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The Effect of Gender-Diversity Training on Perceived Organizational Justice

Lauran Star Raduazo
Walden University

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Walden University

College of Social and Behavioral Sciences

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Lauran Star Raduazo

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Review Committee

Dr. Brian Cesario, Committee Chairperson, Psychology Faculty

Dr. Marlon Sukal, Committee Member, Psychology Faculty

Dr. Samuel Taylor, University Reviewer, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2021

Abstract

The Effect of Gender-Diversity Training on Perceived Organizational Justice

by

Lauran Star Raduazo

MA, Argosy University, 2011

BS, University of Massachusetts, 1993

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Industrial Organizational Psychology

Walden University

May 2021

Abstract

The purpose of this quantitative study was to examine gender-diversity training content and design and their effect on employees perceived organizational justice. A total of 205 employees specializing in science, technology, engineering, mathematics, and finance (STEM&F) participated in this study. A quantitative quasi-experimental study design occurred with a baseline, posttraining, and 2-month final follow-up. A mixed ANOVA was run to test for mean differences for Colquitt's Organizational Justice Scale (COJS) overall and subscale scores. Baseline, posttraining, and final scores were compared by intervention and control group. There was a statistically significant interaction within intervention between time and groups ($F(2,406) = 12.247, p < .01, \text{partial } \eta^2 = .057$), as well as overall COJS score ($F(2,406) = 7.57, p < .01, \text{partial } \eta^2 = .036$). Interpersonal justice results demonstrated there was not a statistically significant interaction within intervention between time and groups; however, there was a statistically significant interaction between the intervention and time on interpersonal score. Informational justice results demonstrated a statistically significant interaction within intervention between time and groups; however, there was no statistically significant interaction between the intervention and time on informational justice score. More research is needed to determine if the results are applicable for other protected classes, STEM&F, and/or other industries. The results can help promote positive social change through diversity training in local governments and businesses. It may also provide new pathways to encourage women in the STEM&F system by decreasing gender stereotypes.

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Dedication

This work is dedicated to my three children, Raffael, Isabella and Mishalena.

May you love education as much as I do.

Acknowledgments

Thank you to my committee members, Dr. Brian Cesario, Dr. Marlon Sukal, and Dr. Samuel Taylor for guiding me throughout this journey and supporting my development as an academic scholar.

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Chapter 1: Introduction to the Study

Introduction

U.S. organizations and municipalities spend a combined average of \$8 billion annually on diversity training with a large focus on gender-diversity training (Lipman, 2018). A primary goal of diversity training is to improve perceived organizational justice and workplace equity. A secondary goal is to improve employees' knowledge of the differences of employees in the workplace (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Fujimoto & Härtel, 2017; Lipman, 2018). Organizational inclusion and diversity have been shown to improve performance, decision making, organizational ethics, and perceived organizational justice (Gompers & Kovvali, 2018; Harjoto et al., 2018; Hayes, 2017; Kalinoski et al., 2013; Lee et al., 2017; Rasool et al., 2018; Schneid et al., 2015). Perceived organizational justice and organizational inclusion are directly linked. Organizations with high levels of perceived organizational justice, the feeling of equity, and the perception of fairness in the workplace have demonstrated high inclusion rates (Dahanayake et al., 2018; Lazauskaitė-Zabielskė, 2017; Moss-Racusin et al., 2018; Roczniowska et al., 2018; Saifi & Shahzad, 2017). Yet, the question of how diversity training impacts perceptions of organizational justice in the workplace remains.

The STEM&F industry (comprised of science, technology, engineering, mathematics, and finance sectors) is focused on new research in the arena of gender inclusion, and diversity training is used to attract and retain women in the STEM&F field. Furthermore, female client retention has demanded gender inclusion in the workspace (Bier, 2017; García-Sánchez et al., 2017; Holst & Kirsch, 2016; Moss-Racusin et al.,

2018; Noon, 2018; Saxena et al., 2019; Szala, 2018; Wiley & Monllor-Tormos, 2018). Wiley and Monllor-Tormos (2018) demonstrated how the financial industry is directly linked to the mathematical application in STEM, thus creating the terminology STEM&F that is used within this paper. Gender inclusion enhances stronger performance, business development, client retention, problem solving, and perceived organizational justice in the STEM&F industry; however, this industry is lagging in gender diversity (Keune et al., 2019; Moss-Racusin et al., 2018; Sharma & Yadav, 2017; Saxena et al., 2019; Szala, 2018; Wiley & Monllor-Tormos, 2018; Wyman, 2016). Beyond attracting women to the industry, the retention of these women falls to diversity training and inclusion initiatives that lack empiric research (Bier, 2017; Jones et al., 2013; Keune et al., 2019; Moss-Racusin et al., 2018; Sharma & Yadav, 2017; U.S. Government Accounting Office, 2016). The gap in literature demands more research in specific industries, demonstrating whether diversity-training theory affects perceived organizational outcomes.

The STEM&F industry focuses on new research in the arena of gender inclusion and diversity training aims to attract and retain women in the municipality and local government fields, which demand gender inclusion (Amirkhanyan et al., 2019; Cooper & Gerlach, 2019; García-Sánchez et al., 2017; Noon, 2018). However, a large gap of heterogenicity persists, specifically women and people of color in the STEM&F industry beyond entry-level support-staff positions (Amirkhanyan et al., 2019; Cooper & Gerlach, 2019; Young, 2019). Gender inclusion enhances stronger performance, business development, client retention, problem solving, and perceived organizational justice in the STEM&F field; however, this industry is lagging in gender and ethnicity diversity

(Amirkhanyan et al., 2019; Cooper & Gerlach, 2019; Goodman et al., 2015). Beyond attracting women to the industry, the retention of these women falls to diversity training and inclusion initiatives that lack empiric research (Amirkhanyan et al., 2019; Cooper & Gerlach, 2019; Goodman et al., 2015; Jones et al., 2013; Robin et al., 2019; Sharma & Yadav, 2017; U.S. Government Accounting Office, 2016). Additionally, a large gap persists of women in the industry beyond entry-level support-staff positions.

Municipalities and organizations have a high level of talent that falls under the STEM&F workplace classification (Amirkhanyan et al., 2019; Cooper et al., 2019). Again, the gap in literature demands more research in specific industries, demonstrating whether diversity-training theory affects perceived organizational outcomes.

In this dissertation I explored the effectiveness of organizational gender-diversity training based on diversity-training theory and its impact on perceived organizational justice within a large organization where employees fall under the STEM&F workplace category. Organizations use diversity training to drive diversity understanding and inclusion; however, outside of academic settings, research has yet to show a clear understanding of whether diversity training actually drives inclusion or does harm by negatively impacting perceptions of organizational justice (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Ehrke et al., 2014; Fujimoto & Härtel, 2017; Lipman, 2018;). Furthermore, little research has described how diversity-training theory is applied outside the academic setting and its impact on perceived organizational-justice outcomes (Alhejji et al., 2016; Bezrukova et al., 2016; Enoksen, 2016; Fujimoto et al., 2013; Fujimoto & Härtel, 2017; Gebert et al., 2017). Diversity training has often

created an “us versus them” shift in attitudes rather than fostering inclusion, in part due to applying the wrong diversity-training theory, as outcomes are difficult to measure (Enoksen, 2016; Fujimoto & Härtel, 2017; Gebert et al., 2017; Kossek et al., 2017; Lipman, 2018; Noon, 2018; Saxena et al., 2019). Diversity training spending has reached \$8 billion annually (Lipman, 2018), therefore the need for research on diversity training and inclusion is paramount.

This study provides a potential for social change in shifting how organizations view diversity and organizational inclusion. Diversity does not drive business alone yet including diversity in today’s business paradigm does (Pendry et al., 2007; Penn, 2019; Saxena et al., 2019). Understanding how to train diversity, with results lending themselves toward perceived organizational justice, provides insight beyond gender inclusion.

Problem Statement

Organizational diversity and inclusion have shown to improve retention, job satisfaction, performance, and organizational justice (Alhejji et al., 2016). Organizational justice, defined as perceived fairness and equality, is an important measure of how well an organization embraces diversity and inclusion (Fujimoto & Härtel, 2017; Kalinoski et al., 2013). The approach to improve organizational diversity and inclusion has fallen to diversity training as an organizational implementation strategy (Alhejji et al., 2016). U.S. organizations spent a combined average of \$8 billion annually on diversity training with a large focus on gender-diversity training (Lipman, 2018).

Current research on diversity training has yet to demonstrate a strong correlation between the application of diversity training and shifts in negative behaviors and attitudes (Alhejji et al., 2016; Bezrukova et al., 2016). Negative behaviors and attitudes include harassment, space segregation, equality, unconscious avoidance, metastereotypes, and the perception of unjust organizational rules and structure (Alhejji et al., 2016; Gilrane et al., 2019). Some diversity trainings have done more harm than good, in large part due to poor content and design (Lipman, 2018; Moss-Racusin et al., 2018). Two areas of content concerns in diversity training are attention to individual differences in training classes and the lack of inclusion of language specifically toward gender (Bezrukova et al., 2016; Lipman, 2018). Moreover, diversity training may create barriers to inclusion, in part because of biased content that does not recognize individual differences and needs (Kalinowski et al., 2013; Lipman, 2018; Noon, 2018).

