

## Historical Analysis of Gender Bias in Early to Mid-20<sup>th</sup> Century Pittsburgh Area Medical Field

### Purpose & Aim

My purpose with this proposal is to take advantage of the extensive Digital Archives Collection offered by the University of Pittsburgh Library System in order to craft a topical research project that satisfactorily meets the criteria necessary to apply for the Archival Scholars Research Award in the Spring 2021 term. The aim of my research will be to conduct an early to mid 20<sup>th</sup> Century historical analysis on medical research, clinical practice, and health system dynamics from archival sources in the general Pittsburgh region to assess gender bias against female patients in the medical field, particularly by physicians or other health care professionals. The research will be presented as a final research paper at the end of the Spring 2021 semester.

### Background & Relevance

The medical field is globally recognized and revered for its evidence-based medicine approach where “there is one true explanation to illness...that can often be measured and judged in an objective way” (Hammarström, 2003, p.126) “because knowledge is defined as facts that can be verified” (Risberg et al., 2006, p. 3). Although this traditionally biomedical approach to scientific knowledge acquisition and application is held in high esteem, it fundamentally excludes social and cultural realities which are known to have a profound effect on health and well-being. Particularly in relation to sex and gender, the medical field appears to harbor gender bias against women that can arguably be traced historically through scientific research design and its manifestation in clinical practice (Holdcroft 2007). Although the medical community has made biomedical progress in addressing the gender disparity, the impact its had on health outcomes plaguing women in medicine cannot be understated. This approach, although worthy in its own right, provides only a partial solution to a deeper rooted issue: the medical field’s resistance to fully acknowledge not only the implications of sociocultural factors like gender bias on women’s health, but also its own contributions to those factors. To fully address this, the bias present in its education system, research endeavors, and clinical practice must be evaluated through a gender sensitive perspective (Hammarström, 2003; Lent & Bishop, 1998). Given this context, the Pittsburgh region—world-famous for its excellence in health care and research—is the most appropriate field to conduct this research in. In doing so, biases that are woven into its various levels of the Pittsburgh medical field during the early to mid 20<sup>th</sup> century, a critical time in medical advancement, may be elucidated.

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Gender bias is a complicated and nuanced issue, and is one of many sociocultural determinants of health (Phillips, 2005). The challenge in addressing gender bias becomes exponentially more difficult with the awareness that the medical field itself has committed sex and gender discriminatory practices influencing sociocultural health determinants. Although sex and gender are distinct identities, with the former a biologic construct and the latter a social one, the discrimination of both contributes to gender bias. Additionally, this proposal recognizes men are also affected by gender bias, but this proposal will focus on women, as they tend to suffer more negative consequences in relation (Phillips, 2005). To begin addressing this issue in the medical field, a layered analysis is necessary. With respect to medical research, scores of studies have been funded, conducted, and put into practice despite having little, if any, gender perspective or sex inclusion (Holdcroft, 2007; Johnson et al., 2014). Thus historically, and in the current context, biomedical research topics that are equally relevant to women, have failed to

include measures necessary to examine differential impact on sex and gender such as: lack of both sexes in animal studies and human studies, failure to specify sex-ratios in co-sex studies, failure to include appropriate numbers of women participants, and failure to differentially relate and implicate results for women (Johnson, et al. 2014). These practices have created data disparities between the sexes and have contributed to the significant gap in biomedical understanding of women's health. Even after the 1993 NIH Revitalization Act—which aimed to increase inclusion of women into NIH-funded studies—there is still a visible discrepancy between sex and gender inclusion in research (Holdcroft, 2007; Johnson, et al., 2014).

Although there is tremendous progress towards bridging the gap created in medical research due to lack of gender perspective and sex inclusion, addressing its translational effect in the medical field is yet to be fully accepted and integrated into education and practice. The continued failure to consider the profound impact sex and gender have on both health provider-patient relations and clinical practice— as dictated by scientific findings from research studies (Johnson, et al., 2014) —resigns women into a state of vulnerability within the medical field. Although the sociocultural impact on women outside of the realm of medicine is also highly determinant of their health outcomes, the medical field's own internalized gender bias creates a scenario where women are double burdened by sociocultural detriments to their health. As mentioned, there are continuing efforts by the scientific community to abate the consequences of the long-standing bias in research; however, their approach still transpires in a tangible and biomedical fashion. Although the medical field is slowly accepting that men and women exhibit significant biomedical differences based on genetics and physiology which manifests in factors like disease prevalence, mortality rates, symptom presentation, and drug efficacy (Clayton, 2016; Holdcroft, 2007; Johnson, et al., 2014), their approach only appeals to evidence-based medicine, and the scientifically accepted notion of sex, not gender. In contrast, gender is considered “less amenable to investigation” (Clayton, 2016). Therefore, apart from conducting new research to close the gap in knowledge, there is a clear need to analyze past and current scientific studies, educational standards, and clinical practices from a gender sensitive perspective. This approach could hold the key to uncover and bring awareness to biases within these components of the medical field (Hammarström, 2003; Holdcroft, 2007; Lent & Bishop, 1998; Risberg, et al., 2006), that have significant impact on women's health outcomes.

### Objectives

1. Use available archival sources from early to mid-20<sup>th</sup> century to analytically survey possible gender biases in Pittsburgh area medical research. The focus of the analysis will be to:
  - A. Assess the variety of research Pittsburgh physicians presented to to their peers
  - B. Assess and quantify the composition of sex or gender in presented research
  - C. Assess degree to which the topic of sex or gender is engaged with in discussion of presented research
  - D. Assess presence of biased language
2. Use available archival sources to analytically survey Pittsburgh region medical reports, books, and manuals pertaining to patient treatment, patient sex or gender composition, and language in order to assess for any indications of bias
3. Use supplementary secondary sources to contextualize and expand upon the information and conclusions drawn from archival analysis

## Intended Method of Research

The research is intended to transpire in two parts: archival research & secondary sources research. I intend on utilizing the following archival sources: Pittsburgh Academy of Medicine Records Collection (1878-1972), Western Pennsylvania Hospital and Dixmount Hospital Records Collection (1847-1918), tentatively the Public Admin Report and Studies Collection (assorted, 1910-1992), and the book *A Century of Medical Excellence: The History of the University of Pittsburgh School of Medicine* (1930).

