wu discussed that measuring success depends on the ultimate goal since expanding medication access to schools “might save a few people’s lives. If the goal is to reduce the number of drugs used, putting Narcan in schools or anywhere else is not going to do it, but if the objective is to save someone’s life, have people die when they can be treated, then I think it will be

successful” (personal communication, November 10, 2023). He further supported his statement by suggesting that school is usually not the place where students consume fentanyl and overdose; they are more likely to do it alone in an isolated area.

Likewise, Davidson from Colorado explained that before expanding medication access, “people were using drugs alone, which means no one would have noticed them overdosing, and no one had a chance to provide naloxone” (personal communication, November 10, 2023). To counter overdose deaths, Colorado has distributed overdose-reversing medications to not only educational institutions but other public organizations such as churches. At present, naloxone is accessible in local pharmacies in both Colorado and Texas without the requirement of a prescription or by contacting organizations such as the “Texas A and M Opioid Task Force,” which works with the HHIDTA (W. Campbell, personal communication, November 7, 2023).

Telemedicine Consultations

According to the research discussed in the literature review, telemedicine consultations reduced overdose rates only in Colorado (Anderson et al., 2022, p. 1). It is possible that Colorado’s less stringent drug possession laws affected these results by reducing the stigma drug users confront in their healthcare system. In Texas, drug intelligence officer Wendell Campbell emphasized the need for “treatment and individuals being able to access harm reduction services to help them deal with some type of opioid abuse issue on various levels” (personal communication, November 7, 2023). Unfortunately, the stigma in the healthcare system has an indirect influence on telemedicine consultations in the Lone Star state; drug users are still less likely to seek help or medication from a medical provider, whether it be through a call or in person. This is a significant barrier to the effectiveness of telemedicine in Texas. Reducing stigma requires concentrated effort across a range of practitioners and possibly runs counter to Texas’ traditionalistic political culture. Colorado’s telemedicine programs may provide a model for Texas, but programmatic advances need to be accompanied pre- and post-implementation by attitudinal ones.

Harm Reduction

Following on from the above, two obstacles to harm reduction services in Texas and Colorado are attitudes and finances. Focusing on the balance between harm reduction and criminalization strategies, Gene Wu suggests that “if somebody has a drug issue, but it’s not escalated to something where they’re committing crime, then why not let people handle that on their own or handle it in a medical setting and not a jail or prison setting” (personal communication, November 10, 2023). Added to this, wider attitudes regarding drug users need to shift. Like the stigma affecting telemedicine, the stigma surrounding drug users hinders them from seeking out harm reduction services, including treatment, prevention, and recovery.

A further notable barrier is funding. Davison stated that “more money is going into public awareness campaigns, but there’s always an issue of funding.

In the state, there’s always a reluctance to raise taxes or revenue. There are a lot of demands in public health, so many things need attention. We don’t have infinite resources” (personal communication, November 3, 2023). When these barriers are overcome, positive outcomes are observed. As McDaniel stated, “we thought we’d never be partnered up with treatment and prevention. And I’m telling you, it made us stronger in our coalitions and our approach to this threat” (personal communication, November 7, 2023). Texas Representative Wu highlights the lack of funding for harm reduction programs in prisons: “The one part where the justice system can’t deal with it is putting people on probation... hopefully getting them treatment when they’re in jail or prison, but right now in Texas, because of the budget cuts, a lot of the prisons aren’t even doing drug rehabilitation” (personal communication, November 10, 2023). Ultimately, while complex, multifaceted policy problems like the fentanyl epidemic require consistent long-term investments, demands for financing are in constant competition with more politically appealing policy priorities.

Fentanyl Testing Strips

One unique form of harm reduction is fentanyl testing strips. However, a stark contrast exists between how the approach is perceived in Texas and Colorado. Testing strips are currently legal under federal law and widely distributed in Colorado yet remain criminalized in Texas (Texas House Bill 362 overwhelmingly voted 143 yeas to 2 nays to decriminalize but the bill died in the Texas Senate). According to Texas Representative Gene Wu, “There’s no clear reason why it died. That’s sort of the power of how the Senate works” (personal communication, November 10, 2023). Note that Wu also supported Texas HB 4058, which similarly died in the Texas Senate in 2023, expanding fentanyl medication to public and private schools and higher education institutions as well as at off-campus events.

Contrary to Texas’ resistance to fentanyl testing strips, Davidson, an expert from Colorado, believes they have the potential to slow or delay the epidemic if placed in the hands of those capable of using them correctly (personal communication, November 3, 2023). He asserted they could save the lives of those who overdose during a public event, such as a concert or a festival. Despite this potential, opponents in Texas raised concerns about their misuse as well as the fear that they inadvertently facilitate or condone fentanyl use. According to Campbell, “some people would be putting their hope into a test strip that gave a false positive... or maybe they only tested a portion of the pill and not the whole pill during the testing process” (personal communication, November 7, 2023). In essence, the debate over testing strips reflects lawmakers’ underlying political predispositions, institutional politics and, relatedly, how legislators calculate the costs and benefits of harm reduction strategies.

Fentanyl Incarceration Policies

With regard to increased penalties for fentanyl possession, studies from Colorado found that penalty enhancements increased prison fatalities (Cranney, 2022, p. 6).

In Texas, published research has yet to emerge on the penalty enhancement bills. Instead, policymakers have emphasized reducing incarcerations for those with mental illness and addiction. Davidson from Colorado does not “believe in the lock them up approach, and you can’t just arrest your way out of this crisis” (personal communication, November 3, 2023). He notes multiple problems with the approach, specifically treating second-hand overdoses as murder, including the fact that individuals might not know the drugs they are sharing are tainted with fentanyl. Likewise, Gene Wu voted against Texas House Bill 6 and Texas Senate Bill 645 owing to the lack of research proving that penalty enhancements are effective in changing an illicit fentanyl user’s behavior. In his words, “people who do drugs simply do not think about what the penalty is for something before doing drugs” (personal communication, November 3, 2023). Overall, the interviewees in this study agreed that fentanyl penalty enhancement bills do little to mitigate the crisis and, controversially, likely exacerbate the problem.

This does not imply that law enforcement is peripheral to tackling the fentanyl crisis. Far from it. Officials such as McDaniel and Campbell, who work for the Houston High Intensity-Drug Trafficking Area, are essential to “targeting, identifying, tracking those organizations and removing counterfeit pills laced with fentanyl and or other drugs” (personal communication, November 7, 2023). However, McDaniel noted that the level of threat the fentanyl epidemic posed to communities “required law enforcement to take a whole new approach and a different perspective of how to do it” (personal communication, November 7, 2023). Since the beginning of the epidemic, law enforcement has played a significant role in reducing the supply of fentanyl-laced drugs.

Ultimately, state policymakers can apply these multifaceted solutions with varying degrees of commitment and investment. The acceptability of each strategy varies with state politics, policy concerns, and institutions. According to the research literature and the four interviews conducted for this study, policymakers are best advised to prioritize a combination of healthcare, education, harm reduction, and law enforcement solutions in addressing the fentanyl crisis, with a reduced focus on penalty enhancements and closer attention to the stigma discouraging illicit drug users from accessing resources.

Conclusions

The fentanyl epidemic will continue to be addressed at both federal, state, and local levels of government. It is an issue impacted by international criminal organizations down to municipal school boards. Statewide public policies are foundational to tackling the crisis, yet they are nested within, and reactive to, a wider set of variables impacting the supply and demand for fentanyl. Even within a given state, politics and institutions impact the evaluation of competing solutions. Consequently, a one-size-fits-all solution is unlikely to be adopted in Texas and Colorado. The selective state policies discussed in this paper reflect the politics of policy advocacy and opposition, not simply opioid addiction rates. Yet policy sharing can and does occur across state boundaries and accurate evaluation of state-based solutions remains essential. While further research is

required to assess recently enacted fentanyl laws in Texas, data from the Colorado Department of Public Health and Environment (2023) indicates the fentanyl-related fatality rate has begun to stabilize, possibly due to the state’s earlier attempts to mitigate the epidemic. Still, rigorous policy evaluation is a long-term process, and the effectiveness of multipronged strategies requires robust longitudinal data. Research inconsistencies and interpretations must be supplemented with practitioner perspectives and experiences, such as those included in this paper. Ultimately, if and when best practices are identified, the fentanyl epidemic will require resources and that is a political choice.

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The Impact of Artificial Intelligence in Radiology: Improving Diagnosis and Patient Care

Research Paper by
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RADR 2309: RADIOGRAPHIC IMAGING EQUIPMENT

In her research paper, Tanja Martin relies on her knowledge and experience as a student radiographer to explore the impact of AI in patient care and improving diagnosis. Following her introduction, she discusses artificial intelligence and its implications on our daily lives. She proceeds to differentiate between AI, machine learning, and deep learning. She then proceeds to describe the use of artificial intelligence in assisting radiologists with accurate diagnosis, improving workflow, and transforming personalized medicine. Tanja's strong sense of organization and attention to detail as she discusses the use of AI in medical imaging makes this an excellent example of writing that is common in medicine, specifically in medical imaging.

- Rowdy Volmer

Abstract

Artificial intelligence (AI) is revolutionizing diagnostic imaging, offering substantial enhancements in diagnostic accuracy, workflow efficiency, and personalized medicine to improve overall patient care. This paper explores the transformations that have already occurred in the context of radiological practices as the field is facing an increasing demand for fast and precise diagnoses. The introduction defines machine learning and deep learning. The literature review study demonstrates significant improvement in radiologists' diagnostic accuracy. A case study from a Massachusetts hospital illustrates how AI streamlines radiology processes in workflow, prioritizes urgent cases and automates routine tasks.

Additionally, integrating artificial algorithms into personalized medicine is discussed, emphasizing its ability to predict treatment responses based on collected patient data. While acknowledging the promising benefits of Artificial Intelligence, the paper also addresses ethical concerns related to data privacy, transparency, and regulatory compliance. In conclusion, the paper recognizes the impressive potential of AI applications in diagnostic imaging for the future if emerging challenges are acknowledged and addressed quickly and proactively.

Introduction

When it comes to technology, artificial intelligence (AI) is being mentioned more frequently nowadays. We commonly hear terms such as "AI," "machine learning," or "deep learning" and are left to wonder what the difference is. Artificial intelligence is a field of developing computer systems that can

complete tasks that usually require human intelligence. These tasks include learning from experience, problem-solving, recognizing patterns, and adapting to new situations. Machine learning is part of AI, a subset system that can learn and improve from experiences without specific programming. It is, however, considered a low-accuracy AI system. Deep learning is a subset of machine learning that uses artificial neural networks inspired by the human brain structure. Compared to machine learning, deep learning is considered a high-accuracy AI system. In either system, computer intelligence uses complex algorithms to learn, solve problems, and adapt.