Empirical evidence substantiated the need to understand the impact of diversity training on perceived organizational justice (Alhejji et al., 2016; Jones et al., 2013). Currently, increasing gender diversity is a business focus in part due to changing global markets, the increased rate of women entering the workforce, women's economic purchasing strength, and workplace well-being (Graham et al., 2017). The perception of unfairness and inequality in an organization relates to decreases in women's advancements in the organization (Graham et al., 2017). Because organizational justice is an excellent measurement of how organizational diversity impacts attitude and behavioral shifts (Bezrukova et al., 2016), it provides a way to understand the effects of diversity trainings with a specific focus on gender.

More research is needed on diversity training (Alhejji et al., 2016; Bezrukova et al., 2016). Several theoretical approaches must be explored, including organizational justice and its link to diversity-training outcomes, a need for industry-specific applications, aspects of diversity training including content and design, and implications and industry-specific shifts in behavior based on diversity-training theory application. Moreover, although organizational justice has been used to demonstrate the level of diversity and inclusion accepted in an organization, the impact of diversity training on organizational justice has yet to be determined (Alhejji et al., 2016; Bezrukova et al., 2016; Jones et al., 2013). Therefore, a gap in research exists to provide evidence on diversity training and the way it may change attitudes and behaviors. The need persists for more research on diversity content and how it might affect people's beliefs about organizational fairness.

Purpose of the Study

The purpose of this quasiexperimental quantitative study was to examine gender-diversity training content and design and determine if there was a significant change on employees perceived organizational justice. Focus on content and design factors ensured that a gender-diversity training was evidence based and built on solid theory. Finally, this study also addressed the impact of gender-diversity training outside the academic setting.

Research Questions

The following research questions guided this study:

RQ1: Does completing gender-diversity training significantly change employees' baseline perceptions of organizational justice posttraining and 2 months later?

*H*₀₁: Completing gender-diversity training has no significant change on employees' baseline perceptions of organizational justice posttraining and 2 months later.

*H*₁₁: Completing gender-diversity training has a significant change on employees' baseline perceptions of organizational justice posttraining and 2 months later.

RQ2: Does completing gender-diversity training significantly change employees' perceptions of the organizational-justice subscales of procedural (PJ), distributive (DJ) interpersonal (IPJ), and informational justice (IFJ)?

*H*₀₂: Completing gender-diversity training has no significant change on employees' perceptions of the organizational-justice subscales of PJ, DJ, IPJ, and IFJ.

*H*₁₂: Completing gender-diversity training has a significant change on employees' perceptions of the organizational-justice subscales of PJ, DJ, IPJ, and IFJ.

Theoretical Framework

The theoretical basis for this study was Bezrukova et al.'s (2016) diversity-training theory. Diversity-training theory describes instruction courses with a focus on the following: (a) improving positive intergroup interactions and interpersonal relationships, (b) decreasing discrimination, and (c) improving participants' knowledge and motivation to interact with diverse others (Alhejji et al., 2016; Dahanayake et al., 2018; O'Brien et al., 2015; Pendry et al., 2007). Diversity training has many components that must be examined, including individual differences, content, design, and scheduling (Bezrukova et al., 2016).

Prior to Bezrukova et al.'s (2016) argument around the need for proven theoretical applications of diversity-training theory, Kalinoski et al. (2013) and O'Brien et al. (2015) highlighted the need for more understanding of individual differences in gender, content, and design. Both groups of authors approached diversity-training theory from an academic setting. Ehrke et al. (2014) used diversity-training theory training and setting, both important in retaining information; however, Ehrke et al. did not examine participants longer than 1-month past training. Fujimoto and Härtel (2017) created a diversity-learning framework based on diversity-training theory that positively impacted decision making.

This study builds on Bezrukova et al.'s (2016) and Fujimoto and Härtel's (2017) work. I used the learning framework created by Fujimoto and Härtel (2017) to apply gender content and design based on findings from Bezrukova et al. I hoped to demonstrate diversity training with a focus on gender content and Fujimoto and Härtel's design, perceiving whether they have a positive or negative impact on the construct of organizational justice.

Nature of the Study

This study had a quantitative quasiexperimental research design with a baseline, posttraining, and 2-month follow-up. The sample frame was employees within a large city-based organization where employee specialized in STEM&F. Quantitative research aligns with the purpose of the study as the sample size was large and allows for the understanding and statistical analysis of how diversity training impacts employees' perceptions of organizational justice.

Colquitt's Organizational Justice Scale (COJS; Colquitt & Zipay, 2015) served as the measurement tool on the impact of gender-diversity training. Participants took a baseline COJS, a posttraining COJS, and a final COJS 2 months later, providing insightful information as to whether the diversity training had short-term or long-term effects on organizational justice. The independent variable was gender-diversity-training content for the training group and the group who did not receive training. The dependent variables were perception of organizational justice baseline, posttraining, and final COJS results immediately following training and 2 months after training.

Definitions

The following are important terms to define for this study:

Attitude shifts: A change in behavior or feelings toward an issue or diverse group of individuals (Bezrukova et al., 2016).

Colquitt Organizational Justice Scale (COJS): The measurement tool for perceived organizational justice. COJS has already demonstrated validity as a measurement tool in perceived organizational justice and is customizable toward the type of training participants receive (Enoksen, 2015).

Distributive justice (DJ): Employees' perceptions of fairness associated with decision outcomes and distribution of organizational resources such as salary, praise, and promotions (Enoksen, 2015).

Diversity training: Instructional courses with focus on (a) improving positive intergroup interactions and interpersonal relationships, (b) decreasing discrimination, and (c) improving participants' knowledge and motivation to interact with diverse others.

Goals should include positive intergroup interactions and reduced posttraining justice and discrimination. Diversity training provides participants with tools that help diverse individuals understand how to work together effectively, thereby raising personal awareness. Furthermore, diversity training refers to training or solutions designed to increase cultural-diversity awareness, attitude, knowledge, and skills (Alhejji et al., 2016; Dahanayake et al., 2018; Lindsey et al., 2015; O'Brien et al., 2015; Pendry et al., 2007).

Gender inclusion: The feeling of belonging, understanding, and being valued in a group or team of mixed genders (Chen & Tang, 2018; Le et al., 2018).

Heterogeneity: Dimensions of diversity including gender, age, sexual orientation, and ethnicity within organizational employees (Amirkhanyan et al., 2019).

Informational justice (IFJ): Employees' perceptions of how information is shared in organizations as timely, truthful, and specific (Enoksen, 2015).

Interpersonal justice (IPJ): Employees' perceptions of respect and how they are treated in the organization (Enoksen, 2015).

Municipalities system: Urban unit of local government, a political subdivision of a state providing local government as well as a workforce (Amirkhanyan et al., 2019).

Organizational diversity: Differences in employees in an organization that may include gender, religion, ethnicity, and culture (Gompers & Kovvali, 2018; Harjoto et al., 2018; Rasool et al., 2018).

Perceived organizational justice: Any employee's perception of fairness or equality in an organization (Enoksen, 2015).

Procedural justice (PJ): Employees' perceptions of fairness in relation to organizational processes, determining if the process was approached ethically, accurately, and consistently and without bias (Enoksen, 2015).

STEM&F: The workplace and study of science, technology, engineering, mathematics, and finances (Wiley & Monllor-Tormos, 2018).

Workplace inclusion: The feeling of belonging, understanding, and being valued in a group or team of individuals in the workplace; being of value based on other factors than diversity (Chen & Tang, 2018).

Assumptions

I made the following assumptions for this study. First, all participants have had prior diversity training and were employees for over 1 year in job roles that fell under the STEM&F classification. Diversity training is a common organizational training approach for the workplace, specifically in STEM&F fields (Amirkhanyan et al., 2019; Cooper & Gerlach, 2019; Saxena et al., 2019; Szala, 2018). Second, participants all had interactions in a team dynamic of mixed genders. I also assumed that all participants would take the online assessment independently and answer questions honestly.

Scope and Delimitations

I focused on a large city organization and its employees, specifically those who worked under the fields of STEM&F. I selected the organization based on its culture, access, size, and location. The delimitation of the study first falls to questions in the COJS. I asked participants to participate in diversity training and take a baseline, posttraining, and final COJS. Included were participants who had worked in the

organization for at least 1 year, had a job classification in STEM&F, and had a positive employee evaluation in the past year.

Limitations

The COJS is the online questionnaire used to gather responses from all participants in the study. Although the COJS provides responses from employees, it did not allow face-to-face or exploratory interviews. The rationale for using an online questionnaire was to allow participants to respond to the study questions in a short period of time.

A second limitation was COVID-19 and its timeline. There was no face-to-face interaction between me and the organization including workplace interactions. Furthermore, employees had limited contact with each other over the past 12 months due to COVID-19 contact restrictions.

A third limitation was sampling. Participants voluntarily self-selected; therefore, sampling bias may have been present. Participants who self-selected may have had an interest in the issue or topic and brought forth their own personal biases. Participants who had at least 1 year of employment in the organization, had a job classification in STEM&F, and had a positive employee evaluation in the past year were included. This information was validated through the organization's human-resources department.

Significance

This study is significant because it provides an insight into gender-diversity training and its impact on organizational justice, with a specific focus on content through gender inclusion. Results provided insights into how diversity-training theory shifted

employees' perspectives on gender equality. Additionally, this study was significant in further explaining theory, practice, and social change.

