Spring 5-13-2022

Reporting on Athletes and Mental Health: An Evolution in Language and Lexicon from 1970 to 2019

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REPORTING ON ATHLETES AND MENTAL HEALTH:

AN EVOLUTION IN LANGUAGE AND LEXICON FROM 1970 TO 2019

A Thesis

Submitted to the McAnulty College of Graduate School of Liberal Arts

Duquesne University

In partial fulfillment of the requirements for

the degree of Master of Fine Arts in Media

By

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May 2022

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April 7th, 2022

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ABSTRACT

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In the spring and summer of 2021, several athletes made headlines for seemingly prioritizing mental health over the status quo of sports society. For example, in May 2021, during the French Open, professional U.S. tennis player Naomi Osaka announced she would not appear at press conferences, despite threats of fines, citing on social media it was for her mental health. The controversy surrounding Osaka and others led to further questions. Looking through the lens of agenda setting and framing theories, the purpose of this study is to better understand the frequency, variety, and evolution of language in journalistic coverage of athletes' mental health in the *Pittsburgh Post-Gazette*. This study will examine the change in discourse by journalists throughout the decades at a regional, daily newspaper in a sports-centric community. It is important to evaluate the coverage of information presented, and how it is framed for the public. It is relevant to identify the

agenda for the newspaper, and whether it changes with time. A content analysis was done utilizing 320 articles from the *Pittsburgh Post-Gazette* from 1970 through 2019. The study showed variety of journalistic coverage did not change significantly over the decades, however led to further questions regarding the cultural context of the coverage.

DEDICATION

This paper is dedicated to all the people who annoyed me so much by bad-mouthing Olympic athletes and their mental health on Twitter, that I decided to do my master's research about it.

TABLE OF CONTENTS

Page

Introduction

In the spring and summer of 2021, several athletes made headlines for seemingly prioritizing mental health[1] over the status quo of sports society. In May 2021, during the French Open, professional U.S. tennis player Naomi Osaka announced she would not appear at press conferences, despite threats of fines, writing on social media, "I've often felt that people have no regard for athletes (sic) mental health and this rings very true whenever I see a press conference or partake in one" (Martin, 2021). This resulted in both support and backlash in the media.

Leading up to the Summer Olympic Games in Tokyo, discussion of mental health seemed to be more prevalent, especially on social media. In the summer of 2021, athletes from all over the world were competing in the 2020 Summer Olympics, a global event that had been postponed due to the COVID-19 pandemic. In July, at the games, U.S. gymnast Simone Biles dropped out of the team gymnastics final amid much controversy. Following her exit, the U.S. Women's Gymnastics team took silver, with ROC athletes winning the gold. There was debate on her injury and "USA Gymnastics said a 'medical issue' forced Biles out of the competition, and the gymnast later suggested she did not suffer a physical injury, according to reports" (Pramuk, 2021). The way people reacted to the gymnast's mental health led to deeper questions about how athletes and mental health are reported on. Both these women are athletic champions, Olympians, but above all,

[1] Note*: Content Warning: This paper includes discussion of both Mental Health and Mental Health terms used throughout the decades. The paper includes outdated terms, both clinical and colloquial. Some content might be sensitive for some readers. The National Institute of Mental Health has resources for those who might need help. https://www.nimh.nih.gov/health/find-help*

human beings. These events shed light on changing social norms regarding mental health, leading this research to consider how journalists report on athletes and mental health.

What is "mental health?" Is the term just bait for young people? When did mental health care terms come to be in society? How have journalists reported on athletes in the past? Why are athletes' lives and health in the spotlight? This study needed a clear scope and was guided by initial research into Terry Bradshaw.

As a local and prominent example, the former Pittsburgh Steelers' quarterback has been outspoken about his attention deficit disorder (ADD)[2] and depression in his non-playing career. There is evidence he began to speak about his mental health in interviews in the early 2000s (Snowbeck, 2003). This led the researcher to questions about how reporting and language changed between the time Bradshaw became a Steeler at the beginning his professional career to the present? These questions, proximity to Pittsburgh, and access to databases, led to the focus on the city of Pittsburgh, and the daily newspaper, the *Pittsburgh Post-Gazette*. While the subject of Terry Bradshaw was removed from the scope of the analysis, it helped shape the nature of the study.

Looking through the lens of agenda setting and framing theories, the purpose of this study is to better understand the frequency, variety, and evolution of language in journalistic coverage of athletes' mental health in the *Pittsburgh Post-Gazette*. This study will examine the change in discourse by journalists throughout the decades at a regional, daily newspaper in a sports-centric community. It is important to evaluate the coverage of information presented, and how it is framed for the public. It is relevant to identify the agenda for the newspaper, and whether it changes with time. This process can also be

[2] As of 1994, the diagnoses for "ADD" changed terminology to "Attention-deficit/hyperactivity disorder (ADHD): Inattentive Type" (Miller & Bhandari, 2021)

utilized further in other projects. Based on the study, the language used in journalistic coverage of athletes' mental health does not change drastically, however the results lay a groundwork for evaluating evolution of journalistic language in the future.

Literature Review

A history of defining mental health

The first time "Mental health" was discussed in English literature was with the introduction of "Mental hygiene" in the 1840s (Mandell, 1995). While this is the first introduction in writing, the concept of "mental health" was in discussion prior to the 1840s. A draft law, submitted to the Berlin Society of Physicians and Surgeons in 1849, included "healthy mental and physical development of the citizen" as the first object of public health (Bertolote, 2008). It would take another century for the terms "mental health" and "mental hygiene" to be defined by the World Health Organization's Expert Committee on Mental Health in September 1950.

"Mental hygiene refers to all the activities and techniques which encourage and maintain mental health. Mental health is a condition, subject to fluctuations due to biological and social factors, which enables the individual to achieve a satisfactory synthesis of his own potentially conflicting, instinctive drives; to form and maintain harmonious relations with others; and to participate in constructive changes in his social and physical environment" (Bertolote, 2008).