Artificial intelligence substantially impacts many aspects of our lives, and healthcare is no exception. Intelligent technology integration significantly influences healthcare in multiple ways, including radiology. Modern medicine strongly relies on radiologists to interpret medical imaging. Available modalities, such as radiography, computed tomography, magnetic resonance imaging, and ultrasound, contribute unique insights into patients' conditions, diagnosis, and treatment planning. The demand for radiology services is rising, and radiologists must produce fast, consistent, and precise diagnoses more often. Artificial expert systems are already being utilized to address this potentially stressful issue. The current applications of complex computer algorithms are advancing radiologists' skills, boosting the accuracy of diagnosis, improving workflow, and transforming personalized medicine.

Literature Review

Enhancing Diagnostic Accuracy

According to ("AI algorithm with high diagnostic accuracy helps improve lung cancer detection," 2023), one of the most noteworthy impacts of machine Intelligence in radiology is enhancing diagnostic accuracy. Algorithmic systems are primarily utilized to detect cancerous lesions in breast, colon, and lung tissues, among other areas. Radiologists face various human factors, such as stress, distractions, and fatigue, which may influence their interpretations of X-ray images. Computer-aided algorithms, however, work continuously and consistently to identify patterns and abnormalities that the human eye could overlook. ("AI algorithm with high diagnostic accuracy helps improve lung cancer detection," 2023) describes a study conducted by researchers at Seoul National University on how Automated Intelligence assisted in detecting lung cancer on chest X-rays. The author highlights how expert digital systems influenced and enhanced radiologists' performance and diagnoses. The study consisted of 30 participants (radiologists and residents) who were asked to evaluate 120 chest X-rays. Out of these specific images, half came from patients with lung cancer, the other half from patients without the disease. In a second round, the same participants reviewed identical chest images with the assistance of intelligent machines. Two different algorithmic systems were utilized: one with low accuracy, also known as a machine learning system, and one with high accuracy abilities, also known as a deep learning system. Participants paired with the high-accuracy system had notable improvements in their diagnosis versus those

paired with the low-accuracy system. The study demonstrates that when specific tasks and clinical settings are matched appropriately with suitable algorithms, artificial Intelligence can significantly enhance the abilities of radiologists.

Workflow Efficiency

In addition to improving the accuracy of diagnoses, computer intelligence can also increase workflow efficiency in the radiology department. Smooth and effective work methods within the imaging department make possible timely and accurate diagnoses for patients. One example of how AI has been successfully integrated into a hospital workflow can be seen at a Massachusetts hospital. According to a case study by Jones (2021), Radiologists at Lahey Hospital & Medical Center have incorporated several algorithmic systems to aid in different ways. Jones states that computer technology is further applied to help diagnose and triage certain patients or cases after capturing and processing medical images. During this pre-screening process, life-threatening circumstances are flagged, and urgent conditions are highlighted. Existing work lists regenerate accordingly, placing such cases at the top, allowing radiologists to apply their time much more targeted.

Furthermore, utilizing machine intelligence automates specific repetitive tasks. Radiologists regularly perform routine responsibilities that can be rather time-consuming, such as image segmentation, annotation, and writing reports. Jones has found that AI can execute these tasks rather accurately and consistently, allowing radiologists to focus on the more complex aspects of image interpretation instead. Lastly, AI systems seamlessly integrate with Picture Archiving and Communication Systems (PACS), the software for storing and retrieving medical images. According to Jones, the documentation process for radiologists is simplified by generating the necessary reports. Consequently, the respective study demonstrates that artificial intelligence streamlines the entire radiology workflow from image acquisition to diagnosis, improving overall patient care.

Personalized Medicine

The impact of computer intelligence in radiology also extends into personalized medicine or precision medicine. According to Atutornu and Hayre (2018), precision medicine customizes medical treatment and healthcare by considering the patient's genes, environment, and lifestyle. The authors assert algorithmic systems are used primarily to collect, map out, and predict how patients will respond to specific treatments based on patient's medical imaging and all pertinent data. The integration of neural networks allows for the best selection of the most effective drug and treatment plan for the individual. Therefore, AI is helping reduce trial and error in healthcare and improving patient health. Per the online commentary, specialty fields like cardiology and oncology are applying more specific computer algorithms to help identify patients at higher risks for health issues. For example, intelligent machines can locate a patient with an increased risk of heart issues before clinical signs present themselves. Detecting a potential disease early would allow for immediate, precise intervention, quick treatment, and possibly prevention. Thus, per Atutornu and Hayre (2018), a more

personalized approach will improve patient care, leading to superior health outcomes.

Discussion

The applications of artificial intelligence have exciting benefits in healthcare, including radiology. According to an online article by Brady and Neri (2020), the authors predict incredible improvements in computer algorithms soon. Future algorithms will require fewer data points to learn and handle an even more extensive variety of healthcare information generated by medical records and genetic data. Additionally, the authors envision doctors and healthcare systems collaborating directly with tech companies to develop personalized healthcare that is even more effective and cost-efficient. Despite the extensive, positive, and exciting impact of machine intelligence in radiology, it brings along specific challenges and ethical concerns that must be carefully addressed sooner rather than later. One of the biggest fears is the management of sensitive patient data. Brady and Neri (2020), mention in their article that algorithmic systems in radiology rely on a vast number of medical images and patient records to learn and make accurate diagnoses. While this data is essential for training algorithmic systems, it raises significant privacy and security concerns. Patients trust that healthcare providers protect their sensitive medical information. Radiology departments and healthcare organizations must establish more vital data management protocols to secure all patient data and maintain patient trust continuously.

Similarly, there is the concern of regulation. As it stands, the government highly regulates the healthcare industry. Agencies, like the U.S. Food and Drug Administration (FDA), must be even more diligent in ensuring that applied AI systems continually meet the rules for safety and effectiveness. The FDA will have to work and check in with the respective clinic departments, such as imaging, to ensure compliance is updated and continuously maintained. Lastly, it is challenging to understand machine intelligence and make their processes more transparent to the user. Bradi and Neri (2018), state that AI systems, incredibly complex deep learning systems (also referred to as "black boxes"), provide limited insights into their decision-making processes. This seems to be a trust issue for radiologists, who are supposed to collaborate and rely on the system. Researchers and developers must create tools and interfaces that help radiologists understand how the AI system reaches a specific diagnosis. While these are just a few concerns among several more, it is crucial to acknowledge arising issues and emphasize the need to address them appropriately. Furthermore, amongst all challenges and problems, it is equally important not to lose sight of the benefits the individual patient gains from applying artificial intelligence in radiology. According to Bradi and Neri (2018), there is no doubt that AI can advance patient care through enhanced diagnostic accuracy and increase efficient workflow throughout the imaging department.

Summary

Artificial intelligence (AI) is having a significant impact on healthcare, as well as radiology. Intelligent technology enhances diagnostic accuracy, streamlines

workflow, and contributes to personalized medicine. Applications of computer algorithms have improved diagnostic accuracy by assisting radiologists in detecting cancerous diseases. Deep learning systems complement human skills and produce more accurate results. The use of automation technology has optimized workflows in radiology. Routine and time-consuming tasks, like image segmentation and the generation of reports, have been computerized to allow radiologists to better focus on more complex tasks. Integrating AI with existing systems streamlines the entire process, benefiting radiologists and patients. AI also plays a role in personalized medicine by examining patient data, including medical imaging, genetics, and lifestyle, to predict treatment responses better. This approach customizes treatment for the patient and improves overall results. However, the adoption of intelligent computers within radiology is also a concern. Protecting patient data and assuring privacy is fundamental. Regulatory compliance is crucial to maintain safety and effectiveness standards. Creating transparency between AI and radiologists is necessary to establish understanding and trust. Despite the challenges, the future seems promising. AI algorithms will become more efficient, require fewer data points, and handle diverse healthcare information. The collaboration between healthcare and tech companies will shape a more customized approach to patient care.

Conclusion

Computing with artificial intelligence (AI) is happening right here, right now. Constantly evolving computer algorithms are rapidly transforming technology, including radiology. Neural networks have become a valuable tool, not a substitute for radiologists. Radiologists must learn how to work alongside AI to successively improve diagnostic accuracy, streamline workflow, and advance personalized medicine. Artificial intelligence's capabilities complement radiologists' abilities and enhance patient care. While specific issues, such as data privacy, regulation, and AI transparency, must be addressed, we can look forward to more efficient, effective, and personalized healthcare.

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Overview and Comparative Analysis of Dual Source Computed Tomography (DSCT) and Dual Energy Single Source Computed Tomography (DESSCT)

Research Paper by
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RADR 2309: RADIOGRAPHIC IMAGING EQUIPMENT

In her research paper, Catherine Miranda utilizes her knowledge as a medical radiologic technology student to compare the efficiency and drawbacks between utilizing Dual-Source Computed Tomography (DSCT) and Dual-Energy Single-Source Computed Tomography (DESSCT) as diagnostic modalities. She introduces the complexity of each exam, describing how the two CT exam images are produced and highlighting the importance of patient care with respect to radiation dosages. Catherine incorporates a detailed review of scholarly literature to compare the impact of advances in medical diagnoses, proficiency of diagnostic values, patient care, and clinical outcomes. Her organization of the research paper demonstrates the innovations and contributions that each of these imaging methods provides to the medical field, as well as distinct differences. Her attention to detail regarding these differences is remarkably diverse, covering many topics, including, imaging quality, and the financial impact of each modality.

- Krystal Kidder

Abstract

This term paper explores the transformative impact of advances in medical imaging technologies, particularly Dual-Source Computed Tomography (DSCT) and Dual-Energy Single-Source Computed Tomography (DESSCT). The comparative study explores their differences, applications, advantages, and disadvantages, aiming to assist healthcare practitioners in choosing the most suitable imaging technology for enhanced patient care by examining pivotal scientific articles.