### Phase I:

The Pittsburgh Academy of Medicine Records Collection 1878-1972 will be the primary source for analyzing gender bias in medical research. The collection from this Academy, created in 1889 by Pittsburgh physicians for “the promotion of the science and art of medicine,” has a unique section on scientific papers and discussions of cases conducted at their scientific meetings between the years of 1917-1935. This information will be used to accomplish this research proposal’s first objective, which will be to analytically survey any and all possible gender biases in medical research. The first sub-goal will assess the scientific paper choices by the Academy members and survey for a the ratio between the genders. The rest of the sub-goals aim to incorporate a systemic approach to interpret the individual papers for analysis of gender bias. This will occur in three parts, each following the sub-goals outlined respectively. First, the research papers will be surveyed for the presence, and thus composition, of female participants in the research papers, which will extend to both human and animal studies. If the papers do contain female participants, an assessment of the degree to which the research topic engages with a sex or gender perspective in the discussion of the result will follow. This will be quantified in the following manner, as adapted from the 1998 Dr. Lent and Dr. Bishop research study: incomplete, unequal, and/or omitted descriptions between the sexes or genders. Finally, if female participants are included in the scientific paper, an overall assessment for any biased language will be done (Lent & Bishop 1998).

The Western Pennsylvania Hospital and Dixmount Hospital Records Collection (1847-1918), will be the other primary source for analyzing gender bias in the medical field, particularly in mental health care. This collection offers annual reports issued by the mental care institutions: Western Pennsylvania Hospital and Dixmount Hospital. The annual reports, which will be analyzed only from the years 1900-1918 to keep the scope of study within the 20<sup>th</sup> century, offer information on patient origins and illnesses indicating insight into any possible differential treatment between male and female patients. The collection also contains a *Rules and Regulations Record* book (1903), which will also be assessed for differential patient protocols or any biased language. This information will be used to accomplish this research proposal’s second objective to survey again for gender bias against female patients.

The next two sources are given tentatively, as they appear to have promise for supporting the first two sources. First, the book *A Century of Medical Excellence: The History of the University of Pittsburgh School of Medicine* (1930), as the name implies offers a historical look at the University of Pittsburgh’s medical school. This source could be useful for further analysis into gender bias of the medical field in the form of language regarding female patients. Furthermore, its chapter on “The Growth of Research” could provide useful information to contextualize the data collected under from the The Pittsburgh Academy of Medicine Records’ scientific paper analysis. The

second tentative source is the Public Admin Report and Studies Record Collection, which has a *Pittsburgh Hospital Manuel*, which could also be useful in deciphering any gender biased language or protocols; however, it is important to note the manual is from 1970, which is outside the 20<sup>th</sup> century focused research proposal. Nevertheless, both these sources could provide additional information to fulfill the second objective of this proposal, to survey for any indications of gender bias towards female patients in the medical field.

#### Phase II:

After completing a significant portion of the archival research, I plan to continue my research using secondary sources to contextualize and expand on the information I will have already collected and synthesized. I intend for the secondary sources to strengthen and support the data and conclusions I will collect from the archival research of the early to mid 20<sup>th</sup> century by providing context and adjacent examples. I also intend to use secondary sources to expand and broaden the scope of the study by analyzing the evolution of gender bias in the medical field in the mid to late 20<sup>th</sup> century. In doing so, I hope to accomplish the final objective offered in this research proposal.

#### Conclusion

This research proposal highlights a desire to understand and assess gender bias using a historical overview of Pittsburgh area medical archival sources from early to mid 20<sup>th</sup> century. Medically related archival sources from the Pittsburgh region is highly precious, as the Pittsburgh region currently has one of the strongest health care systems in the country and is a global leader in research, largely due to UPMC and University of Pittsburgh Medical School. Thus, the region is rich with information necessary to historically analyze gender bias in medicine. In doing this work, my hope is to show the value of incorporating a gender sensitive perspective in research, not only to uncover biases within in the medical field, but also to inspire and promote further research and considerations in this manner. The strict biomedical approach's attempt to close the gap in scientific knowledge is not enough to address bias because it doesn't address the issue of why the gap was there in the first place. In contrast, the gender sensitive approach aims to proactively, albeit using a retrospective analysis, expose the basis of the biases by interpreting historic treatment of gender and sex, and attempting to draw connections to the way it impacts current treatment and its translational effect on patient outcome. If careful retrospective analysis can bring awareness to factors unequivocally accepted as the norm by the medical field, it could ultimately give credence to and uplift the voices of women who have silently suffered from the consequences of medical gender bias. Additionally, by instigating significant awareness about this issue, there is a good chance it could eventually lead to practices meant to abate effects sex and gender inequality. The eventual goal, well beyond the scope of this proposal, would be to deduce and trace exactly what biases historically specifically still impact medicine today. Therefore, the results of this research are intended to be open ended and provide avenues for further research topics.

I would like to thank the staff and faculty at the University Library System and Archives & Special Collections for providing me with this opportunity to present a research proposal I am very passionate about. I extend my sincerest appreciation for all the dedication and effort they put in to not only make the Archival Scholars Research Award possible, but also in providing both the University and greater Pittsburgh community with unmatched primary sources necessary to promote and support the research community.

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