According to the American Psychiatric Association (APA), the initial reason for creating a classification system was the need to collect statistical information. The U.S. Census Bureau, part of the United States Federal Statistical System within the

Department of Commerce, was initially responsible for producing data about American citizens and the United States' economy (Census Bureau, 2021). In the 1840s, the frequency of terms such as "idiocy" and "insanity" were recorded for statistic purpose, to gather information about mental health in the U.S. (American Psychiatric Association, 2022). By the 1880 Census, the Bureau expanded from just "idiocy and insanity" to disorders such as mania, melancholia, monomania, paresis, dementia, dipsomania, and epilepsy (Tartakovsky, 2011). Further research should look further into the Census Bureau's agenda in recording mental disorders. The organization operates in a political context, and the reason for collecting this information was not for the purpose of helping every citizen.

In 1917, the Census Bureau embraced a publication titled *Statistical Manual for the Use of Institutions for the Insane.* This was created by the American Medico-Psychological Association, (which in 1921 changed to the American Psychiatric Association) and the National Commission on Mental Hygiene. They separated mental illnesses into twenty-one groups (Tartakovsky 2011). The manual was published in ten editions until 1942. All these disorders, except for two, were "psychotic in nature" (Pater, 2019). In 1948, at the International Health Conference in New York, the World Health Organization (WHO) was created and in the same year the first International Congress on Mental Health took place in London, England (Lack, 2012).

A year later, the WHO published a diagnostic manual called the *International Classification for Diseases (ICD-6)*, which for the first time included a section of mental disorders. The chapter included three sections: Psychoses, Psychoneurotic Disorders, and Disorders of Character, Behavior, and Intelligence. There were no descriptions to

accompany the diagnoses laid out in the singular chapter, only identifying numbers. Prior editions of the ICD had been published prior to the WHO assuming responsibility for putting together and publishing a new revision every decade (Apter, 2019).

The APA Committee on Nomenclature and Statistics developed a variant of the WHO's ICD-6 that became the first edition of The Diagnostic and Statistical Manual of Mental Disorders (DSM). This was developed as a modification so information would be relevant to the United States. There have been five editions of the DSM with many edits and reprints (Lack, 2012). The DSM-I included names and descriptions of 106 "reactions" (Apter, 2019). It also contained a glossary of descriptions of the diagnostic categories and was the first manual of mental disorders to be meant for a clinical use, rather than a statistical measure (American Psychiatric Association, 2022). The first edition of disorders was based on theories of abnormal psychology and psychopathology. These reactions were categorized by "psychotic, neurotic, or behavioral" reactions (American Psychiatric Association, 1952). In Appendix C of the DSM-I, there is a list of "supplementary terms" referenced in the manual. Included on that list are a lot of outdated terms, but some that are still used, such as "anxiety," "depression," "manic," "delusions" and "hallucinations" (American Psychiatric Association, p. 120). These terms were used throughout the decades, but the meanings and associations have shifted over time.

The DSM-II was first published in 1968. There has been criticisms and controversies with the various editions. The seventh printing of the DSM-II, in 1974, was the first-time homosexuality was declassified as a mental disturbance (Lack, 2012). The DSM-II was only slightly different than the first edition. It increased the number of

disorders and removed the term “reaction” (Tartakovsky, 2011). Sections on “depressive disorders, anxiety disorders, and personality disorders” were expanded upon (Apter, 2019). Terms such as “neurosis” and “psychosis” were emphasized as separate things, and overall, there were 185 diagnoses for mental disorders (Lack, 2012).

The DSM-III was first published in 1980 (Lack, 2012). There was a major shift from the previous editions, a move away from “vague descriptions mostly concerned with a disorder’s origin,” but rather “embrace the clinical specificity of diagnostic criteria” (Apter, 2019). This edition provided specific, diagnostic criteria for 265 diagnoses. In previous editions, many anxiety disorders were lumped together as one “Anxiety Neurosis.” DSM-III segmented the very broad diagnoses into several different anxiety disorders like panic disorder, social phobia, and generalized anxiety disorder (GAD). The term “neurosis” was removed from the manual altogether (Lack, 2012). A 1987 revision of the DSM-III-R included 297 different diagnoses.

The DSM-IV was first published in 1994 and was more “research based” regarding criteria and diagnoses (Lack, 2012). There were 365 named diagnoses. The most recent edition of the DSM, the DSM-5 was first published in 2013. There was a deliberate shift from Roman numerals to Arabic numerals and a text revision (DSM-5-TR) set to be released in March 2022 (Moran, 2021).

The Diagnostic and Statistical Manual of Mental Disorders (DSM) is widely known as the bible of psychiatry and psychology. The manual was an indicator of which clinical terms were accepted during different time frames. There is evidence of various terms and different language used for the same disorder, and the same symptoms. This

study sought to examine how familiar journalists have been with the DSM in the past? How do they write about mental health? What sort of terminology do they use?

It is also important to note the differences between clinical terms and colloquial terms. Further research should look at the political context of the APA and DSM and the purpose and agenda behind creating a manual. The clinical terms for mental illnesses and disorders changed, but unless someone is in the field of psychology or psychiatry, it is unlikely laypeople, including journalists, would be up to date with the language. How would the average citizen gain information on updated language? This study argues that media set an agenda through the terms it uses, and how information is framed to audiences.

Agenda Setting Theory

Lippman (1922) wrote "The world that we have to deal with politically is out of reach, out of sight, out of mind" (Stacks & Salwen, 2009, p. 90). McCombs and Shaw (1972) described the way information travels to people through media thusly: "The information in the mass media becomes the only contact many have with politics" (p. 176). In their landmark study, they described how citizens could learn more about political candidates if issues were presented more in the mass media. "The mass media force attention to certain issues. They build up public images of political figures. They are constantly presenting objects suggesting what individuals in the mass should think about, know about, have feelings about." They hypothesized that "the mass media set the agenda for each political campaign, influencing the salience of attitudes toward the political issues" (McCombs & Shaw, 1972, p. 177).

Neuman (1990) analyzed these patterns further by examining the evolving public awareness of news issues. His study modeled the threshold of public attention regarding specific political issues. The author noted that public awareness tends to differ with topics, and he argues that it might have to do with how the news information is presented (Neuman, 1990, p. 159). Valenzuela and McCombs later added to these ideas of agenda setting in *An Integrated Approach to Communication Theory and Research*, when they noted that "when connecting to the world outside our family, neighborhood, and workplaces, we deal with a second-hand reality created by journalists and media organizations" (Stacks & Salwen, 2009, p. 90). The researchers argued that the press' agenda tends to have a repetitive nature. The same messages repeated over again can be considered a "redundancy of the press agenda (that) allows the public to learn about issues and other news objects with little deliberate effort on their part. The incidental nature of this learning, in turn, helps issues to move rather quickly from the media agenda to the public agenda" (Stacks & Salwen, p. 92). Basically, audiences become accustomed to getting easy, accessible information from media sources, making it easier for the audience to believe whatever the journalists say or write.