Dual-Source Computed Tomography (DSCT) is recognized for its exceptional temporal resolution and dual-energy data acquisition. It is significant in cardiac imaging because it generates high-resolution and motion artifact-free images. The Dual-Energy Single-Source Computed Tomography (DESSCT) approach, which can differentiate materials and minimize radiation exposure, present novel prospects in oncological imaging, contribute to reduced radiation and heighten diagnostic precision. Dual-Source Computed Tomography (DSCT) and Dual-Energy Single-Source Computed Tomography (DESSCT) emerge as promising avenues to enhance medical diagnostics, benefiting accuracy, patient well-being, and clinical outcomes.

Introduction

Advances in medical imaging technologies have changed how doctors diagnose and treat numerous illnesses. Popular methods include Dual-Source Computed Tomography (DSCT) and Dual Energy Single Source Computed Tomography (DESSCT). These techniques may show the body's inner workings in detail. Therefore, this research compares DSCT with DESSCT to explain their differences, advantages, and disadvantages. This comparative study is essential because healthcare practitioners aim to increase patient care; therefore, choosing the right imaging technology is crucial. Dual-Source Computed Tomography (DSCT) uses two x-ray tubes and detectors simultaneously, whereas DESSCT uses a single source and a single detector that rapidly switches between two energy levels. Healthcare providers and researchers must comprehend these modalities' differences and similarities. This information provides an overview of these technologies and how they affect diagnosis accuracy, patient care, and healthcare costs.

This paper investigates Dual-Source Computed Tomography (DSCT) and Dual-Energy Single-Source Computed Tomography (DESSCT) in diagnosing and treating complex diseases like cardiovascular disease, cancer, and traumatic injuries. By carefully analyzing these technologies, we can help healthcare practitioners choose between DSCT and DESSCT, assuring the best patient results.

Literature Review

Alizadeh et al. (2023) review "Dual-Energy Computed Tomography (DECT) in Cardiothoracic Imaging," focuses on current advances and practical applications. Different vendors have created DECT hardware and software to produce multi-energy datasets. Due to technical advances, DECT is now used in cancer, trauma, emergency radiology, and musculoskeletal and cardiovascular imaging (Alizadeh et al., 2023). Virtual Monoenergetic Imaging (VMI) improves tissue characterization by reconstructing pictures at specific energy levels. Material breakdown distinguishes materials with identical attenuation at certain energy levels. Perfused blood volume imaging, Virtual Non-contrast Imaging (VNC), plaque removal, and Virtual Non-Calcium (VNC) imaging are all highlighted as cutting-edge methods that might improve cardiothoracic CT image processes. According to the study, DECT technology is advancing, which might enhance cardiothoracic imaging (Alizadeh et al., 2023). The article intends to educate medical practitioners and academics about DECT's growing potential to improve diagnostic accuracy and patient care.

Borges et al. (2023) explore the "Pros and Cons of Dual-Energy Computed Tomography Systems" examining the Dual-Energy Computed Tomography (DECT) systems and arguing that a general method is not possible. DECT, which uses different energy spectrum x-ray beams, is better at diagnosing and reducing contrast agents and radiation exposure than single-energy CT. This research examines commercially available DECT technology with two x-ray sources and detectors versus the single sources capable of quick energy switching. The authors examine specialized detectors and filters that separate the x-ray beam into high- and low-energy components. The authors also study

sequential acquisition at different tube voltages and conclude with a review of Dual-Energy Computed Tomography (DECT) clinical applications and spectral CT imaging prospects (Borges et al., 2023). They explain the need to understand DECT scanners' pros, downsides, and how they can impact image quality and radiation exposure.

Lenga et al. (2019) compares radiation dosage and image quality in contrast-enhanced dual-source chest CT scans. The research compares Single-Energy Computer Tomography (SECT) and Dual-Energy Computed Tomography (DECT) scans in matched cohorts using second- and third-generation Dual-Source CT (DSCT) systems. Lenga et al. (2019) also compares chest CT radiation dose and image quality. Clinically relevant contrast-enhanced chest CT scans were performed on 200 patients to guarantee accurate matching, patients were chosen by sex and BMI. The research included four 50-patient groups. The study found that second-generation Dual-Source Computed Tomography (DSCT) groups with DECT had much lower radiation exposures than those with SECT (Lenga et al., 2019). However, third-generation SECT and DECT have similar radiation doses. An objective dose-independent figure-of-merit Contrast-to-Noise Ratio (CNR) investigation indicated that third-generation DECT had the greatest values. The research found no statistically significant variations in subjective image quality between the four groups.

"Image Quality Comparison of Single-Energy and Dual-Energy Computed Tomography for Head and Neck Patients", Bedernik et al. (2022) compares the image quality of single- and dual-energy CT scans for head and neck patients. In head and neck imaging, Bedernik et al. (2022) conducted a prospective randomized study to compare Single-Energy Computed Tomography (SECT) with automated Tube Voltage Adaptation (TVA) and Dual-Energy CT (DECT) weighted average pictures (Bedernik et al., 2022). This research involved 80 individuals, forty patients had Single-Energy Computed Tomography (SECT) with Tube Voltage Adjustment (TVA), while the other 40 underwent DECT with radiation dose matching on a dual-source CT scanner. This research aimed to evaluate objective picture quality using dose-normalized Contrast-to-Noise Ratio (CNRD) computations. CNRD values were measured for jugular veins, muscle, and adipose tissue. Subjective image quality was assessed using Likert-type measures for anatomical structure reproduction, image artifacts, noise, spatial resolution, and diagnostic acceptability. This examination included sixteen anatomical substructures. The research found that DECT-weighted average photos outperform TVA-based SECT in objective and subjective head and neck imaging quality.

Comparative Analysis

Dual-Source Computed Tomography (DSCT) uses two x-ray sources and two detectors to capture data concurrently. As a result of its two x-ray sources and detectors, the DSCT system has excellent temporal resolution, which is optimal for visualizing motion without any blurring. DSCT systems may capture pictures from two energy levels sequentially, producing outstanding image quality, especially in motion or fast imaging sequences. Its use in cardiac imaging is crucial because it captures high-quality pictures of the heart and coronary arteries in one pulse.

On the other hand, Dual-Energy Single-Source Computed Tomography (DESSCT) has benefits and uses over dual-source CT, and it excels in material differentiation. DESSCT easily distinguishes materials with equal attenuation at a certain energy level using x-ray beams with different energy levels. In oncology, this capacity helps characterize tissue types, thus improving diagnostic accuracy.

Advantages and Disadvantages

Cardiovascular imaging is a significant advantage of Dual Source Computer Tomography (DSCT). It simultaneously minimizes motion artifacts by acquiring images from different energy levels, making it easier for coronary artery, plaque, and heart function assessments. Another advantage is that DSCT offers faster scan times, eliminating patients needing to breathe and benefiting vulnerable patients and children. However, DSCT has disadvantages as it needs careful dose monitoring due to higher radiation exposures to the patient.

On the other hand, DESSCT also has significant benefits. DESSCT can distinguish between different materials within the body, which provides a more detailed and accurate diagnosis and tissue characterization. DESSCT reduces radiation exposure compared to DSCT. "It requires lower concentrations of contrast agents and allows radiation dose reduction by its capability of generating virtual non-contrast (VNC) images" (Borges et al., 2023, p. 198). This radiation decrease improves patient safety when imaging is needed. However, due to its singular-source arrangement, DESSCT may need help to capture dynamic processes quickly. Therefore, it may not be ideal for cardiac imaging or scenarios requiring high temporal resolution. DESSCT may have slightly longer scan times due to sequential energy switching, which could lead to motion artifacts and a decrease in image quality.

Discussion

Medical imaging has advanced with DSCT and DESSCT. DSCTs' high temporal resolution has transformed heart imaging, allowing the diagnosis of coronary artery disease and heart function. In contrast, DESSCT improves material discrimination and reduces radiation exposure, making it useful in cancer and other therapeutic settings. These technologies improve diagnostic accuracy, patient safety, and clinical applications.

Although DSCT and DESSCT offer many advantages, contraindications should be considered. Due to its contrast-enhanced imaging, DSCT may not be suitable for patients allergic to iodinated contrast agents. DSCT's higher radiation doses may further limit its use in some patient populations, especially those more vulnerable to ionizing radiation. Due to its single-source nature, DESSCT may not be ideal for imaging dynamic processes or fast motion.

DSCT and DESSCT equipment may be expensive to buy and maintain. Expenses are a critical factor to consider as most healthcare organizations consider this technology a long-term investment that needs careful financial planning. DESSCT often uses lower radiation doses, which may save long-term healthcare expenditures by reducing radiation-related problems.

Summary

This paper reviews critical scientific articles to discuss sophisticated imaging methods' applications, pros, and disadvantages. Dual-Source Computed Tomography (DSCT) is known for its excellent temporal resolution and dual-energy data acquisition. This technique has several clinical uses, but cardiac imaging stands out. Its capacity to produce high-resolution images with little motion artifacts makes it unique in medical diagnosis. However, DESSCT can distinguish materials and reduce radiation exposure, which has opened new possibilities in oncological imaging. Its ability to minimize radiation and enhance diagnostic accuracy is significant. Dual Source Computed Tomography (DSCT) and Dual-Energy Single Source Computed Tomography (DESSCT) might improve medical diagnostics, accuracy, patient well-being, and clinical outcomes.

Conclusion

DSCT and DESSCT have transformed medical imaging by improving diagnostic accuracy, efficiency, and patient care. These technologies have improved medical care on many different levels, making them valuable tools in modern healthcare. These technologies have benefits and limitations, including radiation exposure, cost, and maintenance. These techniques assist doctors to make more accurate diagnoses and improve patient outcomes. In comparing DSCT and DESSCT, healthcare providers must choose the best option depending on the circumstances. Technology is changing daily, and new advancements and improvements in both technologies are happening constantly.

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Miserere Mei, Deus (motet for SATB voices, a cappella)

Original Chorale
Composition by
GILBERT MARTINEZ

MUSI 1116: SIGHT SINGING AND EAR TRAINING I

In this original work, Gilbert's chorale composition reflects the functional techniques and part-writing rules most often attributed to the style of Johann Sebastian Bach during the late Baroque era. The work is an original chorale composition that demonstrates proper voice-leading, TPDT (tonic predominant-dominant-tonic) functional harmony, and it explores the use of all diatonic chords within the given key signature of C minor. Gilbert's chorale is an *a cappella* SATB (soprano, alto, tenor, bass) setting of the sacred Latin text *Miserere Mei, Deus*. The Latin text of this motet translates as "Have mercy on me, God, for I have sinned against you! Lord, blot out my transgressions!" It is intended for use during the Roman Catholic season of Lent. By composing this motet, Gilbert is demonstrating his understanding and application of functional music theory by creating an original work. This work also showcases Gilbert's fluency and mastery of MuseScore, an open-source music notation program software. The sung performance was recorded by the LSC-Montgomery Chamber Singers, directed by Dr. Mark Marotto, in May 2024.