Significance to Theory and Practice

A unique attribute of this quantitative study was its focus on STEM&F employees where there is evidence of gender disparities (see Amirkhanyan et al., 2019; Cooper & Gerlach, 2019; Gilrane et al., 2019; Robin et al., 2019; Saxena et al., 2019). Diversity training has demonstrated the potential for negative impacts on attitudes and biases, in part due to lack of theory (García-Sánchez et al., 2017; Moss-Racusin et al., 2018; Noon, 2018; Wiley & Monllor-Tormos, 2018). The organization's interdepartments and human-resource managers will likely benefit from the research as it may provide a positive gender-diversity-training blueprint for future trainings. Diversity training may have more positive outcomes if the organization can understand how to provide diversity training from a theoretical lens. According to Dahanayake et al. (2018), the goal of diversity training is to increase one's knowledge of other employees' differences.

The second value was the quantitative data on diversity training and outcomes. Outcomes help make the case for diversity training in businesses. At the organizational level, this study may be applicable to leadership, management, human resources, and training departments.

The third value is community engagement. The community engagement rate significantly increases when organizations are diverse and that diversity represents the community's heterogeneity (Schultz et al., 2019; Woodson, 2020). A community that is engaged with the organizations surrounding them and its workforce tends to demonstrate

a positive cohesion (Young, 2019). Young (2019) continued on to demonstrate that this cohesion improves the recruitment of diverse candidates within the organization.

Finally, this research provides an understanding of how gender-diversity training impacts organizational justice. This information helps organizations use such trainings to mitigate barriers to gender diversity, achieving a gender-inclusive organizational atmosphere that may increase job satisfaction and organizational health (Bezrukova et al., 2016). Findings provide a secondary benefit of enhanced equality, fairness, and improved ethical decision-making skills for participants. The gender-diversity issue is quite timely as the STEM&F industry is aggressively seeking the best means to improve gender inclusion in the workplace through gender-diversity training (Amirkhanyan et al., 2019; Cooper & Gerlach, 2019; Robin et al., 2019; Saxena et al., 2019; Wiley & Monllor-Tormos, 2018; Valenzuela, 2017; Young, 2019).

Significance to Social Change

The social-change implication of this research is three-fold. The first implication is that this study may provide insights on how diversity-training theory applies to perceived organizational justice. Additionally, this research demonstrates which of the four perceptions of organizational justice are impacted, thereby helping to uncover future gaps in research. Outcomes assist human-resource management and training departments with a platform on diversity-training theory and provide evidence for if this training does indeed change perceptions. Outcomes also provide a means to retain women within the STEM&F system.

Second, this research draws attention to diversity training and inclusion.

Organizations understand the need for inclusion; however, organizations are unclear how to attain inclusion (Lipman, 2018; Noon, 2018). This research provides another tool for organizations to assist in creating an inclusive workplace. The current study demonstrated a link between diversity training and inclusion; however, the means of diversity training has yet to be fully studied (see Fujimoto & Härtel, 2017; Meyer et al., 2017; Watson, 2016). Organizational behaviorists, human-resource managers, and training teams gain some insight on diversity-training theory and its impact on perceived organizational justice as a tool for measurement.

Finally, although this study focused on STEM&F and gender, it may help other industries understand how diversity training impacts organizational justice. This study could also provide a blueprint for diversity-training programs in other industries. Likewise, although the focus of this study is gender based, if the results are positive in shifting long-term behaviors, it may be a starting point for other protected classes or differences.

Summary

In this study, I examined diversity training based on empirical research on diversity-training theory and its impact on perceived organizational justice. Diversity-training theory is the theoretical lens used to create a framework for gender-diversity training. Participants self-selected from a large city organization with strong STEM&F departments. The COJS, an online survey, was administered to participants immediately before and after training, as well as 2 month later. A gap in literature surrounds diversity

training and its impact outside the academic setting regarding perceived organizational justice (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Fujimoto & Härtel, 2017; Hayes, 2017; Lipman, 2018).

The following chapters present the current literature regarding diversity training, perceived organizational justice, the research design, data collection and results, and interpretation of the findings. In Chapter 2, I review the most recent studies found on diversity training, focused on three major themes: diversity-training theory, inclusion, and perceived organizational justice. Chapter 3 includes the research design, targeted population, instruments and procedures, data-collection process, hypotheses, and potential ethical concerns of the study. Chapter 4 contains the study results presented in table and graphic formats. The chapter addresses all research questions and their respective hypotheses. In Chapter 5, I summarize the overall interpretation of the findings from the study, limitations of the study, and recommendations for research and social change.

Chapter 2: Literature Review

The purpose of this study was to examine the effects gender-diversity training has on employees' perceptions of perceived organizational justice. The study site was a large organization with employees specialized in STEM&F. The study focused on content and design factors, ensuring that the gender-diversity training was evidence-based and built on diversity-training theory. This study also addressed the impact of gender-diversity training outside the academic setting.

Several scholars have noted the lack of research around diversity-training theory, its application outside the academic setting, and its impact on perceived organizational justice outcomes (e.g., Alhejji et al., 2016; Bezrukova et al., 2016; Enoksen, 2016; Fujimoto & Härtel, 2017; Gerbert et al., 2017; Keune et al., 2019; Yuka et al. 2013). Specific meta-analysis articles were used to examine over 40 years of diversity training research. These articles demonstrate that although a plethora of studies on diversity training exist, these studies lack data that demonstrate impact (e.g., Alhejji et al., 2016; Bezrukova et al., 2016; Kalinoski et al., 2013; Moss-Racusin et al., 2018; Young, 2019). This chapter addresses diversity training in conjunction with three major themes found in recent literature: diversity-training theory, perceived organizational justice, and the role of gender in the workplace.

The Literature Search Strategy

This literature review comprises an examination, synthesis, and analysis of today's most recent peer-reviewed studies from organizational psychology, business management, and diversity training journals. Most articles were written within the last 5

years, with the diversity training perspective focused on Western business practices. The academic articles are all peer-reviewed. The trade and academic articles describe both STEM&F as well as gender-diversity.

I conducted an exhaustive literature search on diversity training to determine how and if there was a definitive impact on business applications. This search included the following elements: the size of past studies; how impacts were measured; the benefits of diversity training on an organization; the role of perceived organizational justice in diversity; what aspects of diversity training theory were proven to be reliable; and finally, what literature gaps required exploration. I conducted this research using the Walden University Database, and data were collected through EBSCO, PsychARTICLES, PsychINFO, SocINDEX with Full Text, Business Source Complete, Emerald Insight, ProQuest, and ABI/INFORM Complete. For this study, I only considered peer-reviewed data sources with publication dates ranging from 2005–2021 from academic journals, books, and conference presentations. Boolean/Phrase word searches were conducted using the following key phrases: *diversity, diversity training theory, gender diversity and workplace, business and diversity training, gender and financial industry, STEM&F, local government, community relationships, city and diversity training, inclusion, perceived organizational justice, organizational culture, business case for diversity, Denison Model of Organizational Culture, and Colquitt Organizational Justice Scale*. Over 175 articles were reviewed throughout this research.

Workplace Diversity

Diversity in the workplace has become the focus for training and development for human resource management in many global organizations and governments (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Fujimoto & Härtel, 2017; Lipman, 2018). Organizational diversity means the differences found in employees and their organizations, including gender, religion, ethnicity, and culture (Gompers & Kovvali, 2018; Harjoto et al., 2018; Rasool et al., 2018). However, diversity has become a sought-after goal as businesses change rapidly due to technology and globalization. A strong business case exists for having stronger diversity (Buengeler et al., 2018). Regardless, one must understand the history of diversity and how diversity training came about to understand the discrepancies in literature (Alhejji et al., 2016).

The history of diversity in the workplace has shifted every 10 years with each new generation and as the laws around diversity change. Globalization has driven the diversity message within organizations (Rasool et al., 2018). Anand and Winters (2008) examined diversity training in a retrospective review of history and diversity goals and concluded that from 1960–1979 the goal of workplace diversity was diversity compliance. This was in large part due to the Civil Rights Act of 1964. Affirmative action was the cornerstone of diversity hiring and organizations were focused on conformity. Increased workplace diversity during the 1980s led to the birth of diversity training in 1987. Compliance was still a goal; however, it was from training rather than affirmative action (Anand & Winters, 2008). The focus of diversity and diversity training from 1980–1999 was to foster sensitivity and understanding. From 2010 and beyond, diversity argues the need for

the focus on inclusion within the workplace. The diversity focus has shifted slightly from ethnicity to gender inclusion in the global workplace (Blumstein & Bennett, 2018).

Today, workplace diversity leans more toward inclusion as the definition of diversity has become more encompassing. Workplace diversity is defined as acknowledging, understanding, accepting, valuing, and celebrating the vast differences within the workplace regardless of age, class, ethnicity, gender, physical and mental ability, race, sexual orientation, and spiritual practice (Cavico & Mujtaba, 2017; Rasool et al., 2018). The following topics must be discussed as part of this literature review: the business case of diversity, the potential risk diversity training may pose, gaps in research and literature around diversity training, and diversity-training theory. The business case for creating a stronger diverse workforce has been repeatedly proven (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Fujimoto & Härtel, 2017; Gompers & Kovvali, 2018; Harjoto et al., 2018; Lee et al., 2017; Rasool et al., 2018).