Valenzuela and McCombs mention "in theoretical terms, some issues are obtrusive, that is, they obtrude into our daily lives and are directly experiences, while other issues are unobtrusive, and we encounter them only in the news" (Stacks & Salwen, p. 94). They then added, "Consequently, the less obtrusive an issue is, the more individuals will rely on the news media for information about it and the stronger the agenda-setting effects can be" (Stacks & Salwen, p. 94). In other words, audiences are conditioned to repetitive messages relating to less obtrusive issues.

According to Valenzuela and McCombs, "the agenda-setting role of the mass media converges with many other paradigms in the communication field, including framing, priming, gatekeeping, cultivation, and the spiral of silence. The similarities and differences between agenda setting and framing are currently one of the most discussed of these theoretical connections" (Stacks & Salwen, p. 96). They wrote that an approach to this sees "framing as a paradigm that explores the way events and issues are presented." This has a subsequent influence on audience members. Agenda setting theory and researchers working with the theory continue to expand our understanding and knowledge of the connections between what is going on inside people's own minds and what is going on in the world outside.

News Framing Theory

Gamson (1989) wrote "facts have no intrinsic meaning. They take on their meaning by being embedded in a frame or story line that organizes them and gives them coherence, selecting certain ones to emphasize while ignoring others" (p. 157). This is an assumption how much informational content is presented. "Think of news as telling stories about the world rather than as presenting 'information,' even though the stories, of course, include factual elements" (Gamson, p. 157). He noted that it is important for receivers of information to be aware of the way news is presented. "It is possible to tell many different stories about the same events" (p. 158). He argued audiences need to recognize that "framing incorporates the intent of the sender of the message" (p. 158). The intent of the sender is the agenda of the news organization. The framing of any given news organization does not necessarily come from a singular person in charge. More

likely, it follows societal or cultural trends. “The frames for a given story are frequently drawn from shared cultural narratives and myths” (p. 161).

Entman (1991) argued that “news frames exist at two levels: as mentally stored principles for information processing and as characteristics of the news text” (p. 7). Like what Stacks and Salwen mentioned regarding agenda-setting theory, repetition and reinforcing information is a heavily involved in framing. “Through repetition, placement, and reinforcing associations with each other, the words and images that comprise the frame render one basic interpretation more readily discernable, comprehensible, and memorable than others” (p. 7). Frames exist as “information-processing schemata,” meaning they act as a tool used to organize information in a deliberate fashion (Entman, 2001, p. 7). This tool can be utilized by news media without public awareness. “Media reports may penetrate the consciousness of mass public that is minimally aware of most specific issues and events” (p. 9).

In a 1993 article, Pan and Kosicki discussed news discourse as “a sociocognitive process involving all three players: sources, journalists, and audience members,” when they analyzed and examined media framing of issues in news texts (p. 55). The authors expanded upon the idea of framing as a tool in news discourse. They organized framing into four classifications, “representing four structural dimensions of news discourse: syntactical structure, script structure, thematic structure, and rhetorical structure” (Pan & Kosicki, p. 59). These four categories further organized the devices used to frame information.

“Agenda-setting converges with framing when the latter is defined in terms of the characteristics in which a news object is portrayed in the media or by the public, but the

two concepts diverge when framing involves more abstract, all-encompassing processes" (Stacks & Salwen, p. 96). News framing theory is rooted with psychological and sociological ideas. Framing theory describes how news media influence people's attitudes and behaviors by changing how they report on an issue. Media framing can bring cultural taboo topics, like depression, into the "mainstream" discourse (Jin et al., 2018).

Media and Mental Health

Several studies have been conducted using content analyses that focus on mental health, media, and awareness. A study published in 2012 in the *Journal of Health Communication: International Perspectives*, focused on three Central European countries; Croatia, Czech Republic, and the Slovak Republic. The goal of this study was to compare both content and tone of articles on "mental health/illnesses" in Czech, Slovak, and Croatian *print* media. The aim was to determine quantity of articles written about the subject, as well as analyze the tone of articles (Nawková et al., 2012).

A 2014 Spanish study aimed to analyze the content and the form of news topics related to mental illness. The authors conducted a "cross-sectional" descriptive study where they took a sample from twenty Spanish newspaper over the course of the 2010. Their focus and hypotheses were related to the public's stigma and associations of mental illness. They wanted to understand the role of media in propagating or attenuating stereotypes, prejudices, and stigma (Aragonès et al., 2014).

Jin et al. (2018) meanwhile, used content analysis to focus on Chinese college students. The authors were specifically looking at content related to depression, as it is

"now one of the most severe public health threats in China and among Chinese college students." The purpose of the study and content analysis was to examine the effects of depression news coverage on college students' mental health literacy (Jin et al., 2018).

Both the Central European study and the Spanish study focused on a content analysis of newspaper and other print sources and their coverage relating to mental health/ mental illness. The benefit to the Chinese study is the discussion of "depression" and use as a search term, as well as focusing on framing theory and how it affects overall perception. None of these studies focused on athletes, specifically. This study will have different viewpoint, using historical content analysis to see the trends in relation to athletes' mental health. With these concepts in mind, the following research questions are proposed:

RQ1: How has journalistic coverage of athletes' mental health changed since 1970?

H1: The frequency of journalistic coverage of athletes' mental health has increased each decade.

H2: The variety of journalistic coverage of athletes' mental health has increased each decade.

H3: The language of journalistic coverage of athletes' mental health has changed over the decades.

Methodology

This study consisted of a mixed methods content analysis of the *Pittsburgh Post-Gazette*. The articles were collected by utilizing the database, ProQuest, with access provided by Duquesne University. The ProQuest databases used include "Pittsburgh Post- Gazette (2009-[3])," "Pittsburgh Post-Gazette (1927-2003)," and "Pittsburgh Post-Gazette, Sun-Telegraph (1960-1978)."