- Michael Walsh

To view the score and hear the performance, go to:

<https://youtu.be/iwrbjATFTtM>

Or use the following QR Code:



Miserere Mei, Deus
For SATB
Gilbert Martinez

Supplicando (♩ = 55)

The musical score is for a SATB setting of 'Miserere Mei, Deus' by Gilbert Martinez. It is in C minor, 4/4 time, and is marked 'Supplicando (♩ = 55)'. The score includes lyrics in Latin: 'Mi - se - re - re me - i, De - us, qui - a - pe - cca - vi, pe - cca - vi ti - bi!'. The score includes dynamic markings such as *p*, *mp*, *mf*, and *pp*.

Nursing Leadership

Report by
HANNAH DOCUYANAN

RNSG 2362: CLINICAL NURSING IV

Nursing IV students are required to learn leadership styles and spend a clinical day observing and assessing a charge nurse. Hannah followed a charge nurse in an Intensive Care Unit. She outlines a review of leadership styles from a nursing resource, then documented her day with the charge nurse and what leadership styles she witnessed during different situations during the day.

- Pat Schwartz

A charge nurse plays an important role in creating an efficient unit in which they display abilities such as supporting the staff on the floor to provide quality patient care. There are various leadership styles in which the charge nurse can incorporate in her practice: Servant Leadership, Transformational Leadership, Democratic Leadership, Authoritarian (Autocratic) Leadership, and Laissez-faire Leadership (Frandsen, 2014). The charge nurse can be a single type or a combination of these leadership styles. Today, the charge nurse combined the principles of democratic leadership and servant leadership to create an environment that encouraged collaboration within the members of the team. Democratic leadership encourages team members to be involved in making decisions and open communication. Whereas Servant leadership prioritizes the needs and concerns of the nursing staff and creates opportunities for their professional development. This resulted in devoted followers in response to the considerate attention the charge nurse gave.

By blending democratic and servant leadership styles the charge nurse created a collaborative and nurturing environment. An example of the charge nurse demonstrating a Democratic Leadership style was during the morning huddle where she actively listened to concerns expressed by the staff and took them into consideration whenever decisions needed to be made. A second example was when the charge nurse led a multidisciplinary review which involved members of the healthcare team such as physicians, chaplains, dietitians, and RT. She demonstrated the ability to openly communicate with other members of the healthcare team and represented the staff nurses when voicing concerns that need to be addressed with the rest of the team. Additionally, the charge nurse displayed Servant Leadership in which she helped the staff when there was a new admit on the floor by obtaining blood for one of the patients because the staff nurse needed to stay and stabilize her patient. Lastly, the charge nurse demonstrated Servant leadership by creating a safe space for constructive feedback in which one of the ICU CNAs was floated to another floor but was unprofessional and the charge nurse calmly communicated that she should be more professional next time and to avoid using profanities.

Ultimately, the leadership role of a charge nurse who seamlessly blends

servant and democratic leadership styles is one who values service and empowerment. However, it is also important for the charge nurse to remember to let go of their egos and insecurities. By doing so, staff nurses and the rest of the healthcare team will feel respected, valued, and supported. Benefits are that it can help increase productivity and result in higher quality patient care. Lastly, the charge nurse emphasized that her role is primarily being “five steps ahead of the game” to keep up with the always evolving situation in the unit and to be a reliable resource for the staff on the unit.

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**Public Health
Issue Scholarly
Paper: Soil
Contamination**

**Research Paper by
JODY MEADS**

NURS 4433: POPULATION-FOCUSED
COMMUNITY HEALTH

In this research paper Jody Meads explores a public health concern in Kashmere Gardens, a community in the greater Houston Area that has longstanding ties to the Union Pacific Railroad. After completing a windshield survey, and an assessment of the community, he identifies that soil contamination is a significant public health concern for the residents. Jody conducted a review of the literature, exploring the relationship between soil contamination and its effects on the health and safety of those who engage in outside activities. His paper is an excellent example of scholarly writing, bringing attention to a lesser-known Houston community and addressing an issue that has significant long-term effects if not addressed.

- Julie Kendall

Public Health Issue Scholarly Paper

Kashmere Gardens is a vibrant community in the Fifth Ward of Houston, TX, boasting a diverse cultural heritage and a rich history. However, urgent attention is required to address a significant public health concern - soil pollution. According to the Houston Health Department, the soil near the Union Pacific Railroad site is heavily contaminated with creosote, posing a severe threat to the environment and human health. Exposure to polluted soil can lead to a range of medical conditions, from asthma to heart attacks, which is particularly concerning for the residents of Kashmere Gardens. This research will highlight the critical importance of addressing soil contamination in this community, using statistical data from a comprehensive assessment conducted by the Houston Health Department in our analysis.

Literature Review

Researchers hold varying opinions about soil contamination and its potential risks to Kashmere Gardens residents. In their investigation, Münzel et al. (2022) raise important questions that cardiologists must consider regarding the links between contaminants in water sources and soils and human health. Though they focus on cardiovascular research, they stress the need to understand how environmental factors impact overall health. Vandenberg et al. (2023) provide a thorough overview of exposure assessments critical to protecting public health. Their study identifies flaws in current assessment methods and underscores the importance of accurate evaluations. This holistic approach draws on multiple scientific

disciplines and is a key component of public health. Wang et al. (2021) have also contributed to environmental and public health studies. Their research highlights practical examples of how governance can enhance environmental management, particularly in addressing pollution control issues like those faced by Kashmere Gardens.

Issue Development

It's crucial to address the issue of soil contamination in Kashmere Gardens due to its detrimental impact on the health and well-being of individuals in the area. According to the Houston Health Department (2019), the proximity of the Union Pacific Railroad site significantly increases the risk of contamination. Not only does this pollution harm the environment and disrupt the ecological balance, but it also exposes families to health risks while engaging in routine park activities. As Lodhia (2022) notes, the adverse effects of environmental pollution extend beyond physical health problems and can impact the entire community's social order and emotional well-being. Such issues can cause disruptions at the family level and other groups, ultimately leading to a decline in the overall quality of life in the Kashmere Gardens community, as reported by the Houston Health Department of Houston (2019) and Lodhia (2022). It's essential to recognize that this issue is not limited to the local community and has global implications, as environmental problems are interconnected worldwide.

Soil contamination in a specific area can significantly impact the overall health of an ecosystem. This pressing concern necessitates comprehensive and prompt solutions, given that it affects all individuals residing in the Kashmere Gardens region regardless of age. Soil contamination can lead to numerous health risks affecting children, adults, and older adults. As a result, it is essential to address these concerns, as they are not limited to a single generation but rather impact multiple generations.

Analysis

Sansom and colleagues (2022) shed light on the urgent matter of environmental pollution in Kashmere Gardens. Identifying cancer clusters by local residents and advocacy groups in 2019 and 2021 underscores the need for swift intervention to eradicate ecological pollution. The neighboring communities of Denver Harbor and the Fifth Ward are situated close to a railyard and a former wood treatment center where the use of creosote, a coal tar byproduct, and polycyclic aromatic hydrocarbons (PAHs) pose substantial environmental and public health risks.

The significance of community awareness campaigns and advocacy programs concerning documented cancer clusters is underscored in the paper. The issue is grassroots and has elicited concerns from residents, advocacy groups, and grassroots organizations that advocate for a community-based approach. The paper recommends several interventions, including organizing community meetings and campaigns that effectively educate people about the risks associated with environmental contamination. The primary hurdle is to

address the issue comprehensively, with stakeholders actively participating and reporting based on information obtained from soil samples at the core site. The paper advocates for collaboration among stakeholders to tackle the problem effectively.

Sansom et al. (2020) conducted a comprehensive examination of soil samples from Kashmere Gardens to measure the concentration of environmental contaminants. While the study found low levels of PAH concentration, indicating minimal cancer risk, it also identified cancer clusters, highlighting the need for further investigation and remediation efforts. The study's emphasis on measuring pollutants and the need for ongoing monitoring underscores the importance of collaborative efforts with the EPA for environmental evaluation (Lodhia, 2022). Advocating for increased funding for the EPA is crucial to support critical projects such as this.

According to the study conducted by Sansom et al. (2022), legislative measures to detect environmental hazards should be emphasized. Therefore, to strengthen environmental protection laws, state regulations must be implemented to address cancer clusters. Legislation should focus on these types of cancers and impose stricter penalties for non-compliance with environmental regulations. In addition, ongoing research is being conducted to identify disease-causing pathways, which will inform maintenance and surveillance efforts in the long term. This underscores the need for sustained commitment from lawmakers. Their research serves as a valuable resource for practical interventions aimed at assessing toxicants in communities with a high concentration of minority populations. It provides a crucial foundation for addressing toxins in these neighborhoods, which are home to not just minorities but also many white residents. While current levels of PAH concentrations suggest a reduced likelihood of developing tumors, additional research is necessary to evaluate other contaminants and historical pollution levels. By drawing on successful interventions in other cases, informed decisions can be made based on factual evidence. The work of Sansom et al. offers new insights and the potential for treatment modifications as new discoveries emerge.

According to the research, 40 out of the 46 samples evaluated exceeded the USEPA screening level, which is a cause for concern regarding the effectiveness of current public health policies and legislation. Therefore, a comprehensive review of these policies is necessary to identify gaps and opportunities for improvement. Legislative initiatives should closely align with research objectives to address these issues practically and effectively, focusing on safeguarding community health. The research emphasizes the importance of conducting soil screening at a regional level, mainly to detect levels of carcinogenic PAH concentration. This information can help in making resource allocation decisions. Establishing strong partnerships that enable communities to enhance their capabilities is crucial to working with established environmental health organizations or agencies recognized by Sanson et al. (2022).

Conclusion

Kashmere Gardens is facing a significant public health challenge due to

confirmed pollution and high rates of cancer cases. This issue is intricate, involving a range of environmental, health, and societal factors. Residential neighborhoods surrounding the railyard and wood treatment facility, which have links to coal tar creosote and polycyclic aromatic hydrocarbons, indicate that soil contamination on the Union Pacific Railroad site must be addressed. This issue's implications are local and global, underscoring the critical importance of environmental concerns. To tackle this public health issue, the community must be actively involved, and a comprehensive strategy should be implemented based on evidence-based research and support from the EPA. Cooperation among stakeholders, active reporting, and community involvement will strengthen sustainable development initiatives. The focus should be on enhancing Kashmere Gardens' health and wellness, thereby improving its residents' quality of life. This approach should be inclusive and responsive to current threats while laying the groundwork for long-term environmental preservation. Ultimately, such an approach will create a resilient society that benefits future generations.