The Business Case of Diversity

U.S. organizations spend a combined average of more than \$8,000,000,000 dollars annually on diversity training (Lipman, 2018); however, it is unclear if the training effectively shifts attitudes and behaviors (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Fujimoto & Härtel, 2017; Gebert et al., 2017; Gompers & Kovvali, 2018; Meyer et al., 2017; Noon, 2018; van Knippenberg & Mell, 2016). Shifts in attitudes and behaviors would be seen through microaggressions and biases. The business case for workplace diversity has been made; organizations with diverse workforces outperform those organizations that are lacking or falling short of workplace

diversity (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Fujimoto & Härtel, 2017; Gebert et al., 2017; Gompers & Kovvali, 2018; Meyer et al., 2017). The benefits of diversity include improvement in job satisfaction, performance, decision making, conflict resolution, and perceived organizational justice within the organization (Rasool et al., 2018). As organizations are globalized, the need for a workforce from various cultures is needed. Customer and employee language barriers as well as cultural differences are needs that may go unmet in the workplace. Diversity within the workplace can lead to positive workplace effectiveness and wellness extending to global competitive benefits (Ehrke et al., 2014). For the past 2 decades, organizations have evaluated workplace diversity benefits through the business case lens of performance and production, job satisfaction, and attraction-retention of employees (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Fujimoto & Härtel, 2017). In today's global business atmosphere, perceived organizational justice must also be included in the business case, as it drives the other three business benefits (Alhejji et al., 2016; Bezrukova et al., 2016; & Fujimoto & Härtel, 2017). The need for perceived organizational justice is the next step in improving workplace diversity.

Performance and Production

Diversity in the workplace improves overall production and performance as the company understands their targeted markets as well as their community better due to the employee diversity (Alhejji et al., 2016; Bezrukova et al., 2016; Fujimoto & Härtel, 2017; Young, 2018). The causal relationship between venture capital organizations and diversity relates to profits and financial outcomes (Gompers & Kovvali, 2018; Goodman

et al., 2015). Organizations with strong diversity leading to inclusion have significantly improved organizational financial performance (Alhejji et al., 2016; Bezrukova et al., 2016; Fujimoto & Härtel, 2017; Gompers & Kovvali, 2018; Harjoto et al., 2018; Kalinoski et al., 2013; Lee et al., 2017; Rasool et al., 2018; Schneid et al., 2015); however, an increasing amount of research is now being evaluated on diversity and team performance.

Van Veelen and Ufkes (2019) examined diversity and its relation to team performance. Using a cross-sectional study of 72 project teams, they determined that teams who were demographically diverse in gender and nationality outperformed those who were not. Although team diversity data are somewhat limited, this appears to be an area that requires more research (Van Veelen & Ufkes, 2019). Wu et al. (2019) examined performance and team diversity in the engineering field using a theoretical model and questionnaire. The study was conducted with 205 engineering professionals. Diversity in teams not only increased team performance, but it also improved conflict management and positive mediation. Add summary and synthesis.

Job Satisfaction

Workplace diversity also increases job satisfaction. Organizations that have a diverse workforce present overall higher job satisfaction scores and interpersonal skills between management and employees. Madera et al. (2016) examined the diversity and job satisfaction scores of 164 individual hotel properties. Through hierarchical linear regression analysis, Madera et al. found that psychologically diversity climates impact job satisfaction. Furthermore, employees who felt positively about diversity and inclusion

had a correlating positive job satisfaction score. Rasool et al. (2018) explored the impact of gender, age, and education background on employee performance in the ACCL Logistic International organization, which is known to employ a highly diversified workforce. Self-administered questionnaires were provided to 100 employees. Through regression, the results indicated that overall organizational outcome and employee satisfaction were linked to culture and demographic diversity. According to both studies there was a determined link between employees who has a positive experience and outlook on diversity and workplace job satisfaction. Furthermore, a diverse organizational culture fosters positive job satisfaction.

Armache (2012) examined literature around diversity and job satisfaction. Armache argued that a diverse workforce goes hand-in-hand with improved job satisfaction, as a strong correlation exists between workplace diversity and the following benefits: improved problem solving and conflict management, improved interpersonal skills and communication, a shift in personal perspective on coworkers, and tolerance. Positive diversity in the workplace supports an increased level of tolerance amongst employees (Armache, 2012; Gebert et al., 2017). Although job satisfaction involves a compilation of factors, workplace diversity provides a solid foundation for satisfaction (Gebert et al., 2017).

Attraction and Retention of Talent

Workplace diversity has shown to improve workplace retention. However, Davies et al. (2019) argued it is not diversity that drives retention, rather it is inclusion. Brown (2018) and Tetteh (2019) examined organizations with diverse workforces and

determined that turnover rates were lower than organizations with a homogenic workforce. This research frames the argument that workplace diversity also drives attraction and retention within the organization. A homogenic workplace may suffer from similarity bias in hiring. This is hiring employee who represent the hirer.

The cost to attract and retain employees is constantly rising (Boushey & Glynn, 2012; Tetteh, 2019; Werner, 2017). Talent capital tends to be the largest expense within an organization. Turnover is one of the largest talent expenditures organizations face (Tetteh, 2019). Boushey and Glynn (2012) examined this expense through 11 research articles published over a 15-year period. They determined the average cost to an organization struggling to retain highly skilled employees is 213% of the cost of 1 year's compensation for that role. Furthermore, the research and organizational expenditures around employee attraction ranges from 1.5–2.0 times the employee's annual salary (Werner, 2017). The Society of Human Resource Management (2018) reminds organizations to include in turnover rates the costs to hiring, onboarding, training, ramp time to peak productivity, the loss of revenue due to turnover, the increase in business error rates, and general organizational workplace culture impacts. Organizations with strong diversity may be the solution to limiting turnover.

According to the Equal Employment Opportunity Commission, (2018), all U.S. organizations must adhere to the Civil Rights law leading to a diversified workplace. The Civil Rights law is defined as follows: the employers must be cognizant of whom they hire and promote and cannot discriminate based on any protected class such as race, color, national origin, religion, sex, age, or disability (Cavico & Mujtaba, 2017).

Affirmative action must be considered when hiring employees to ensure protected groups are provided an equal opportunity for employment (Tetteh, 2019). Increasing an organizations diversity from attraction and retention provides a diverse workplace and limits the organizations legal exposure rate. Once an organization attract diversity it needs to create an environment that retains that talent. Diversity training may be a tool, however the data is unclear.

Perceived Organizational Justice/Fairness

Perceived organizational justice is the fourth prong in understanding the business case for workplace diversity. Perceived organizational justice is the perception of fairness in an organization's diversity practices, including hiring, promotion, and communication (Enoksen, 2015). Toubiana (2014) examined diversity in the business setting and concluded that social justice improves when an organization and its employees embrace workplace diversity. Job satisfaction, performance, attraction, and retention also improve when organizational justice improves (Toubiana, 2014). Positive workplace diversity enhances perceived organizational justice (Ardakani et al., 2016). Ardakani et al. (2016) randomly surveyed 500 steel employees from the two largest steel companies in Iran ($N=42,332$) to examine diversity management's mediating role on perceived organizational justice. Through descriptive statistics, diversity management does impact perceived organizational justice. If diversity management is positive, so is perceived organizational justice. Additionally, perceived organizational justice or fairness improves when inclusion is reached through diversity (Alhejji et al., 2016; Bezrukova et al., 2016; Fujimoto & Härtel, 2017).

Although the business case for workplace diversity has been proven, it is argued that diversity is not enough, and diversity training may be providing a stronger foundation for inclusion. Murphy (2018) and Pleasant (2017) both examined the workplace diversity environment and determined that organizations that used diversity as a driver for workplace inclusion were more productive than those who focused solely on diversity. With the ever-growing globalized market, diversity training must focus on inclusion and organizations must become more understanding of the link diversity and inclusion have with success. Chen and Tang (2018) surveyed 335 manufacturing employees using the Monto Carlo method to determine if there was a correlation of positive perceived inclusion and workplace output. They reported that employees who had positive perceived inclusion—beyond diversity—were more likely to feel organizational and job-role alignment as well as improved production. Furthermore, it was noted that the perceived inclusion may be a factor of diversity training (Chen & Tang, 2018).

However, the question of how an organization increases its diversity and moves toward inclusion remains. The current literature determines the risks and return on investments when an organization attains diversity. Diversity initiatives are not one-size-fits-all and may often alienate those who are. Risks of diversity initiatives include alienation, diversity fatigue, and stereotyping (Lam, 2018). There appears to be several research gaps in the effectiveness of diversity training (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Ehrke et al., 2014; Fujimoto & Härtel, 2017; Kalinoski et al., 2013; Lipman, 2018).

Potential Risks of Diversity Initiatives

Diversity initiatives that are done incorrectly negatively impact workplace diversity and inclusion (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Gundemir et al., 2017; Lam, 2018; Lipman, 2018; Moss-Racusin et al., 2018). Resistance to change and negative attitudes are difficult organizational traits to overcome in diversity. When diversity programs fail, organizations can find themselves facing employees who feel alienated, singled out, blamed, and excluded (Lipman, 2018; Moss-Racusin et al., 2018). Diversity fatigue is seen in the workplace when those entrusted with driving diversity become burnt out due to lack of change and progress in the organization (Lam, 2018). Diversity training is necessary because it is a driver for inclusion, yet when training fails, resistance to diversity change is eminent (Dobbin & Kalev, 2016). There is a lack of research on new diversity initiatives and training trends (Noon, 2018). An organization can see a polarization of attitudes and behaviors that creates the “us versus them” workplace environment.

Alienation and Exclusion

Alienation and exclusion can happen in diversity training for a variety of reasons, all due to inadequate training and initiative design (Alhejji et al., 2016; Gundemir et al., 2017; Lipman, 2018). Alienation of employees happens when one protected group (the out-group) is the focus of the diversity training (Lipman, 2018). This allows blame to be placed on others for their overall lack of equality. Training rational also plays a role in alienation (Jones et al., 2013). Furthermore, exclusion creates the us versus them workforce atmosphere that damages the construct of diversity.