Four time periods were selected as parameters for the search terms, to see the evolution of these ideas. The four time periods selected are as follows: 1) January 1, 1970- December 31, 1979; 2) January 1, 1980- December 31, 1989; 3) January 1, 1990- December 31, 1999; 4) January 1, 2000- December 31, 2009, 5) January 1, 2010- December 31, 2019. These time periods were selected to be distanced enough to show an evolution. The choice to begin the study in 1970 was partially due to the publishing of the DSM-II IN 1968, which coincided with the start of Bradshaw's NFL career in 1970.

Several search terms were used to find the articles during each of the five different time periods. The term "athlete" was searched along with individual terms including, "anxiety," "depression," "mental," "neurotic," and "insane." These terms were selected using both the Word Associations diagrams created by a group for the American Addictions Center (Mentalhelp.net, 2021), and the *Diagnostic and Statistical Manual of Mental Disorders* online (American Psychiatric Association, 1952). The terms were searched by decade. These terms were used as an initial baseline to pull articles for the study.

[3] *Pittsburgh Post-Gazette* (2009-) is a database starting in 2009 and goes through current editions (as of February 2022).

A universe of 3,089 articles were identified following these parameters (see Table 1). Approximately, twenty percent of the articles, broken down by decade, were randomly selected and coded. During the coding process, some duplicates and irrelevant data points were removed, so a total of 567 articles were coded. Each article was coded for: word count, section of newspaper, story unit, gender and ethnicity of author, and gender and ethnicity of athlete written about. Additionally, the articles were examined for more than four dozen terms and themes, in addition to the six used for the initial article collection. (See **Appendix A** for full coding manual and **Appendix B** for coding sheets).

A priori and emergent coding were utilized due to the nature of the study. Twenty-five terms and eleven themes were selected prior to data collection, while thirty-two terms and eight themes were added during the coding process. This came out to fifty-seven terms and nineteen themes for which the articles were coded, for a total of seventy-six key words. (See Appendix A for complete list of terms and themes.) Out of the 567 articles coded, 247 datapoints were removed before analysis because they were deemed irrelevant to the purpose of the study. One example of an irrelevant article for analysis is an obituary. After removing these articles from analysis, sixteen terms and frames were no longer present, and only terms and frames were analyzed. A total of 320 datapoints were used in the analysis.

Results

To test the RQ1, 60 crosstab/chi square tests were run on every term and frame by decade. Out of 60, only six were statistically significant (See Table 2 for test results). The statistically significant terms (showing difference in coverage across decades) included "mental," "nervous," "trauma," "concussion/Traumatic Brain Injury (TBI)." The statistically significant frames included "treatment" and "active sport." The term "mental" appeared most frequently in the 2010s. "Nervous" appeared only in the 1980s. "Trauma" appeared in 1970s, 2000s, but mostly in the 2010s. "Concussion or TBI" appeared in the 2000s, but predominately in the 2010s. The frame, "treatment" appeared the most in 2010s, and the frame "active sport" appeared most in 1990s. This meant that there was a significant difference per decade in how many times these elements were included or referenced.

H1 predicted that the frequency of journalistic coverage of athletes' mental health would increase each decade. To test H1, a chi square goodness of fit test was run using SPSS, results show that $X^2(3, N=272) = 58.441$, $p < .0001$ meaning there is no difference across decades in terms of how many articles were published. Therefore, H1 was rejected.

H2 predicted that the variety of journalistic coverage of athletes' mental health would increase each decade. A new variable was created in SPSS called "Variety of terms," by adding all coded terms and themes. Using a one-way ANOVA test, variety was analyzed by decade. The results show that $F= (4, 309) = 1.551$, $p=.187$, meaning there were no differences across decades in terms of how many key words (terms and frames) were observed in each article. To test the variety of coverage in relation to gender

and ethnicity of both author and athlete, a series of crosstabs analyses with chi square were conducted. (See Figure 1, 2, 3, and 4). Results show that there was no relation between decade and gender or ethnicity of authors or athletes. However, it should be noted that regardless of the decade, most of the articles were written predominately by white males. The athletes covered in the press were also predominately white males.

H3 predicted that the language of journalistic coverage of athletes' mental health would change over the decades. Tone of news stories were tested in relation to each decade using crosstabs/chi square analysis. Results showed that $X^2(16, N=320) = 13.34$, $p = .648$, meaning the tone of writing has been consistent over the decades. Regardless of the publication year, the tone of news stories was predominately neutral.

Discussion and Limitations

This study showed that there were some differences in terms of observed terminology in the journalistic coverage of athletes' mental health since 1970's, however this change was not gradual or immense. Each decade had its own focus only in 6/60 (10%) of the time. Majority of the terms have been consistent over the past fifty years, apart from decreased use of "nervous" and increased use of "trauma" and "concussion/TBI." There was no difference in frequency, variety, or language of journalistic articles on athletes' mental health over the past fifty years. The agenda for reporting on mental health seems to have been set five decades ago and has not changed much. Audiences are not used to seeing athletes framed within a mental health context. And while both concepts were reported on, it was not always together. Further research should look at the connection between athletes and their status as celebrity. Additionally,

it would be interesting to evaluate the way athletes are covered at different levels of sport, from recreational and amateur to professional.

The findings of this study have practical implications for journalists, athletes, and historians. For journalists, one straightforward recommendation would be to make a constant effort to diversify the newsroom or workplace. Journalists of different genders, races, and cultural backgrounds have their own unique viewpoint and perspective. The diversity in the newsroom should represent the diversity of the population. Athletes should not be afraid to speak out about mental health in addition to physical health. Historians of both media and sports should reflect on whether their industry has evolved or grown around mental health research.

In addition to the contributions of this study, it has limitations. A limitation to this study was that access to the ProQuest Database was limited, and articles from 2004-2008 were not available, therefore H1 did not include the decade of the 2000s. For all other analyses besides quantity of articles by decade for H1, the available articles from this decade were utilized and included in the dataset. Regardless of missing several years of articles in the sample for the 2000s decade, the average word counts still increased between 1990s and 2000s (See Figure 5). Future research should investigate where the missing articles might be, and whether changes in publishing format affects the average number of articles published or average word count of articles.