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Teaching Plan on Elder Abuse

Report by
**TERI SHAPIRO and
CARLY CLAYTON**

RNSG 2362: CLINICAL NURSING IV

Nursing students in their final semester are required to write and to present a teaching project to a select audience. Students in this clinical cohort presented to senior citizens at a senior citizen health fair. Teri and Carly chose to present on the prevalence of elder abuse in the senior population. In addition to the presentation, students must write a paper, prepare an interactive poster display, and create a detailed teaching plan. The paper must include information on learning styles, motivation to learn, readiness to learn, and physical, environmental, and emotional barriers to readiness to learn. Teaching objectives and goals are also embedded in the paper.

- Pat Schwartz

Elder abuse is a global problem that affects the lives of vulnerable individuals 65 years of age and older. According to the World Health Organization (2022), about 1 in 6 elderly experience some form of abuse. Healthcare professionals must educate all members of the community on the topic because the potential impact of abuse can result in physical, financial, and emotional harm. Elder abuse is an essential topic of discussion for the participants today, as more than 15 percent of the population of Montgomery County is 65 or older (Texas Department of Family and Protective Services, 2023). This means the participants today could be considered one of the 102,907 potential victims in the community.

Elder abuse is defined as “a single or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust, which causes harm or distress to an older person” (World Health Organization, 2022). It is important to note that the roles of perpetrator and victim are not gender specific. Videbeck (2017) identifies the most common perpetrators as caretakers, while the most common victims of abuse are women and individuals with multiple health conditions.

Abuse may be classified as physical, sexual, financial, emotional, neglect, and abandonment. This presenter will provide information on physical, sexual, and financial abuse. The presenter, Carly, will discuss emotional, neglect, and abandonment. It is not always easy to detect abuse; some signs may be obvious, while others are hidden and easily overlooked. Professionals should become familiar with the various indicators of abuse, which can be used to construct an appropriate line of questioning during the assessment process.

Physical abuse involves causing physical pain or injury, such as cuts, broken bones, punctures, burns, or bruises (Videbeck, 2017). Indicators include frequent

unexplained injuries, denial of injuries, and fear in the presence of the caregiver. Sexual abuse involves non-consensual sexual activity, such as intercourse, touching, and fondling (National Council on Aging, 2023). Indicators include unexplained sexually transmitted diseases and pain, bleeding, or bruising in the genitals or anus. In contrast to physical and sexual abuse, financial abuse is less obvious and includes inappropriate or unauthorized use of money, income, or benefits of older adults (Videbeck, 2017). Indicators include unpaid bills, unusual bank account activity, or frequent checks issued to caregivers. Changes in behaviors may also indicate mistreatment of the older adult. A thorough assessment should be completed to evaluate any change and to determine if physical or emotional changes are a part of the normal aging process.

Many cases of abuse go unreported because of shame, isolation, physical limitations, or the victim’s dependence on the perpetrator. According to the National Council on Aging (2023), only about 4 percent of cases of abuse are reported to authorities. Successful prevention of elderly abuse begins with educating community members and increasing awareness. Other prevention methods may include access to resources for older adults and caretakers, support from friends and family, or the use of community organizations. Community agencies, such as Adult Protective Services, the Aging and Disability Resource Center, and Eldercare Locator, are available to provide resources and to help prevent or stop elder abuse.

Assessment

The participant’s readiness to learn may be impacted by many factors, such as the ability to learn, physical limitations, language barriers, and life experiences. Based on Erickson’s Stages of Development, participants are at the stage of Ego Integrity versus Despair. The task for this stage is “Accepting responsibility for oneself and life” (Videbeck, 2017, p.44). The education provided in the presentation supports the stage-related task by promoting participants’ autonomy and empowering them to identify and report incidences of abuse. Palis and Quiros (2014) state, “...the most powerful motivators for learning are internal pressures.” In other words, motivation to engage in the learning process may be influenced by the internal dialogue of the participants and the personal value they assign the information. The diverse life experiences of the participants can be viewed as a strength and may be utilized during the presentation to enhance engagement. This may be reflected in questions or sharing understanding and experiences. Other factors to consider are cultural and familial attitudes regarding abuse.

Environmental factors that will be considered include noise level, lighting, and the designated area for conducting the presentation. These environmental aspects can directly impact the success of the presentation. For example, loud noise may hinder communication and require presenters to articulate loudly. The lack of privacy may also impact the presentation, and the presenters will need to be considerate when participants share personal experiences.

An applicable nursing diagnosis for some participants may be: Knowledge

deficit related to elderly abuse, as evidenced by the inability to identify different forms of abuse and community resources. The short-term and long-term goals would include: (A) Short-term goal: Participants will actively engage in the learning process as evidenced by completing pre-test/post-test and asking questions during the presentation; (B) Long-term goal: Participants will demonstrate the ability to recall two forms of abuse and one method of reporting abuse by the end of the presentation. The goals will be evaluated using the results of a post-test and the results of the interactive game where participants spin a wheel and answer random questions created from the information presented. This will provide an indicator of the information retained by the participants.

The learning domains will be used as a guide in the method of teaching and the resources provided on the topic of elder abuse. Several interventions will encourage cognitive learning, which is the ability to store and recall concepts (Bush, 2024). First, participants will be given a pre-test to assess their current knowledge regarding elder abuse. A short lecture will be given by the presenters covering the goal of the presentation, defining types of abuse, statistics specific to Montgomery County residents and the risk factors for abuse. This method of teaching will engage participants who are auditory learners. To encourage affective learning, which “involves attitudes, beliefs, and values that influence behavior” (Bush, 2024, slide 24), the presenters will provide the 2023 statistics from Adult Protective Services regarding allegations and repeated incidences. The goal is that participants will have a positive attitude, value the information provided, and view the data as relevant to their lives. Pamphlets and a trifold with relevant information will be on display to engage visual learners. A Spanish version of the visual aids will also be available. The displays created by the presenters will use short and easy-to-read information, which aligns with the recommendation that “.... educational materials should be written at a 5th grade level” (Bartlett et al., 2019, p.191). The pre/post-test and spin-a-wheel game will engage kinesthetic learners. A community resource guide will also be available for participants to view.

The following paragraphs will provide a detailed outline of the five-minute presentation discussing elder abuse. According to Bartlett et al. (2019), a successful teaching plan integrates short teaching sessions with information the adult learner can use immediately.

Outline

1 Minute: Introduction (Teri) – During the first minute of the presentation, participants will be given a short four-question pre-test to determine their knowledge of elder abuse. This will establish a baseline assessment that will then be compared to the same four-question post-test to assess the knowledge gained by the presentation. Teri will also be defining elder abuse at this point. “Good morning, my name is Teri, and this is my partner, Carly. We would like to talk to you about Elder Abuse. The World Health Organization (2022) defines elder abuse as, “a single or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust, which causes harm or distress to an older person” Our goal is to provide information that will help

you identify, prevent, and report incidences of abuse Please answer these four questions, it will help us see what you already know about the topic.” We will then distribute the post-test to the participants. The results will establish a baseline that can be used for comparative purposes at the end of the presentation. The second presenter will provide a brief overview of the different types of abuse and provide examples.

1 Minute (Minute 2): Definitions (Carly) – During the second minute of the presentation, Carly will be defining the types of abuse and giving 3 examples of each. “There are 6 different types of abuse that I will be discussing with you today. I will also go over a few examples of each type.

1. Emotional: Emotional abuse occurs when a trusting person (caregiver, family member) intentionally causes feelings of isolation, low self-esteem, and emotional pain. Their purpose in doing so is to gain control of you. Examples of this may be name-calling, humiliation, and isolating you from friends or family.
2. Neglect: Neglect occurs when someone who is supposed to help care for you ignores your needs. This may occur by not providing access to food, water, or medications. If you do not have what you need and are relying on a caregiver to provide you with these and they are not, this is considered neglect.
3. Abandonment – Abandonment occurs when your caregiver leaves you on your own with no access to resources when you need help to complete daily tasks. Without this, you may be unable to go to doctor’s visits, see friends and family, and enjoy your independence.
4. Sexual Abuse – Sexual abuse happens when a caregiver inappropriately touches you.
5. Financial – This type of abuse may be hard to notice, but happens when someone accesses your money without consent, or convinces you to give them access to your funds or benefits.
6. The final type of abuse is physical. This type of abuse happens when someone in power hurts you, for example, hitting, burning, or causing any other physical harm.”

1 Minute (Minute 3): Statistics (Teri)

“This is an important topic for anyone 65 and older. In Montgomery County more than 15% of the residents fall into that age group. This means that there are over 100,000 potential victims, one of which might be you. Your chances of being abused increases with age, mental illness, dementia, being a woman and being socially isolated. In 2023 Adult Protective Services received 1,649 allegations of elder abuse and 257 of those resulted in repeated incidence. Did you know that being abused makes you 3 times more likely to be hospitalized and increases your chances of death by 300%? We hope that the information we discuss will help each of you identify, prevent, and report incidents of abuse.”

1 Minute (Minute 4): Resources (Carly) – There are many resources available

in our community to help you get access to the care you deserve. Adult Protective Services can be called using the Texas Abuse Hotline (the number will be on the provided hand-outs). There is also an option to report abuse online if you feel you are unsafe speaking on the phone at txabusehotline.org. They will help you get out of an abusive situation and give you short-term access to home healthcare, mental healthcare, transportation, managing money, and access to food. Once you can recognize the forms of abuse, we hope you will feel empowered to understand and report it if it happens to you or anyone you know.

1 Minute (Minute 5) (Both) – During the last minute of the presentation, both Teri and I will be giving the post-test to assess the success of the presentation as well as give the participants a chance to spin-the-wheel to answer questions based off the material presented for prizes. We will then perform a question-and-answer session as well as hand out pamphlets for resources on reporting abuse.

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Written Self and Peer-Evaluation Post Teaching Project

1. What went well?

The presentation went well. I enjoyed interacting with the participants and was glad that they were interested in the topic. I think they enjoyed the spin-the-wheel game the most. I was very happy that we had the Montgomery County Resource Guide because I was able to provide information on food banks, the Housing Authority, and Legal Aid. I also enjoyed working with Carly. She was engaging, empathetic, and took time to listen to any and everything the participants wanted to share with her.