Lipman (2018) studied how gender-focused diversity training in the financial industry affects men. In Lipman's study, men who left a gender-diversity training program noted feeling alienated. Lipman further concluded that this may have promoted an atmosphere of resistance toward change and the other gender (women). Lipman referred to blame as promoting resistance. Resistance to change increases when blame is present in diversity training (Thomas et al., 2010). This is an example of being other-orientated, where the focus is exclusively on one out-group in training (Thomas et al., 2010). This further raises the question around diversity training, theory and shifts in attitudes and behavior.

A second study found similar results when using ethnicity as the out-group. Gundemir et al. (2017) examined five empiric studies on multicultural meritocracy and found diversity training often left the in-group (majority White) feeling excluded and alienated. Gundemir also discovered that stereotyping and ethnic discriminations were perceived as less valid for the in-group.

Diversity training can lead to exclusion or bias (Jones et al., 2013; Kalinoski et al., 2013; O'Brien et al., 2015; Pendry et al., 2007). Trainer bias must be considered as it can heighten trainees' resistance or unconscious biases (Gebert et al., 2017). Diversity-training theory is needed when implementing diversity training to prevent alienation, exclusion, or biases.

Diversity Fatigue

Diversity fatigue happens when those who work in the diversity field become exhausted from trying to change the organization (Lam, 2018). This occurs when

diversity programs become more “check the box” than focused on shifting attitudes and behaviors. Those in the diversity and inclusion field may feel isolated when the organization mandates diversity training (Schumpeter, 2016). Solid, proven diversity approaches help minimize diversity fatigue for both the trainer and trainee. Diversity fatigue is caused from ineffective training and hurts organizational inclusion (Bohanon, 2018).

Diversity Training

Diversity training appears to be one of the most common diversity initiatives an organization uses to drive diversity and inclusion (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018). Effective diversity training is needed as a driver for inclusion; however, when training fails, it creates resistance to changes in diversity (Dobbin & Kalev, 2016). Resistance is the primary negative impact of poorly designed diversity-training programs. Bohanon (2018) examined 830 organizations over a 30-year period and discovered when diversity training programs are forced, the outcomes are met with resistance. When resistance is present, employees’ rebel and do the opposite of what was expected (Bohanon, 2018). It is important to be cautious when instituting diversity training, as it may backfire or have negative results, thus promoting resistance (Thomas et al., 2010).

The secondary impact of flawed diversity training is a negative attitude shift. This negative attitude may be due in part to training resistance or rational (Thomas et al., 2010). When the focus of the diversity training is financially based or linked to the organization’s bottom line, it may create a backlash of negative attitudes (Jones et al.,

2013). The training may be perceived as necessary to get a reward and, in this case, men reported a less-than-positive attitude towards women posttraining. This is partly due to the basis or rationale of completing the diversity training versus achieving personal growth and understanding (Jones et al., 2013).

A Lack of Research on New Training Trends

Organizations are continually looking for the best way to train their workforce; however, organization leaders are not doing due diligence in seeking research around new methodology or contexts (Noon, 2018). It is important for diversity training to draw on evidence-based research to ensure no harm is done (Meyer et al., 2018). Diversity training is not one-size-fits-all and that must be taken into consideration when applying theory (Meyer et al., 2018). Shortcuts often cause disasters (Noon, 2018) and evidence-based research is necessary regardless of the protected class one is training on (Phillips et al., 2019). In a review of 1,322 training articles, Phillips et al. (2019) concluded that more research on new trends must be done before those trends become mainstream.

A new trend in diversity training is unconscious bias training, which is contextually based as cold language. Noon (2018) examined the role of unconscious bias training and outcomes and noted that just awareness around biases does not eliminate racism or discrimination. Noon also argued that unconscious training and positive results have very little theoretical backing because little research has been done on the effectiveness of unconscious bias training. This is one example of a new training trend that is getting attention and may be doing more harm than good (Noon, 2018).

Research Gaps in Literature for Diversity Training

There appears to be several gaps in research on diversity training. The data repeatedly demonstrate that diversity training appears to be the method organizations utilize to drive workplace diversity understanding and inclusion; however, outside of academic settings, research has yet to prove whether diversity training drives inclusion or does harm by negatively impacting one's perception of organizational justice (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Ehrke et al., 2014; Fujimoto & Härtel, 2017; Kalinoski et al., 2013; Lipman, 2018). Several studies stood out and several common themes appeared: the lack of research around diversity training theory, size of population, measurement of attitude shifts, and sites outside of academia.

Alhejji et al. (2016) used a meta-analysis to examine the different theories in diversity training and determine how effective the theories were in shifting learned attitudes in diversity. Alhejji et al. used a theoretical framework to systematically examine 61 of the most recent empirical research papers focused on diversity training. The articles were in 48 peer-reviewed journals spanning from 1994 to 2014. The outcome focused on three perspectives: business case, social justice, and learning. Individual difference theory, cross-cultural and multicultural theory, competency theory, Diversity Training Design Theory (DTDT), and several learning theories were also examined. Alhejji et al. compared theories and concluded that although DTDT in association with diversity-training theory appears to be widely accepted as a method for diversity training, it has yet to prove to be effective in changing biases, attitudes, and organizational social justice.

Trends that emerged included the lack of overall sample sizes, a narrow range on theoretical perspectives and training, and the lack of a good measurement tool for diversity training. Alhejji et al. (2016) concluded that the overall research base for diversity training and applied theory is flawed and fragmented. The data demonstrated an increase in diversity knowledge, a slight shift in diversity attitudes, and an increase in business performance. Alhejji et al. went on to argue that the sample sizes used were too small to draw any solid conclusion, and that little to no data exist around how diversity-training theory impacts social justice outcomes. Social justice is the perceived justice or rightfulness of balance in an organization. Alhejji et al. further implied that social justice outcomes could potentially demonstrate diversity training effectiveness.

Bezrukova et al. (2016) created a meta-analysis literature review comparing over 260 samples of diversity training. Bezrukova et al. examined four areas: content, DTDT, characteristics, and participant outcomes. The goal of the review was to combine and summarize over 40 years of research and align this research with psychological diversity-training theories. Bezrukova et al. examined the data to answer the following question: Does diversity training affect learning outcomes? This question can be found in several research articles prior to the analysis conducted by Bezrukova et al., but an answer had not yet been determined due to a lack of multiparameters.

Larger sample sizes and theoretical diversity-training theory applications must be further researched to better understand how diversity-training theory impacts attitudinal shifts (Bezrukova et al., 2016; Alhejji et al., 2016). General attitudes in training may be changed in the short term; however, social events may change those attitudes back to the

baseline over time (Bezrukova et al., 2016). Both Bezrukova et al. and Alhejji et al. further questioned the need for improved understanding on whether diversity-training theory provides long-lasting results on attitudes outside the academic setting.

Kalinoski et al. (2013) conducted a meta-analysis, mixed-method research study focused on diversity theory and the effect on skill, cognitive, and affective outcomes. Sixty-five studies were identified and reviewed. Kalinoski et al. argued that diversity training had a positive impact on three quantifiable and defined outcomes. The data showed a large shift in diversity training in business where the outcomes needed to be in alignment with the organization. Kalinoski et al. supported the argument that diversity training must have a theoretical application and measurable outcomes in terms of justice.

Dominant diversity-training models (gender, ethnicity, and age) are failing in organizational learning and these methods may cause a hindrance in learning as well as latent conflicts around diversity (Gebert et al., 2017). The barriers for diversity training stem from the trainers and their own dysfunctional beliefs. The trainer's beliefs directly impact the learning process as well as the outcome of the training program (Gebert et al., 2017).

Gebert et al. (2017) examined several diversity-training theories: inclusion theory, equal opportunity theory, and minority integration theory. Gebert et al. concluded that the literature shows a failure in outcomes; however, due to sample size and setting, the results may be inclusive. The common trend in the literature demonstrated trainer biases in all theories examined. Trainer beliefs showed an impact on outcomes across all four theories, and tolerance or shifting perspectives based on the trainer's own assumptions

demonstrated a positive outcome on training (Gebert et al., 2017). Although full awareness or tolerance of the trainer may not be possible, tolerance should be part of the diversity training process.

Research on tolerance training from 2012 to present has been compared to theories that are relatively older in framework and research. Inclusion theory is in the same date parameters for research; however, the amount of research was limited. Gebert et al. examined DTDT as a tool for facilitating training.

Alhejji et al. (2016), Berzrukova et al. (2016), Ehrke et al. (2014), Kalinoski et al. (2013), and Schneid et al. (2015) argued that perceived organizational justice could be an effective tool for measuring DTDT and attitudinal shifts. There have been several quantitative empirical research studies conducted on the impact diversity training has on organizational justice (Gompers & Kovvali, 2018; Harjoto et al., 2018; Kalinoski et al., 2013), inclusion (Dahanayake et al., 2018; Lazauskaitė-Zabielskė, 2017; Roczniowska et al., 2018; Saifi & Shahzad, 2017), and several systematic literature reviews of diversity-training theory (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018). These studies all noted a consistent set of limitations including small sample sizes, lack of evidence outside the academic setting, and a lack of conclusive evidence on whether diversity-training theory has an impact on perceptions of organizational justice. Research is lacking in the application of diversity-training theory outside the academic setting and its impact on perceived organizational justice outcomes (Alhejji et al., 2016; Bezrukova et al., 2016; Enoksen, 2016; Fujimoto & Härtel, 2017; Gebert et al., 2017; Yuka et al., 2013).