In terms of H2, while variety of terms did not show any differences across the decades, it is important to note that regardless of the missing years in the 2000s, the variety of terms does increase slightly between the 1990s and 2000s (See Figure 6). It can be assumed that journalists were using largely common terms for mental health or

mental illness related issues in each decade. If journalists are using a greater variety of language, the audience is reading and understanding a greater variety of language. Future research should explore further, by decade, which mental health terms were commonly accepted in society. It should focus on both the clinical vocabulary used by healthcare professionals, as well as language utilized by journalists during the same specific time.

Regarding H3, terms and language changed both clinically, and colloquially, and it does not seem to happen at the same time. In terms of frames, the two that were most present were related to the active field of play, and the treatment and recovery from some sort of health situation, usually involving physical injuries. Only six out of sixty terms proved to be significant for the entire time. This shows that the terms selected for coding could have been changed to include more relevant search terms.

Regarding the terms, toward the 2010s, this study found an uptick in content regarding the mental health consequences and severe impacts of concussion and Traumatic Brain Injury (TBI). In the late 1990s and early 2000s, there was a rise in research and the conversation surrounding the damaging effects of brain injuries. Studies at the time were finding that it was no longer just a physical issue but involved both the physical and mental health of the athlete. The physical damages of a traumatic brain injury or a concussion can have direct effects on the daily mental health of an athlete. “Concussion” was an emergent coding term for this study. Future research should explore the timeline of concussion research.

This study utilized a small sample of the population of the journalists that work for a certain area. Hence the generalizability of findings is limited. Pittsburgh, like other cities such as Philadelphia, PA, and Houston, TX, is a hub for medical research, in

addition to being a major sports city. Is Pittsburgh an exception or representative for what publications in other cities might be writing about? Is Pittsburgh a pioneer in discussing athletes and mental health, or does it line up with what was written nationally? Future research should look at the same context in different market areas to evaluate the cultural and/or industrial differences.

Most of the articles coded were written by white males and written about predominately white male athletes. However, there are examples of women and people of color reporting as well (See Figure 1). In each era, the overall number of articles in the sample written by women increased. This was not statistically significant; however, it is important to note that women were writing some of the articles. It would be interesting to look at the way other news organizations framed news and mental health topics at the same time as the *Pittsburgh Post-Gazette.*

Conclusion

The research area of mental health reporting and sports reporting is vast. Both areas of reporting have gone through changes in the way information is presented. The intersection of the two remains largely unexplored. However, this study shows that journalists have reported on both mental health and athletes far before the 2020 Summer Olympics. Based on the research for this study, is seems news media agendas have largely remained the same over the last several decades. The information is generally framed in a way that audiences are used to. Despite the lack of statistical significance in the analyses, it is argued that these results express a cultural snapshot in the context of

reporting on athlete's mental health. It shows there are more questions to be asked, and further research to conduct.

Future Research

The examination of mental health terms used in media remains a rich, yet largely ignored, area of research. Additional studies might expand the topics related to mental health, widening to further include intersectionality of mental health with gender, race, class, and other factors. For example, a deeper examination into the history of the DSM and mental health care terminology utilized by news outlets could further our understanding of how of these outlets frame public knowledge and opinion, and thus influence public opinion regarding mental health.

Another interesting note that was unexamined in this study was that the APA initially listed "homosexuality" as a sociopathic personality disturbance. Does this align with political tension at the time? Additionally, there are other publications that could be examined in addition to the *Pittsburgh Post-Gazette*, such as the *Pittsburgh Courier*, which was one of the leading Black newspapers in the U.S. in the 1940s to explore differences in content between a publication written by predominately white journalists, versus one written by Black journalists.

Finally, a perhaps more specific example of further research would be a case study of an individual athlete. For example, Simone Biles, Michael Phelps, or Terry Bradshaw. Such a case study would evaluate the changes in journalistic coverage of the athlete throughout critical stages of their career, including early career, active career, and post-retirement coverage.

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Tables and Figures

TABLE 1: Total Articles in Population

Total Articles in Universe						
Search Term ("Athlete" + "_____")	***Database Name*** *(*Within ProQuest*)*	*Pittsburgh Post-Gazette* (1927-2003)	*Pittsburgh Post-Gazette, Sun-Telegraph* (1960-1978)	*Pittsburgh Post-Gazette* (2009-)	**Total # of articles**	**20% of Total (Articles to code)**
Anxiety 1970-79		8	24		32	6
Anxiety 1980-89		58			58	11
Anxiety 1990-99		98			98	19
Anxiety 2000-09		30		6	36	7
Anxiety 2010-19				85	85	17
Depression 1970-79		10	37		47	9
Depression 1980-89		101			101	20
Depression 1990-99		165			165	33
Depression 2000-09		65		24	89	17
Depression 2010-19				165	165	33
Mental 1970-79		54	87		141	28
Mental 1980-89		375			375	75
Mental 1990-99		669			669	133
Mental 2000-09		228		48	276	55
Mental 2010-19				510	510	102
Neurotic 1970-79		1	6		7	2
Neurotic 1980-89		14			14	2
Neurotic 1990-99		18			18	3
Neurotic 2000-09		9		1	10	2
Neurotic 2010-19				9	9	2
Insane 1970-79		2	14		16	3
Insane 1980-89		27			27	5
Insane 1990-99		43			43	8
Insane 2000-09		29		3	32	6
Insane 2010-19				66	66	13
Total articles:					**3089**	**611**

Table 2: Hypothesis 3 Statistically Significant Terms/Frames

Statistically Significant Terms	
Term	*Result of Crosstabs/Chi-Square*
Mental	X^2 (8, N=320) = 42.477, p < .001
Nervous	X^2 (4, N=320) = 12.114, p = .017
Trauma	X^2 (4, N=320) = 13.495, p = .009
Concussion/Traumatic Brain Injury	X^2 (4, N=319) = 13.967, p = .007
Treatment/Recovery	X^2 (4, N=320) = 18.286, p = .001
Active Sport/ Field of Play	X^2 (4, 320) = 9.158, p =.057