2. What would you change and improve?

I should have printed the pre/post tests on single page or used a bigger font size. It was hard for a lot of the participants to read. Carly and I read the questions to them and was able to use it as talking points if one of the questions was answered incorrectly.

3. What did you learn in this teaching experience?

I learned that I enjoyed doing the presentation and interacting with the participants. I was surprised that so many of them weren't familiar with financial abuse and one person said, "I would have never thought of that". We went over scams, caregivers using their bank accounts without permission, or having social security benefits deposited in the caregiver's account but not making it available to the recipient.

Reference - Handouts and Presentation Display

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Scholarly Paper on a Public Health Issue: Drug Abuse

Research Paper by
SISI XIONG

NURS 4433: POPULATION-FOCUSED
COMMUNITY HEALTH

In this research paper, Sisi Xiong explores the risk of youth drug abuse in the community of The Woodlands, Texas. Sisi recognizes that drug abuse among adolescents is not specific to our area, but affects persons on a global level as youth bridge the gap between adolescence and adulthood. In her review of the literature, she highlights how drug abuse affects youth both physically and psychologically. A solution for combatting this ever-growing health problem is multifaceted, and both youth and parents must be part of the solution. Sisi's paper is an excellent example of scholarly writing and brings attention to an ever-growing health issue that impacts youth academically, physically, and psychologically.

- Julie Kendall

Public Health Issue Scholarly Paper

The Woodlands, located in Montgomery County, Texas, and Harris County, Texas, is situated on the north side of Houston and the west side of Interstate 45. As per the 2022 Census Data Report, The Woodlands has a population of 117,970 (Census Profile: The Woodlands, TX, n.d.). The median age in The Woodlands is 43.3, and 16% of the population falls within the 10-19 age range—a demographic that is notably impulsive and at a higher risk of substance use (Bhankhar & Singh, 2023).

The same age group in Texas constitutes 14.3% of the population. The Woodlands, however, has a higher percentage of the adolescent age group. Given the heightened risk of substance use among adolescents in the Woodlands, drug addiction has emerged as a community-focused health issue requiring attention from parents and the entire community. The extended rehabilitation period for drug addiction and the numerous associated health problems contribute to the significance of addressing this public health concern (National Institute on Drug Abuse (NIDA), 2023).

Healthy People 2030 (2020) has released an assessment of the objectives related to drug and alcohol use. The reports highlight a concerning trend, indicating that the goals of “reducing the proportion of adolescents who used drugs in the past month” and “reducing the proportion of adolescents who used marijuana in the past month” are showing deterioration. This alarming status emphasizes the need to shift our attention toward addressing these persistent, prolonged public health concerns.

Review of Literature

The Lone Star College library database was employed for this assignment, with

a focus on utilizing key databases such as Health Research Premium Collection (ProQuest), Gale OneFile: Health and Medicine (Gale), and Nursing and Allied Health (ProQuest). During the article search process, the criteria included limiting results to peer-reviewed articles and setting the publication date range to the last five years (2019 to 2024). The search for articles occurred between February 20, 2024, and February 26, 2024. The chosen keywords for the search encompassed terms such as drug abuse, drug addiction, the impact of drug abuse, drug use prevention, and drug addiction programs.

The Woodlands is not singular in grappling with youth drug abuse; evidence suggests that drug abuse has evolved into a global health issue, causing alarm worldwide. This concern profoundly impacts individuals, families, communities, and societies globally (Latt et al., 2024; Mirlashari et al., 2020; Sujan et al., 2021). Adolescents, being in a higher-risk age group for drug abuse (Bhankhar & Singh, 2023; Latt et al., 2024), are particularly susceptible due to their transitional phase between childhood and adulthood. Their inherent curiosity, lower perceptions of drug addiction, and increased likelihood of exposure to drugs make them more vulnerable (Bhankhar & Singh, 2023; West et al., 2023).

In their comprehensive review, Bhankhar and Singh (2023) provided a summarized overview of the factors contributing to drug abuse. The review highlighted peer pressure and loneliness as the two major factors influencing drug abuse among adolescents. The negative consequences of drug addiction on adolescents encompass academic performance decline, psychological trauma, and various health issues. The article concluded by emphasizing the importance of identifying the factors that contribute to adolescents' drug abuse, as this knowledge is crucial for enhancing educational programs and intervention strategies (Bhankhar & Singh, 2023).

To assess the impact of drug abuse on academic performance and physical health, Sujan et al. (2021) conducted face-to-face interviews with 436 participants, including 238 drug abusers and 196 non-abusers. Data collection utilized a pre-tested semi-structured questionnaire. The findings revealed that drug users faced increased challenges concentrating in class, with a majority admitting to missing weekly/tutorial exams and a higher percentage dropping an academic semester or year compared to non-drug users. In terms of physical health, drug users reported more frequent illnesses and excessive sleeping hours. The study's data unequivocally underscores the detrimental effects of drug abuse on both academic performance and overall health (Sujan et al., 2021).

Parra-Cardona et al. (2023) conducted a research study examining the impact of parent-based prevention on youth's drug abuse behavior. The study spanned 4-5 months and focused on Mexican-descendant youths and their families, specifically targeting both parents and adolescents. Throughout the research, intensive education sessions were provided to both parents and youth, addressing immigration-related stressors, including issues such as discrimination and cultural conflicts. The primary outcome of the study revealed that the group receiving intensive intervention involving both parents and adolescents exhibited a heightened perception of the harm and risks associated with drug use. The

article concluded by suggesting that parent-based interventions are effective in enhancing the perception of the harmful effects of drugs, thereby contributing to the prevention of drug use in adolescents (Parra-Cardona et al., 2023).

Issue Development

Drug abuse is a multifaceted social issue, particularly prevalent among adolescents, and researchers are diligently exploring the underlying reasons behind it. Contributing factors include genetic elements within the family and social influences (Mirlashari et al., 2020). Adolescents exhibit a natural curiosity and propensity to engage in negative behaviors during the transitional period between childhood and adulthood.

The family environment plays a crucial role in shaping an individual's susceptibility to drug use (Sujan et al., 2021; Villarejo et al., 2024; Bhankhar & Singh, 2023). Parenting practices and a family history of drug use can serve as negative influences, potentially increasing the likelihood of adolescents using drugs (Bhankhar & Singh, 2023). Conversely, nurturing family relationships, supportive parenting strategies, and positive emotional development can function as protective factors, reducing the likelihood of drug abuse (Latt et al., 2024).

Social influence from peers stands out as another significant contributor to drug abuse. In environments like university dormitories, where adolescents reside, the accessibility to drugs is often high, increasing the likelihood of addiction due to peer pressure (Bhankhar & Singh, 2023). Simultaneously, psychosocial factors such as loneliness can also elevate the risk of drug addiction (Bhankhar & Singh, 2023).

Over the years, drug abuse has evolved into a global health concern as it has become prevalent worldwide. Its impact extends beyond individuals to encompass communities and families. The severe health problems associated with drug abuse, including the risk of drug overdose, have garnered global attention, emphasizing the widespread significance of drug overdose as a health concern around the world.

In 2020 the U.S. witnessed 91,799 drug overdose deaths, a 30% spike from 2019 (Mattson et al., 2022). The CDC forecast for 2021 remains ominous, driven by the rise of illicitly manufactured Fentanyl. A special report by Sherif Holifield and Henderson(2022) sheds light on the status of suicide and drug overdose deaths in Montgomery County. Data obtained from Montgomery County Forensic Center reveals that in 2019, there were 96 drug-related deaths, with only one involving Fentanyl. However, in 2020, drug-related deaths increased by 26.3% to 120, with 26 involving Fentanyl – a 116.7% increase. The situation worsened in 2021, with 129 drug-related deaths, a 7.5% increase, and 55 involving Fentanyl, a staggering 111.5% increase compared to 2020.

The alarming statistics presented above underscore the fact that drug abuse not only impacts individuals but also has far-reaching effects on families and communities. Individuals grappling with drug abuse often experience a decline in their overall health. They are more prone to frequent illnesses and suffer damage to the brain stem, a crucial region controlling vital life functions such as

heart rate, breathing, and sleep. This is why drug overdose can lead to depressed breathing and, ultimately, death (National Institute on Drug Abuse (NIDA), 2023).

Furthermore, drug abuse takes a toll on adolescents' academic performance. Research by Sujan et al. (2021) reveals that adolescents addicted to drugs exhibit poorer academic performance and are at a higher risk of dropping out of school. The pervasive impact of drug abuse underscores the need for comprehensive intervention and prevention strategies to address its multifaceted consequences. Drug abuse does not just impact individuals; it affects entire families emotionally and physically. Behind the cold statistics of drug overdose deaths lie 91,799 families, each experiencing the profound grief of losing a loved one. The prolonged grieving process becomes an emotional trauma for these families. Furthermore, for those families actively involved in helping their adolescents overcome drug addiction, the emotional and physical toll is considerable. Family members must navigate extended treatment processes, potential relapses, and the challenges of managing multiple chronic diseases stemming from drug abuse. The ripple effects of drug abuse extend far beyond the individual, permeating the fabric of family life.

Drug abuse also imposes a significant financial burden on society. In 2019, the Healthcare Financial Management Association (HFMA) disclosed that the expense of providing care to drug overdose patients neared \$2 billion across 647 healthcare facilities throughout the nation. The cost per person for hospital care for drug overdose patients amounted to \$11,731, with the expense rising to \$20,500 if intensive care unit (ICU) treatment is required (HFMA, 2019).

Analysis

Drug addiction has inflicted severe damage on individuals, families, and society at large. Despite the significant challenges posed by drug abuse, the damage caused by drug use is preventable. Evidence-based prevention programs have demonstrated that substance abuse can be averted. Texas, facing substantial challenges in combating drug abuse, is actively addressing the issue. The state government is working to enhance awareness of the harms associated with drugs, implementing various programs tailored to different populations, combating drug trafficking from Mexico, and increasing financial support to fight against drug abuse. These initiatives underscore the determination of Texans to address drug-related issues and protect their communities.