There is a gap in sample size and theory-based diversity training (Alhejji et al., 2016; Bezrukova et al., 2016) and the need for an improved measurement tool is apparent. Trending theories in training must be included in further research. Training focus also came into question: Should diversity training focus on groups or be more generic? Bezrukova et al. noted in-group versus out-group dynamics could be an important lens for understanding the true business world and a case for diversity outcomes. Bezrukova et al. also suggested that the greatest shortcoming in diversity training is not being able to demonstrate real behavioral changes.

Diversity-Training Theory

Diversity-training theory includes instruction courses where the focus is on the following: (a) improving positive intergroup interactions and interpersonal relationships, (b) decreasing discrimination, and (c) improving knowledge and motivation of participants to interact with diverse others (Alhejji et al., 2016; Dahanayake et al., 2018; O'Brien et al., 2015; Pendry et al., 2007). According to Fujimoto and Härtel (2017), DTDT is defined as components of the training application that impact diversity-training theory. These factors include composition of training, group selection, design, and evaluation. There is an overlap of research on DTDT and diversity-training theory. The following theoretical-based moderators must be considered when creating and implementing diversity training: composition of training and context (approach, setting, duration), design (attendance, focus, type, instruction), group selection (trainee characteristics), and evaluations (Bezrukova et al., 2016; Fujimoto & Härtel, 2017). Diversity-training theory examines the impact diversity training has on each participant's

attitudinal shifts whereas DTDT is the training map for implementation (Bezrukova et al., 2016; Fujimoto & Härtel, 2017).

Fujimoto and Härtel (2017) created and examined a diversity learning framework—DTDT—that could potentially provide a roadmap for diversity training. Behavioral, attitudinal, and cognitive learning in the workplace were cornerstones for this framework. Fujimoto and Härtel used joint decision-making and organizational intervention as the foundation for outcomes. Fujimoto and Härtel examined the shortcomings of diversity training programs and considered the variables of composition, group selection, design, and evaluation. Fujimoto and Härtel provided theoretical framework in diversity learning as a solution. This learning foundation examined the attitudinal and behavioral shifts of employees before, during, and after diversity training. This examination allowed for individual surveys on perception to take place. The survey process considered behavior, attitudinal, and cognitive ability and shifts in each stage. Fujimoto and Härtel also provided selection and role criteria for participation. Fujimoto and Härtel stated that DTDT provides organizations a map for creating lasting learning.

Bezrukova et al. (2016) created a meta-analysis literature review comparing over 260 individual samples of diversity training and examining four areas of DTDT and diversity-training theory. Focused results showed an overall effect size (Hedges g) of .38 with the largest effect being for reactions to training and cognitive learning. Smaller effects were found for behavioral and attitudinal or affective learning. Bezrukova et al. used these studies to predict outcomes based on diversity-training theory on theoretical

moderators and DTD. This provided a framework for the research done by Fujimoto and Härtel along with current research.

Theoretical Moderators

Context

Diversity training context is important to consider because it links motivation to learn and learning outcomes (Bezrukova et al., 2016; Fujimoto & Härtel, 2017).

According to Bezrukova et al. (2016), where the training occurs and how it is positioned is a necessary factor to consider when looking at outcomes. If participants feel they are safe and the information has value, motivation to learn increases. The research done by Alhejji et al. (2016) demonstrates context, but as in the majority of diversity training research, the research was academic and thus may not provide outcomes for business application.

Language is a strong positioning tool for context in diversity training. Jones et al. (2013) demonstrated that empiric research has shown that cold language (negative language), or economic of diversity language (language focus is on policy and business), produces a negative effect. Cold language compared to positive language (the right things to do, ethical language, or lacking blame) provided an improved positive motivation for learning. Moral awareness cues in language around diversity and decision-making demonstrated a stronger correlation of employees doing the right thing in the diversity context (Tenbrunsel & Smith-Crowe, 2008).

Approach

An integrated approach provides lasting attitudinal shifts (Bezrukova et al., 2016; Fujimoto & Härtel, 2017). Bezrukova et al. (2016) reviewed 260 demonstrated studies. When comparing intergraded versus standalone approaches, the integrated approach had larger effect sizes for attitudinal and affective ($g = .47$) and behavioral learning ($g = .86$) compared to a standalone approach ($g = .27$, $g = .42$, respectively). These differences were significant: $QB(1) = 7.15$, $p = .01$; $QB(1) = 5.11$, $p = .02$, respectively.

Often, the approach in diversity training is to check the box, get it done, and move on; however, ongoing reinforcement materials and discussion should be provided with different perspectives (Ehrke et al., 2014; Fujimoto & Härtel, 2017; Jones et al., 2013). An integrated approach signifies a commitment to inclusion from the organization (Bezrukova et al., 2016) and allows for factors such as diversity ethics to be considered (Jones et al., 2013).

Setting

In the context of diversity training, the overall setting was overrated compared with the relationship of diversity training and continued reinforcement tools (Bezrukova et al., 2016). Setting is important depending on the training goals. Although educational settings have demonstrated positive outcomes, this may not be the case outside the academic setting as educational settings have a larger group size ($g = .80$) than organizational settings ($g = .28$), $QB(1) = 6.43$, $p = .02$ (Bezrukova et al., 2016). An educational setting is preferred if the goal is to learn about diversity and prejudice;

however, if the goal is to increase inclusion, the setting should be organizational and aligned with the organization's goals (Bezrukova et al., 2016).

Setting also includes face-to-face or computer-based learning. Kalinoski et al. (2013) compiled a meta-analytic evaluation of diversity-training outcomes. This evaluation discovered that active and interdependent task programs—rather than passive programs such as computer-based learning—have a higher learning outcome. Active and interdependent task programs can be inclusive of training, reinforcement materials, and discussions.

Duration

Duration goes beyond the training session. Ehrke et al. (2014) studied 62 participants undergoing 2-hour diversity interventions in the academic setting. The study showed a decrease of sexist attitudes and improved attitudes towards gender out-groups; however, no long-term data were examined. The duration of the initiative is more important than the duration of one training class (Alhejji et al., 2016; Bezrukova et al., 2016; Fujimoto & Härtel, 2017), and attitudinal shifts increase when the diversity training lasts more than one session. A 45-minute session with several months of follow up is more impactful than a 6-hour class (Fujimoto & Härtel, 2017). Low sample size in conjunction with the academic setting leaves the results inconclusive for the business setting (Alhejji et al., 2016).

Time and workshop must be considered with the organization's goals. The longer people are together face-to-face and interacting, the more comfortable they are in expressing their own biases (Bezrukova et al., 2016). Diversity trainings with a longer

duration are more useful and leave lasting implications (Caffrey et al., 2005; Griswold et al., 2006). Ehrke et al. (2014) conducted two experiments: a 2-hour diversity training program and a 1-day training program. Ehrke et al. examined the subject's responses to gender sexism (Experiment 1) and ethnic attitudes (Experiment 2). Ehrke et al. concluded the full day of diversity training demonstrated positive outcomes around ethnicity, gender, and age within the in-group towards the out-group; however, Ehrke et al. warned these experiments were conducted in an academic setting and real-world application still needs to be proven. The 2-hour gender-diversity training demonstrated positive gender perceptions towards the out-groups.

Design

Diversity training design should aid in breaking down social barriers while recognizing the differences in a group (Ensari & Miller, 2006). Diversity training should increase cooperated behavior and conflict management in groups. A strong design results in improved familiarity of group members and increased inclusion (Bezrukova et al., 2016) and design and organizational learning are strongly linked (Fujimoto & Härtel, 2017). The stronger the design, the more learning outcomes are achieved.

Attendance

Voluntary attendance has a positive outcome on attitudinal shift over mandatory attendance (Bezrukova et al., 2016; Fujimoto & Härtel, 2017). Bezrukova et al. raised the following question: Did the training reach the right individuals? Although voluntary attendance increased the motivation of participants to learn, both voluntary and

mandatory attendance had no significant difference on attitudinal learning (mandatory $g = .36$, and voluntary: $g = .38$, $QB(1) = 1.66$, $p = .40$). (Bezrukova et al., 2016).

Focus

Group and topic focus have been debated for years. There is no significant difference regarding the focus being inclusive or group (Bezrukova et al., 2016); however, focus does reiterate the need for trainers to be unbiased, as bias may shift the focus and cause more harm than good in a training session. Gebert et al. (2017) examined how the focus of dominant diversity training models (gender, ethnicity, and age) are failing in organizational learning. Gerbert et al. concluded that dominant diversity training models may cause a hindrance in learning as well as latent conflict around diversity training and group dynamics. The barriers for diversity training stemmed from the trainers and their own dysfunctional beliefs. Tolerance and inclusion languages should be included with the diversity training framework (Gebert et al., 2017).

Type

The type of training correlates with a preferred outcome of awareness or behavioral shifts. Awareness training has smaller effect sizes for attitudinal or affective and behavioral learning ($g = .22$; $g = .35$, respectively; Bezrukova et al., 2016). The differences in effect sizes were statistically significant for attitudinal or affective learning— $QB(2) = 15.16$, $p = .00$, and behavioral learning, $QB(2) = 6.92$, $p = .05$ —yet not significant compared to reaction or cognitive outcomes. Integrated training appeared to have the best impact results on participants (Bezrukova et al., 2016).