Table 3: Race/Ethnicity definitions from the U.S. Census Bureau

Race definitions from the US Census Bureau	
Race	***Description***
White	A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian.
Black or African American.	A person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as "Black or African American," or report entries such as African American, Kenyan, Nigerian, or Haitian.
American Indian and Alaska Native.	A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment. This category includes people who indicate their race as "American Indian or Alaska Native" or report entries such as Navajo, Blackfeet, Inupiat, Yup'ik, or Central American Indian groups or South American Indian groups.
Asian.	A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. This includes people who reported detailed Asian responses such as: "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," and "Other Asian" or provide other detailed Asian responses.
Native Hawaiian and Other Pacific Islander.	A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who reported their race as "Fijian," "Guamanian or Chamorro," "Marshallese," "Native Hawaiian," "Samoan," "Tongan," and "Other Pacific Islander" or provide other detailed Pacific Islander responses.
Two or more races.	People may choose to provide two or more races either by checking two or more race response check boxes, by providing multiple responses, or by some combination of check boxes and other responses. For data product purposes, "Two or More Races" refers to combinations of two or more of the following race categories: "White," "Black or African American," American Indian or Alaska Native," "Asian," Native Hawaiian or Other Pacific Islander," or "Some Other Race"

Figure 1: Gender of Author by Decade

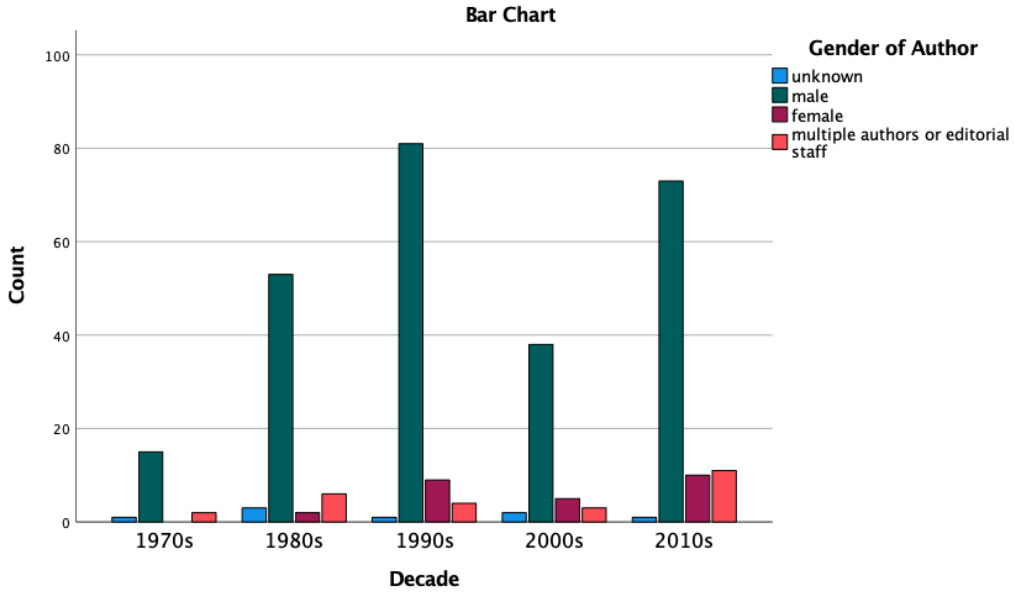


Figure 2: Ethnicity of Author by decade

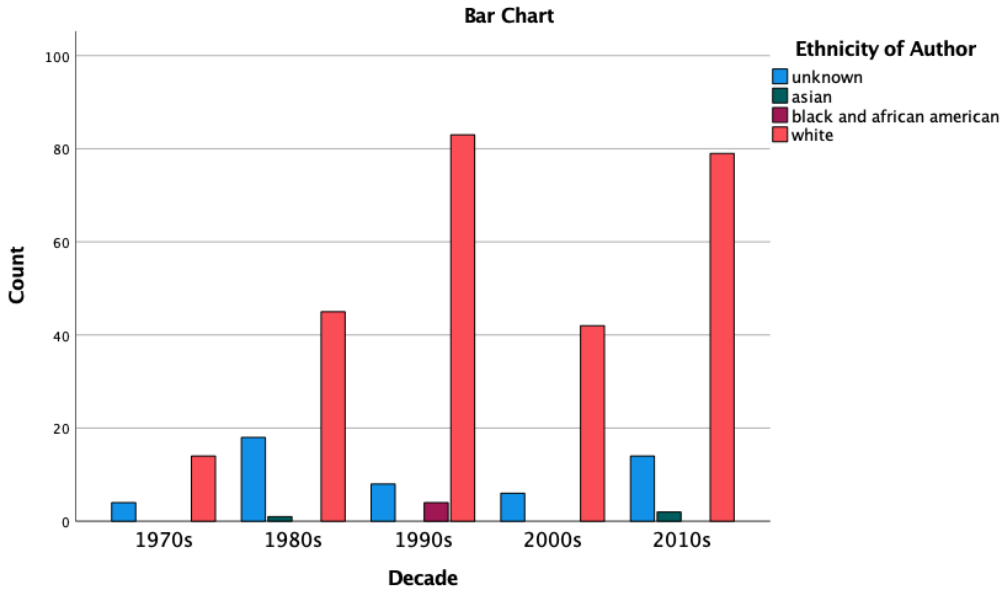


Figure 3: Gender of Athlete (by decade)