The Texas government has implemented evidence-based prevention programs that target various populations through diverse interventions. One such organization is Texans for Safe and Drug-Free Youth, which focuses on adolescents and their parents. This organization endeavors to heighten awareness about the harms of drugs by establishing a Youth Leadership Council. The Youth Leadership Council selects enthusiastic and motivated youth to assume leadership roles. These young leaders undergo training and education to become influencers capable of spreading information about the dangers of drug abuse within their communities. This strategic approach aims to empower adolescents and equip them with the skills to convey the risks associated with drug use

effectively. This program explicitly addresses risk factors related to peer pressure by creating positive leadership roles within the adolescent community and fostering a positive social environment in high schools.

In Texas, a significant number of drug and alcohol rehab centers are available, offering specialized services for individuals already struggling with drug addiction. These centers focus on helping individuals overcome addiction, preventing relapses, and mitigating the risk of severe hospitalization or death resulting from drug overdose. An example of a resource available is the National Rehab Hotline, which operates 24/7. This hotline serves as a valuable source of information and resources, offering guidance on how to assist loved ones dealing with drug abuse. It also provides strategies for parents to support their youth in overcoming drug addiction and preventing relapse. Such hotlines are crucial in connecting individuals and families with the necessary assistance and support.

Conclusion

The Woodlands grapples with a drug abuse crisis, particularly affecting adolescents. It is crucial to recognize that drug abuse does not only impact individuals but has far-reaching consequences for families and communities. The repercussions extend to significant academic performance issues, the development of multisystem chronic diseases in individuals - families supporting their loved ones through the challenges of overcoming drug addiction and preventing relapse experience long-term fatigue. Moreover, there is a considerable financial burden on communities as they need to treat patients suffering from multiple organ failure resulting from drug overdose. The multifaceted effects of drug abuse highlight the urgency of addressing this issue comprehensively.

While the severe crisis of drug addiction is preventable, the Texas government acknowledges the alarming impact of drug addiction on the youth. It is taking steps to raise awareness of the dangers of drug use. However, the battle against drug addiction in adolescents is ongoing and far from over; it remains a long-term challenge. The data on drug overdose deaths underscores that the current efforts may not be sufficient. The Texas government should place greater emphasis on education programs aimed at preventing drug abuse. Initiatives like the Leadership Council serve as excellent examples, and creating more programs of this nature can further enhance awareness of the harms associated with drug use. Continued efforts and innovative strategies are essential in the ongoing fight against drug addiction among adolescents.

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Lost and Found: An Eriksonian Approach to Understanding the Effects of Social Media on Identity Development in Young Adults During the Digital Age

Research Paper by
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PSYCH 2314: LIFE-SPAN GROWTH &
DEVELOPMENT (HONORS)

Writing an excellent psychological research paper is challenging. APA formatting is quite strict in its guidelines and even with assistance from Purdue Owl and APA style guides, it can still be a daunting and perilous endeavor. Miss Pledger took meticulous care in crafting her paper while adhering flawlessly to these guidelines. Moreover, she chose a topic that bridges a classical developmental theory (Identity formation in Erikson's Psychosocial Identity Development) to modern day challenges (the digital age and social media) as they face a specific age group (young adults). In so doing, she explored theory and practice, creating a dialectic, dynamic and praxis that challenges readers, including myself, to look closer at this classic theory as it applies to today. Her exploration of Erikson's definition of "pseudospeciation" was a particularly compelling and educative to the reader and this professor. Ultimately, while the results of her excellent research endeavor may have been less than clear, her written work makes a compelling argument for further exploration and application of classic psychological theory to the modern problems, a hallmark of a well-crafted psychological research paper.

- Michael Devoley

To function happily in society, individuals must develop a sense of identity beyond their age, height, sex, skin color, and anything else that could be found on a form of government-issued identification. A person's set of beliefs, interests, goals, and values make up their sense of self and identity. Identity development in individuals has been studied by researchers for years, most popularly by Erik Erikson in his development of the psychosocial developmental stages. In recent years, many individuals have expanded on Erikson's research and determined that identity development is a continuous process. Similarly, social media is a growing topic of interest that many researchers have looked at. While the implications of social media overconsumption on mental health have been well studied, very little research has been done on how social media affects the identity development of young adults. More specifically, even less research examines the effects of social media on the psychological moratorium and the pseudospeciation process, both being large areas of identity development. To

begin the conversation of how identity formation through social media affects individuals long-term, the impacts made on the psychosocial moratorium and pseudospeciation will be applied to career satisfaction. This study aims to use Erik Erikson's theory of psychosocial development to distinguish how modern social media has influenced the identity development of young adults.

A logical place to begin analyzing the identity development of young adults is looking at Erik Erikson's theory of psychosocial development. Erikson, a German psychologist, believed that all individuals went through a series of stages that guided their social development. For the purposes of this paper, Erikson's fifth stage of identity versus role confusion will be used. This stage was proposed to take place from 12-18 years of age and individuals are given a chance to explore their identity (McLeod, 2023). If this stage is successful, adolescents will be given the freedom to explore their interests without judgment and will form a concrete identity by the end of the stage. Unsuccess during this stage is characterized by restrictions on what interests they can explore. This ultimately leads to role confusion, or a struggle to find personal identity and life purpose (McLeod, 2023). Through this stage, Erikson stresses the importance of finding identity during adolescence by exploring interests, beliefs, and different people.

Expanding upon Erikson's theory of psychosocial development, James Marcia (1980) created four categories or stages to determine where an individual was in their identity formation process. The four categories are described by the presence or absence of crisis (a period that requires decision-making) and the level of commitment the individual has to their occupation and beliefs. The first category, identity achievement, describes individuals who have high commitment levels and are in a crisis. Foreclosure describes people who are not in a time of crisis but are still committed to their ideology and occupation. Individuals experiencing identity diffusion are not committed to their beliefs or occupation and may be in a time of crisis. Lastly, those experiencing a moratorium are in crisis and are slightly committed to their beliefs and occupation but have not made their commitment permanent (Marcia, 1980). These distinct categories offer more specificity for researchers wanting to study the identity of individuals.

With Erikson identifying identity development as a process that occurs during adolescence, scholars must look at the possibility of identity development occurring during young adulthood and the effects it may have. Orlofsky et al. (1973) interviewed college-aged men to discover how identity affected Erikson's sixth stage of intimacy versus isolation. Overall, Orlofsky et al. (1973) found that individuals who experienced meaningful relationships and solved the sixth stage of psychosocial development found a more meaningful identity throughout the relationship. Conversely, individuals who had not experienced meaningful relationships were found to have fewer clear identities (Orlofsky et al., 1973). Building upon this, Kroger (2018) found that the different tasks listed in each of Erikson's stages often codevelop. Instead of resolving the assigned task before moving to the text psychosocial stage, individuals move through the stages while old tasks from prior stages resurface. Through an analysis of several case studies, Kroger (2018) found that identity develops from the age of 12 throughout

adulthood, without ever experiencing a clear resolution. The resolutions of other stages influence identity, and sudden changes to the status of these tasks negatively impact identity. Overall, an analysis of these articles depicts identity as a constant evolution and not a concrete stage.

After establishing the evolution of identity throughout adulthood, the social and psychological impact of social media must be explored. Mohan and Ravindran (2020) explored the usage of social media in young adults and how it correlated to loneliness. After defining loneliness as a condition that reduces the brain's executive functioning, which causes increased impulsivity, they found that individuals with higher levels of loneliness were far more likely to have an internet addiction and use the internet to seek a solution for their intimacy vs. isolation conflict. However, the increased internet usage seemed to create an unhealthy loop of increased loneliness due to increased comparison and self-esteem issues (Mohan and Ravindran, 2020). Looking at the effects of social media from a psychological point of view, Chen and Lee (2013) interviewed college students to determine the relationship between Facebook usage and psychological distress. Specifically, Chen and Lee (2013) attempted to discern between two specific mechanisms causing distress: communication overload and self-esteem. The results suggested that Facebook usage patterns greatly determine the level of distress experienced, as well as finding that self-esteem is not directly linked to Facebook usage, but rather indirectly linked through communication overload. Both articles point to the negative effects of social media overconsumption in social and psychological ways, alluding to the potential harm social media may have on the psychosocial development of identity.

Once establishing social media's ability to have a negative impact on young adults, a more detailed look into how social media affects identity is needed. To do this, Kay (2018) focuses on how Erikson's theories on identity development compare to millennials today, as they grew up as the internet developed. Kay (2018) found that most millennials using social media were using it to strengthen preexisting social ties instead of using it to create new ones. However, the research also noted that the opposite can be true in troubled individuals, where times of confusion lead them to pseudospeciate in extreme ways to niches they would not regularly belong to. Looking at identity development through the lens of comparison, Yang et al. (2018) surveyed college students twice a year to discern how comparing themselves to others through social media usage was affecting their identity. Despite the belief that all comparison on social media is bad, only the judgmental form of comparison on social media hurts identity clarity. More specifically, the act of comparing who has a better life through looking at someone's social media was harmful to participants, while using social media as a means of comparing opinions was not harmful. Overall, these articles suggest that only misuse of social media causes negative identity development and not social media in general.

Despite knowing that social media can be harmful, when used inappropriately, in forming identity, more specific research into what characteristics of social media make it harmful is necessary. Wanting to examine why social media may

be harmful in the process of building identity, Davis and Weinstein (2017) analyze two case studies of emerging adults. From an Eriksonian perspective, both individuals are using Instagram to carve out a psychosocial moratorium, or a space to try out new identities. However, Davis and Weinstein (2017) point out that a crucial aspect of a psychosocial moratorium is that it needs to be safe and private. With social media and internet posts being forever, identity experimentation taking place by teenagers can lead to further confusion and an inability to distance themselves from their past experimentation as they grow older. Taking the Eriksonian perspective a step further, Gonzalez-Larrea and Hernandez-Serrano (2020) investigate how individuals use the internet to broaden their identity. Overall, the research suggests that the expansiveness of social media causes individuals to attempt to broaden their identity to fit into every social category they envy or like. These individuals are pseudospeciating themselves into several niches to be a part of every in-group they like the look of, instead of speciating themselves into one group. This delays identity resolution and confuses individuals more, suggesting that the expansive scope of social media is another issue that interferes with identity development. Together, these articles point to social media's lasting digital footprint and large scope as two main issues affecting identity development.