Instruction

No significant difference has been found between any method over the past 40 years of empiric research on instruction (Bezrukova et al., 2016). The research around instruction is fragmented and is not one-size-fits-all (Alhejji et al., 2016). Imbedded training in the diversity training design may increase retention; however, more research is needed (Fujimoto & Härtel, 2017). Inclusive instruction may provide lasting results as it does not alienate the trainer (Thomas et al., 2010). Stewart et al. (2008) argued when initiating workplace diversity training, one should follow this methodology: a) focus on themes not people (focus on the outcome theme versus the ism or protected groups), b) consider the instructor (are they biased, tolerant, engaging?), c) consider the diversity voice (is the message inclusive and embraced by the organization?), and d) consider the strategic integration of majority allies (include their stories and experiences).

The instructor plays a large role in diversity-training theory; however, this fact has rarely been examined (Alhejji et al., 2016; Bezrukova et al., 2016; Fujimoto & Härtel, 2017; Fujimoto et al., 2017; Thomas et al., 2010). Toubiana (2014) conducted qualitative research through examining the facilitators' roles in training and teaching the perception of diversity and social justice. Through interviewing MBA students in Canada and Israel, Toubiana examined if the faculty's perception of diversity and social justice impacted how the participants viewed diversity and social justice. Toubiana also examined how the definition of diversity and social justice—as defined by the faculty's organization—impacted the participants and faculty. Toubiana concluded that the rigorous definition found in the organization around diversity and social justice prevented

the facilitators from expressing their own views on the subject. The participants could define the terms yet could not apply them to their own life. Toubiana concluded that the lack of personalization to training content drove learning but not application and questioned whether the learning would be retained.

Trainee Characteristics

Using a metaregression analysis of 260 diversity training studies, Bezrukova et al. (2016) discovered no significant outcome when examining trainee characteristics (gender, age, ethnicity groupings) on attitudinal or behavioral shifts. The average age of participants in the sample did not moderate the overall effect size, $b = .001, p = .70$. No relationships were observed for attitudinal or affective ($b = .003, p = .51$) or behavioral learning ($b = .003, p = .66$). The same was concluded for gender and ethnicity as no relationships were observed; ($b = .133, p = .66$), attitudinal and affective ($b = .029, p = .82$) or behavioral learning ($b = .079, p = .69$), attitudinal and affective learning ($b = .178, p = .17$), or behavioral learning ($b = .104, p = .59$, respectively). Trainees who provide a tool in creating an inclusive learning environment in combination with instruction may invoke lasting results; however, more research must be conducted.

Measuring Diversity Training Effectiveness

Diversity training often creates an “us versus them” shift in attitudes when the wrong diversity-training theory is used and outcomes are difficult to measure (Enoksen, 2016; Fujimoto & Härtel, 2017; Gebert et al., 2017; Kossek et al., 2017; Lipman, 2018; Noon, 2018). Outcomes typically fall into four categories (attitudinal, behavioral, cognitive, and reactional learning or shifts) and are subject to the training setting

(educational or organizational; Bezrukova et al., 2016; Fujimoto & Härtel, 2017). In the 260 empiric studies conducted, Bezrukova et al. found measurement of effectiveness differed from study to study in terms of the tool used.

When measuring effectiveness of diversity-training theory or training application, the organization must understand what outcome the organization is seeking. Cognitive learning measurements are complex as it must consider multiple perspectives in diversity training (Fujimoto & Härtel, 2017). It is not clear if there is one perspective that takes precedent over any other perspective in subgroups. This is the same for reactional learning. Overall effectiveness may be difficult to measure; however, perceived organizational justice (the perception of equality and fairness in the organization) is an excellent measurement of how diversity training impacts attitudinal and behavioral leaning shifts in the workplace (Alhejji et al., 2016; Bezrukova et al., 2016; Fujimoto et al., 2013; Jones et al., 2013; Schneid et al., 2015).

Diversity training initiatives and perceived organizational justice are an effective measurement tool, as both focus on equality, fairness, and inclusion (Moon, 2017). Dahanayake et al. (2018) conducted a qualitative case study to examine organizational fairness and justice as a framework to determine if the diversity initiatives were impactful. The study focused on four organizations' diversity management around critical issues and used justice and fairness principles as outcome moderators. Organizations were compared using a cross-case analysis. The results demonstrated that using fairness and justice principles were effective in evaluating diversity interventions. Dahanayake et

al. noted the size of the study as a limitation, as this research was based on four organizations.

Sungchan and Soyoung's (2016) examination of federal workers also demonstrates perceived organizational justice as an effective tool in measuring diversity training initiative outcomes. Ardakani et al. (2016) examined diversity management initiatives using perceived organizational justice as a mediator with 500 human resource professionals. Through structural equation modeling, Ardakani et al. demonstrated how diversity training mediated by perceived organizational justice improved human resource productivity. Ehrke et al. (2014) demonstrated how perceived organizational justice is an effective tool for distinguishing if diversity training is effective.

Perceived Organizational Justice

Perceived organizational justice is the employees' perceptions of fairness or equality in an organization (Enoksen, 2015; Fujimoto et al., 2013; Omar et al., 2018). It is the employees' perceptions of how the organization makes decisions, provides information, allocates rewards, and the overall employee treatment through equality and fairness (Kurian, 2018; Omar et al., 2018). There are four dimensions of perceived organizational justice that make up the overall perception of justice and equality in the workplace. The first dimension is DJ, in which the employees' perceptions of fairness are associated with decision outcomes and distribution of organizational resources such as salary, praise, and promotions. The second is IPJ, in which the employees' perceptions of fairness are associated with whether shared organizational information is timely, truthful, and specific. The third dimension is IFJ, which involves employees' perceptions of

respect and how they are treated in the organization. Finally, PJ, in which the employees' perceptions of fairness are related to organizational processes and whether processes are approached ethically, accurately, and consistency, and lack bias (Dahanayake et al., 2018; Enoksen, 2015; Jordan et al., 2019; Kurian, 2018; Moon, 2017; Omar et al., 2018).

Employees who have a balance of all four dimensions of perceived organizational justice saw the organization as fair and equal to employees (Lazauskaitė-Zabielskė, 2017).

Organizations must understand how and what impacts employees' perceptions of justice to shift towards equality and harvest the benefits (Dahanayake et al., 2018; Omar et al., 2018).

Employees' perceptions of organizational justice are learned in the organization. There are several means of learning; however, diversity training initiatives appear to have the largest impact on perceptions of equality and fairness (Dahanayake et al., 2018; Jordan et al., 2019; Moon, 2017; Kurian, 2018). It is imperative for human resource management professionals to understand the role diversity initiatives have on organizational justice and fairness (Kurian, 2018). Human resource management is often the first engagement center for employees, and thus critical for driving organizational justice. Sungchan and Soyoung (2016) used the 2013 Federal Employee Viewpoint to determine that positive diversity initiatives lead to a higher level of perceived organizational justice.

A second means to shift perception is changing the overall organizational climate (Moon, 2017). This may be done through diversity, ethics, and learning initiatives. A third aspect of shifting organizational justice is employee modeling of organizational

behavior (Kurian, 2018). This is how an employee's perception of justice is shaped. The role of heuristic and globalization fairness is mirrored behavior in an organization (Jordan et al., 2019). Employees learn from others what to anticipate with justice based on what they see. Diversity training is also a method for modeling behaviors as attitudes and shifting behaviors (Kurian, 2018; Tucker, & Jones, 2019).

Organizational Justice and Workplace Diversity

Diversity and organizational justice appear to go together with diversity initiatives for driving equality, inclusion, and fairness. Furthermore, when one is misaligned, the other follows (Frenkel & Bednall, 2016; Dahanayake et al., 2018; Kurian, 2018; Madera et al., 2016; Moon, 2018; Sungchan & Soyoung, 2016). Diversity initiatives must align with organizational justice to decrease turnover rates, increase retention, and drive organizational performance (Moon, 2018). Those who have a positive perception of organizational justice also have a positive perception of organizational diversity initiatives (Sungchan & Soyoung, 2016). Using a survey of hotel managers, Madera et al. (2017) concluded that diversity and fairness attitudes in an organization shape how employees perceived equality. It is also worth noting that different groups do not measure equality and fairness differently (Human Resource Management International Digest, 2018).

Diversity and organizational justice are focused on common goals; however, participation is an important influencer in shifting attitudes and behaviors around both (Ernst, 2019). Ernest (2019) analyzed participation using an online survey from a German energy transformation organization with 516 valid responses. Ernest demonstrated a

correlation between participation in decision-making, diversity processes, and improved justice. This included an increase in organizational trust, fairness, and conflict. The participant process (written, verbal, online, or face-to-face) had no significant differences amongst themselves. The business case between perceived organizational justice and diversity are also linked (Dahanayake et al., 2018; Jordan et al., 2019; & Moon, 2018).

Organizational Justice and Workplace Inclusion

Workplace inclusion is the feeling of belonging, understanding, and being valued in a group or team of individuals in the workplace based on factors other than diversity (Dahanayake et al., 2018; Young, 2019). Gender inclusion is the feeling of belonging, understanding, and being valued in a group or team of mixed genders (García-Sánchez et al., 2017; Young, 2019). Much like organizational justice, inclusion focus falls to equality with all regardless of protected class.