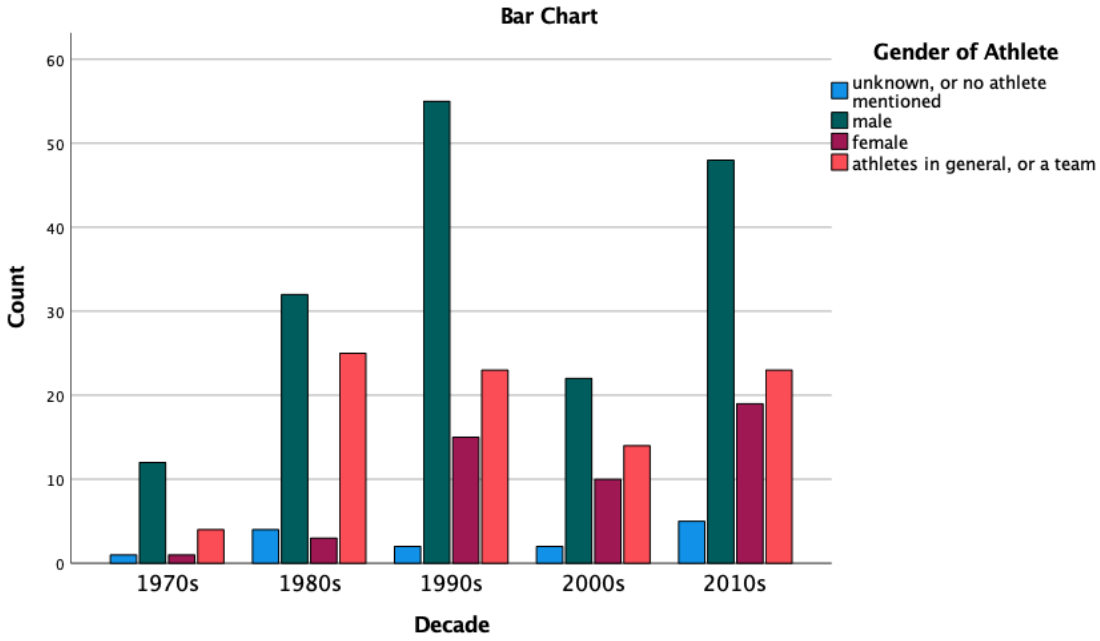


Figure 4: Ethnicity of Athlete

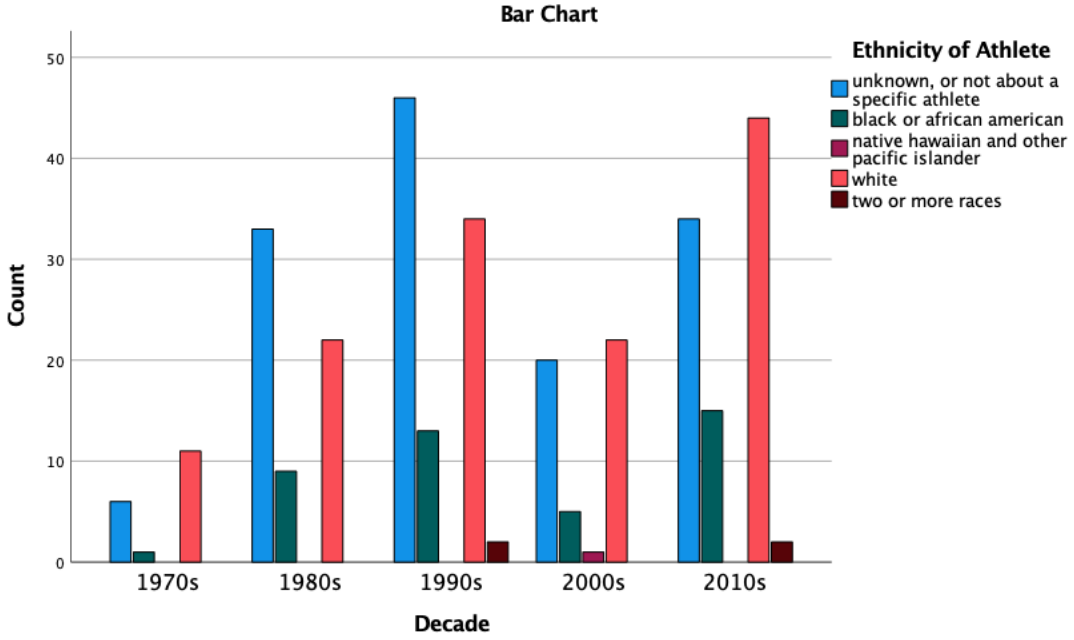


Figure 5: Word count by Decade

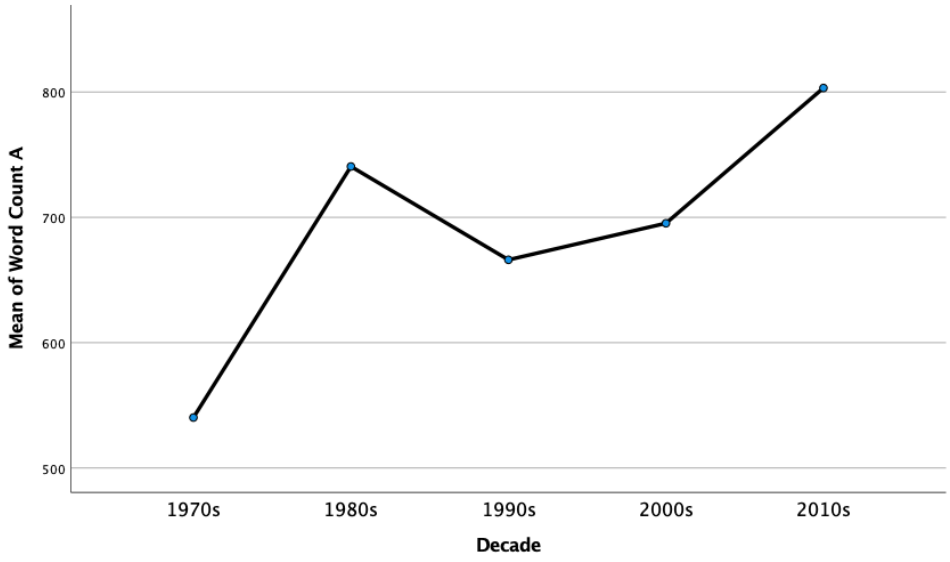
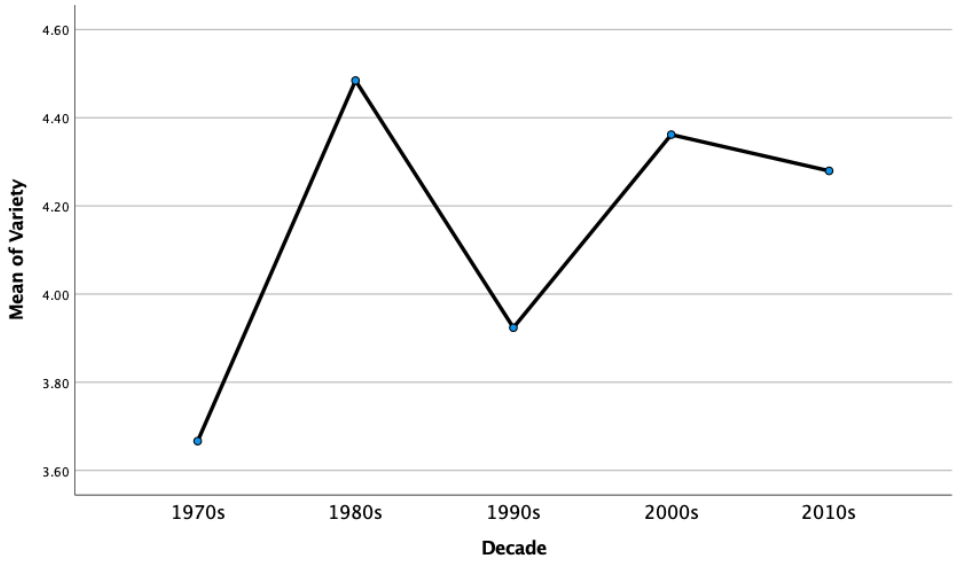