To advance the current research on social media's role in identity development, a greater understanding of how social media creates a digital culture for individuals is necessary. To investigate the implications of congruence levels between in-person identity and online identity, Moran-Pallero and Felipe-Castano (2021) surveyed 350 college students. Through their survey that focused on individual sense of self in online personas and in-person personas, Moran-Pallero and Felipe-Castano (2021) found that individuals who reported a significant difference between the two identities had higher levels of well-being. This suggested to the researchers that having a specialized internet culture was healthy and allowed for better exploration. Wanting to look further into what digital culture means on social media, Gonzalez-Larrea et al. (2021) interviewed adolescents about parasocial relationships with social media influencers. Through questions about how the influencers affected different aspects of their lives and decision-making, Gonzalez-Larrea et al. (2021) found that the individuals experienced a high level of vulnerability for the social and cultural peer pressure category. This suggested to researchers that digital culture not only affects what people choose to engage in on social media, but how they live their in-person lives as well.

To understand how digital culture and identity developed through social media affect emerging adults long term, an analytical look at how identity affects career choice and job satisfaction is needed. After reviewing the theoretical links between career choice and identity, Blustein et al. (1989) decided to conduct a study on college-aged individuals to examine how their sense of identity affected their job search and job satisfaction. Ultimately, the results of the survey showed an inverse relationship between career commitment and psychosocial moratorium status (Blustein et al., 1989). This relationship suggested to researchers that

individuals who are still unsure of their identity are unable to commit and be successful in a career. However, because this study was done 34 years ago, this article does not account for changes to the ways individuals find their identity. There is currently a lack of updated research that considers changes in social interaction, communication, and the ways individuals form their identity in combination with how this affects job satisfaction.

Method

In order to obtain reputable information on social media and identity development, data was gathered using only scholarly databases. The databases included JSTOR and Academic Search Complete (EBSCO). Keywords for the searches included: “Erikson identity,” “social media and identity,” “identity versus role confusion,” “social media and pseudospeciation,” “Erikson and social media,” “young adult identity development,” “late identity resolution,” and “identity and career satisfaction.” Overall, thirteen articles and journals were used to investigate the effect of social media on the increased pseudospeciation of young adults during identity formation.

For the purpose of giving a complete review of how social media influences identity, the potential effects were divided into positive and negative. To further specify, the results were broken down into what aspect of identity development, according to Erikson’s theory, was affected. After determining the effects of social media on the two aspects listed, the effects were applied to individual career satisfaction.

Results

The literature reviewed produced several significant findings relating to how the internet influences the identity development of young adults. Due to the conflicting nature of the findings, both positive and negative effects will be discussed. After an analysis of whether the effects discussed have a lasting impact on identity formation throughout adulthood, a discussion will follow.

Negative Impacts of Social Media on Identity

Effects on the Psychosocial Moratorium

Although the internet is constantly evolving, the lasting trail of past information that social media leaves behind voids the experience of a true psychosocial moratorium. A term coined by Erikson, the psychosocial moratorium is a period of time when individuals can explore their values and beliefs while free from judgment. However, the digital footprint left behind by social media prevents individuals from escaping judgment and consequences from their time exploring. Davis and Weinstein’s (2017) extreme depiction of an individual using social media to experiment with a new identity and having the social media later used as a show of his character proves that social media violates an essential aspect of the psychological moratorium: privacy. Without this privacy, individuals cannot experiment with different identities. This leads to a delay in identity resolution and further identity confusion.

Effects on Pseudospeciation

Social media offers individuals the chance to explore many different avenues of expression and interests, causing individuals to pseudospeciate in extreme ways. While some individuals may use this in a healthy way, overconsumption of media and preexisting mental health issues lead to unhealthy pseudospeciation. Kay (2018) cited American citizens who used social media to become familiar with, and eventually join, ISIS despite having no past affiliation. Similarly, Gonzalez-Larrea and Hernandez-Serrano’s (2020) research pointed to social media causing an unhealthy amount of pseudospeciation. Instead of trying out several niche areas of interest, individuals are expanding their interests too far and joining every in-group they are interested in. Trying to keep up with every online persona they have, individuals are becoming confused in society as to which persona is their real identity. Through extreme pseudospeciation, social media is causing further identity confusion.

Effects on Career Satisfaction

Social media has the power to drastically change someone’s interests, values, and overall identity, also giving it the ability to change an individual’s career satisfaction and other aspects of their future. With young adults using the internet to serve as their psychosocial moratorium, they face the issue of restrictions placed on what they can post and experiment with, leading to a flawed and incomplete time of finding oneself. In addition, individuals are using the internet to pseudospeciate themselves into too many groups, causing confusion about what groups they feel a strong identification with. These two issues can be seen as substantial reasons why individuals are experiencing low career satisfaction, ultimately leading to the resignation of jobs and major life setbacks.

Generation Z, the generation currently graduating college and entering the professional workforce, is facing unprecedented rates of dissatisfaction at work, largely as a result of identity issues. Fifty-four percent of these young employees have reported feeling unengaged at their jobs and feeling no connection with their coworkers and employers (Pendell and Vander Helm, 2022). With the knowledge that individuals may find harmful internet niches (Kay, 2018) and overly pseudospeciate themselves (Gonzalez-Larrea and Hernandez-Serrano, 2020), researchers may hypothesize that this is limiting the connections they are able to create at work. Instead of spending time getting to know coworkers, individuals must spend their time interacting with their online groups to maintain their online identity.

After failing to connect their sense of self to their job, individuals are now forced to make major life adjustments, leading to a generation that is slower to reach major adult milestones. Building upon Blustein et al. (1989) finding that individuals with an unclear sense of identity have lower career satisfaction, researchers can infer that low career satisfaction causes higher rates of career changes. As a result, individuals are forced to make large adjustments to their living situation and future goals to continue their search for a fitting career. At the highest rate since the 1940s, forty-five percent of people ages eighteen to twenty-nine are still living with their parents in America (Napolitano, 2023).

This unideal living situation is one way for individuals to prioritize career satisfaction, but this delay may cause increased issues with identity development and further slow career satisfaction.

Positive Impacts of Social Media on Identity

Effects on Pseudospeciation

Despite other research suggesting that social media causes an unhealthy level of pseudospeciation, Moran-Pallero and Felipe-Castano (2021) suggest that the pseudospeciation caused by social media is positive. Through a survey given to college students, Moran-Pallero and Felipe-Castano (2021) found that only 24% of individuals had a significant difference in their online and in-person identities. However, all of these individuals showed a significantly higher score of well-being than individuals who did not report a difference in identities. These findings suggest that social media gives individuals a healthy level of pseudospeciation, allowing them to explore an alternate identity online before adopting it in real life.

Effects on the Psychological Moratorium

Moran-Pallero and Felipe-Castano's (2021) research also gives evidence that, despite contradicting articles, social media may serve as an acceptable psychological moratorium. Because individuals in the survey who reported a significant difference in their online and in-person identity also reported higher levels of well-being, researchers can infer that social media must be a safe place for identity experimentation. Giving individuals the option to explore an alternate identity outside of the bounds of everyday life allows for a clearer identity resolution and sense of self.

Effects on Career Satisfaction

If individuals use social media moderately, the identity clarity they receive through social media allows for a clearer sense of self and increased career commitment. The findings of Blustein et al. (1989) prove to researchers that individuals with high identity achievement experience higher rates of feeling satisfied with their chosen career path. Applying this belief to Moran-Pallero and Felipe-Castano's (2021) findings about individuals who experiment online experiencing higher rates of identity clarity, the conclusion can be made that social media facilitates career planning and satisfaction. By developing a clear sense of self, individuals can pick and plan for a career that fulfills their beliefs, values, and interests. However, with research on the positive effects of social media on identity being limited, it is more difficult to find a correlation between social media and career satisfaction.

Discussion

The results of analyzing the effects of social media on Eriksonian identity development in young adulthood show the complexities and individuality of identity development. While both the psychological moratorium and pseudospeciation were shown to be influenced by social media usage, it depends heavily on the individual's level of social media usage. Individuals who consistently turn to

social media for gratification or have preexisting psychological issues, such as anxiety or depression, are at risk of facing increased pseudospeciation and lack the privacy of a proper psychosocial moratorium from social media. Conversely, individuals who use social media in moderation may benefit in terms of identity development. However, overall research points to a slightly more negative outcome when using social media to help shape identity, most likely due to the highly addictive nature of social media. These positive and negative effects ultimately have a large impact on other characteristics of adulthood, such as job satisfaction. With individuals using social media to either further their identity resolution or prolong their time spent in the moratorium stage, their chosen career is either affirmed as part of their identity or rejected.

Research on the overall effect social media has on the identity development of young adults is crucial to understanding how identity develops throughout the lifespan. Young adulthood is characterized by a multitude of changes in one's social circle, occupation, morals, life goals, and more. A confident sense of identity is crucial to help individuals transition smoothly into their new roles. Similarly, the option for safe identity exploration is needed for young adults to navigate the beginning of adulthood. With social media allowing for continuous consumption of unfamiliar and new information, individuals can diversify their interests and identities. Knowing the ramifications of social media on constructing identity during young adulthood will allow individuals to make calculated decisions on what media they consume, and how much of it. This could greatly improve the identity dilemmas young adults face, as well as improve the mental and emotional turmoil that accompanies identity dilemmas.

Expanding this research to examine the effects of identity development through social media on career satisfaction allows for a first look into how social media may affect individuals long-term. With millennials and Generation Z being the first generations to grow up with large social media advancements, there is a gap in research that addresses the lifelong effects social media has on individuals. By beginning to understand how social media impacts satisfaction levels and major adult milestones, individuals can begin to fully understand how their online platforms are influencing their future.

However, this research only allowed for limited research on identity development through social media during young adulthood. With Generation Z now ranging from ages 11-26, further research that looks at Generation Z young adults navigating identity development through social media could provide a more modern understanding. Following these individuals for a specific length of time, through a longitudinal study, could highlight the long-term effects of social media usage on identity formation. Research could also expand upon how individuals with different psychological disorders, such as generalized anxiety disorder or post-traumatic stress disorder, employ social media differently to navigate identity formation in early adulthood. A further look into how different social media usage patterns amongst the different groups affect identity development would give researchers a more nuanced understanding of how social media affects identity. Overall, this study proves the need for increased

research into how social media usage affects identity. Without longitudinal research following Generation Z individuals, cross-sectional studies, and sequential studies, researchers lack sufficient evidence to find the specific impacts that social media has on identity.

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This online section includes writing with a significant visual component and reflects the increasing importance of visual rhetoric in and across disciplines, as well as generally in contemporary culture. The instructor introductions to the pieces may be found in the pages of the print version of the journal. We expect this part of the journal to continue to expand as the importance of the visual aspect of texts continues to evolve.



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