Figure 6: Variety of Terms by Decade



APPENDIX A: CODEBOOK

Basic information:

1. Date Published: Identify the date the article was originally printed/published. This will also be the identifier/point of reference for the articles.
2. Section of newspaper: Identify the location of the article and whether it was located on/in the *front page* (1), *local news* (2), *sports* (3), *business* (4), or *features* (5).
3. Story Unit: Are the search terms within the *headline* (1), *story* (2), *down page* (3), an *advertisement* (4), *TV Guide* or *Concert Guide* (5), *Column* (6), *Review* (7), *Opinion/Perspective* (8), *Letters to the Editor* (9), *Obituaries* (10), *Other* (11). If the terms come up on the same page in *two different articles* (12), then record story unit for each.
4. Word Count: Identify the length of article in terms of number of words in each article.
5. Gender of athlete: Identify if the subject of article is *male* (1), *female* (2), *other/not specified* (3), *N/A,* no athlete referenced (0). If the subject is "athletes" in general or a team (multiple athletes) it will be given a 4.
6. Gender of Author: Identify if the author of article is *male* (1), *female* (2), *other* (3), *multiple authors or editorial staff* (4), *N/A, or unknown* (0)
7. Ethnicity[4] of Athlete: Identify ethnicity of athlete (subject of article) using U.S. Census Bureau categories alphabetically, whether they are *American Indian and*

[4] See Table 3

Alaska Native (1), *Asian* (2), *Black or African American* (3), *Native Hawaiian and Other Pacific Islander* (4), *White* (5), *Two or more races* (6), *or N/A,* if the article isn't about a specific athlete (0).

8. Ethnicity of Author: Identify ethnicity of author, whether they are *American Indian and Alaska Native* (1), *Asian* (2), *Black or African American* (3), *Native Hawaiian and Other Pacific Islander* (4), *White* (5), *Two or more races* (6), *or N/A,* if unknown (0).
9. Tone of language: Identify if the tone towards mental health/illness is *neutral* (0), *negative* (1), *positive* (2), or *mixed*, a mixture of positive and negative (3). If the text is not written in reference towards mental health/mental illness, it will be *N/A* (99).
10. Athlete level: Identify if article is about *professional sports* (1), *collegiate sports* (2), *high school sports* (3), *amateur/ recreational* (4), *other* (5).
11. **Terms**: Identify how many terms are used within the context of the article. Beyond the general information previous noted, each story unit will also be examined for specific data contained within each article. It is understood that each unit can have more than one TERM within its content and should be identified for as many as the following terms as needed to accurately reflect the content of the article. The terms also include their iterations. For example, "depressive" and "depressed" would both be coded as 2 for "Depression."

    1. Anxiety
    2. Depression
    3. Mental
    4. Neurotic/Neurosis
    5. Insane/Insanity
    6. Hysteric/Hysterical

7. Mad/Madness
8. Bipolar
9. Manic/Mania
10. Paranoid/Paranoia
11. Psychotic/Psychosis
12. Crazy/crazed
13. Disorder/Disordered
14. Illness/ Ill
15. Health
16. Behavioral/Behavior
17. Stress
18. Lunacy/Lunatic
19. Idiocy/Idiot
20. Break/Breakdown
21. Episode/Incident
22. Athlete
23. Suicide
24. Treatment
25. Therapy/psychotherapy
26. Schizophrenia
27. Psychiatric
28. Psychological
29. Nervous
30. OCD
31. Eating Disorders
32. Role Model
33. Trauma
34. Anger
35. Homosexual/ gay/ LGBT
36. Head injury/ TBI/ concussion
37. Depression, the Great (era)
38. Depression (an indentation)
39. Mental, retardation
40. Mental, toughness
41. Counseling
42. Disabilities
43. Mental, aspect (to sport/game)
44. Autism/Autism Spectrum Disorder (ASD)
45. Mental, errors
46. Assault
47. Mental, lapse
48. Mental, approach
49. Mental, anguish
50. Mental, state
51. Mental, problems
52. Mental, asylum

53. Mental, hospital
54. Mental, patient
55. Mental, challenge
56. Mental, exhaustion
75. Other

12. **Frames** details: In addition to terms, each article with be examined for frames used. It is understood that each unit can have more than one FRAME within its content and should be identified for as many as the following themes as needed to accurately reflect the content of the story.

    1. Criminal Activity
    2. Drug/ Drug Abuse
    3. Alcohol/ Alcohol Abuse
    4. Treatment/ Recovery
    5. Field of play/ Active Sport
    6. Scandal (conflict)
    7. Victim (athlete)
    8. Physical Health/ Injury
    9. Clinical Language
    10. Colloquial Language
    11. Education (informing)
    12. Education (school)
    13. Violence
    14. LGBTQIA+
    15. Satire
    16. Racial Tension
    17. Poverty
    18. Incarceration
    99. Irrelevant

APPENDIX B: CODING SHEET

The following sheet was used to record the data points for this study.

1. Date of Publication					
2. Section of Newspaper					
3. Story Unit					
4. Word Count					
5. Gender of **Athlete**					
6. Gender of Author					
7. Ethnicity of **Athlete**					
8. Ethnicity of Author					
9. Tone of writing					
10. Level of athletics					
11. Terms					
12. Frames					