Workplace inclusion is a cornerstone of human resource management and organizational leadership and human resource management must align for workplace inclusion to occur (Buengeler et al., 2018). Buengeler et al. (2018) created a theoretical framework that examined diversity and organizational justice based on current literature. Deletion, compartmentalization, aggregation, and integration have critical implications for theory and practice as they specify the role of leaders in leveraging the inclusive potential of human resource diversity practices. Leadership and human resource alignment around organizational justice and utilizing diversity initiatives improve organizational inclusion.

Le et al. (2018) examined the mediating roles of PJ and DJ on organizational inclusion using data from 253 Australian employees and an online survey. The study demonstrated that PJ and DJ did significantly mediate the perception of organizational inclusion and the overall wellbeing of the organization improved. Le et al. (2018) concluded that more research must be done to correlate inclusion and organizational health.

The Business Case of Perceived Organizational Justice

After understanding the role diversity plays in perceived organizational justice, it is not surprising that the business case is similar. Over the past 2 decades, organizations have evaluated workplace diversity benefits through the business case lens, which includes performance and production, job satisfaction, and attraction-retention of employees (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Fujimoto & Härtel, 2017). The perception of organizational justice aligns with diversity management as organizational mediators, therefore providing a stronger business case for both.

Saifi and Shahzad (2017) asserted that the relationship between employee behaviors and perceived justice is mediated by the level of job satisfaction among employees. Using a quantitative strategy and cross-sectional survey, data were collected from a self-administered questionnaire. Several organizations were examined with N= 149 employees. The study revealed that employees with a positive perception in relation to organizational justice significantly correlated to employees' job satisfaction, thus

mediating the relationship between the perception of justice and employee behaviors (Saifi & Shahzad, 2017).

Sharma and Yadav (2017) used analysis of variance and descriptive statistics to demonstrate a significant positive correlation between perceived organizational justice and employees' work engagement among 96 bank employees. Employees who have a positive perception of organizational justice have an improved perception of overall equality, workplace environment, respect towards inclusion of other differences (gender, age, ethnicity), workplace attitudes, and stronger ethical decision-making skills (Sharma & Yadav, 2017).

The same lenses are used to demonstrate the business case for organizational justice and have demonstrated the same positive business case (Dahanayake et al., 2018; Ernest, 2019; Kurian, 2018; Lazauskaitė-Zabielskė, 2017; Madera et al., 2017; Moon, 2018; Rasool et al., 2018; Sungchan & Soyoung, 2016). An organization with strong organizational justice improves employee retention, performance, production, inclusion, and job satisfaction, as well as their decision-making and conflict-resolution skills.

The business case has shown that organizational justice has the following effects: it creates an ethical workplace environment (Akar, 2018; Demirtas, 2015; Schminke et al., 2015; Wang & Xu, 2019), it decreases stereotyping and discrimination (Castaño et al., 2019; Cho, 2017; Enoksen, 2016), and improves cognitive function (Elovainio et al., 2012). The perception of organizational justice is directly linked to employees' physical- and mental-health wellbeing (Enoksen, 2015; Roczniowska et al., 2018).

Business Ethics

Business ethics are defined as rules and policies that govern how an organization functions, makes business decisions, and how employees and customers are treated (Wang & Xu, 2019). Business ethics are derived from the organization's culture, leadership, mission, and value statement and are learned behaviors. It has been argued that when organizational justice is positive, business ethics should also be positive as the decision and treatment of employees should be fair (Akar, 2018; Demirtas, 2015; Schminke et al., 2015; Wang & Xu, 2019). Both ethical and justice behavior is mimicked by employees, and the decision-making process is often the first sign of unethical or unjust behavior (Demirtas, 2015). The organization's leadership strongly influences this behavior.

To understand ethical leadership and organizational justice, Akar (2018) conducted a meta-analysis of 33 empiric research articles. Akar stated the following findings:

The effect size of ethical leadership on organizational trust [$r=0.82$] is "very strong;" effect size of ethical leadership on job satisfaction [$r=0.63$], organizational justice [$r=0.76$] and organizational cynicism [$r=-0.56$] is "strong;" effect size of ethical leadership on organizational commitment [$r=0.44$] and motivation [$r=0.47$] is "moderate;" effect size of ethical leadership on mobbing [$r=-0.28$] is "modest." (Akar, 2018, p. 6).

Akar examined the affect ethical leadership has on organizational implications; however, more research is needed to determine whether it is ethical leadership, organizational justice, or both that drives an organization.

Stereotyping and Discrimination

Enoksen (2016) examined how the perception of organizational justice impacts the perception of discrimination. The study focused on workplace immigrants in a cross-sectional design. Enoksen sampled 224 mental health practitioners in a clinic in Norway. Participants completed the COJS and a scale that measures perceived discrimination. The results demonstrated those employees who scored low on the COJS scored significantly higher on the perceived discrimination scale (Enoksen, 2016).

Cho (2017) examined organizational justice as a managerial factor and reviewed discrimination complaints in the U.S Federal Government. Cho used a squares regression analysis on the percentage of employees who filed a complaint to the Equal Employment Opportunity Commission (EEOC) along with the 220,000 employees who responded to an online organizational justice survey from 2006 to 2010. The response rate was 57%. Cho determined that the managerial factor of organizational justice did decrease the number of discrimination complaints. Cho's results were as follows: 2: X^2 - value = 18416.95 ($p = .0$); Normed Fit Index = .99; Root Mean Square Error of Approximation (RMSEA) = .058; Comparative Fit Index (CFI) = .99; Standardized RMR = .025; Goodness of Fit Index (GFI) = .98. Due to the sample size ($N= 160,000$) X^2 - test rejected. PJ, DF, and IFJ were the three dimensions of organizational justice surveyed.

Through a review of 61 articles, Castaño et al. (2019) revealed a strong link between stereotyping and discrimination in organizations. Stereotyping creates an unbalance in leadership advancement. Castaño analyzed 1,150 units with the following breakdown of stereotypes: 751 (65.30%) descriptive stereotypes and 399 (34.69%) prescriptive stereotypes. Using organizational justice may help overcome gender stereotyping and drive inclusion in the workplace. Castaño also noted the importance of human resource management in managing organizational justice, stereotyping, and discrimination (Castaño et al., 2019).

Cognitive Function

Research conducted by Elovainio et al. (2012) around perceived organizational justice and the business case of cognitive function is well regarded. This study is known as the Whitehall II study and focused on middle-aged workers and their perception of organizational justice in relation to cognitive function. The goal was to uncover whether there was a direct link to perceived organizational justice and cognitive function. The study further examined work and health environments to cognitive function scales (Elovainio et al., 2012).

The population for this research included office staff aged 33–55: 6,895 men and 3,413 women. All participants were based in London, England. Elovainio et al. presented five phases of data. A self-reported justice scale was utilized in Phase 1 and 2. It is worth noting the research was gathered from 1989–1990 while the article was published in 2014. A Likert-type scale of 1 to 4—with the high scores pointed at a greater perceived injustice—was analyzed. The results demonstrated a strong link between cognitive

function and perceived justice. Elovainio et al. concluded that this research provided more information on the following: a) middle-age employees demonstrated cognitive function and the relationship with organizational justice, b) focus must be given to decision-making and managerial roles and processes, and c) the risk of unfair treatment by supervisors decreasing cognitive function. The Whitehall II research concluded lower perceived organizational justice is associated with lower cognitive function. Furthermore, Elovainio et al. provided rationale around health markers (i.e., inflammation and heart disease) and lower cognitive function and pointed out that low organizational justice has been associated with an elevated risk of health issues. As Elovainio et al. demonstrated a link between cognitive function and organizational justice, cognitive function may also provide insight or bias in diversity training (Elovainio et al., 2012).

Oh (2019) also examined organizational learning, cognitive function, and the moderating role of organizational justice. Oh (2019) created a theoretical model focused on knowledge acquisition and transfer and collected data from 515 participants. Oh concluded that organizational justice moderates the effect of knowledge acquisition. The higher organizational justice was perceived, the better the transfer of knowledge. This applies to the employees up to organizational leadership. If an organization is looking to improve or explore new technology, fairness in PJ and DJ is critical for success (Oh, 2019).

The business case is still being examined as there are many other benefits to organizational justice in the workforce (Oh, 2019). Organizational justice appears to be one of the moderators for organizational success as organizations become more

globalized and equality continues to drive employee job satisfaction and performance (Akar, 2018; Castaño et al., 2019; Cho, 2017; Oh, 2019). The measurement of perceived organizational justice has evolved over time. Measuring the perception of organizational justice may be as simple as a proven survey (Moliner et al., 2017).

Measuring Perceived Organizational Justice: Colquitt Organizational Justice Scale

Organizational justice and fairness are interchangeable terms in business (Colquitt & Zipay, 2015; Moliner et al., 2017). It is difficult to measure perceived organizational justice as there are many factors that must be considered (Colquitt & Zipay, 2015). Those factors include behavioral mediators of moral emotions, group mode, identification, emotions, and social exchange. An employee's uncertainty around organizational trust, stature, goal progress, and morality affect how the employee perceives justice.

There have been many scales used to measure the perception of organizational justice (see Appendix A); however, they each build on prior work (Moliner et al., 2017). One scale presents significant results in demonstrating an effective way in measuring perceived organizational justice. The COJS can effectively measure leadership, management, and employees' perceptions of organizational justice (Ehrke et al., 2014; Enoksen, 2015; Omar et al., 2018). The COJS is the appropriate measurement tool for perceived organizational justice as it meets all justice rules in the context of selection, performance evaluations, training, compensation, and conflict (see Appendix B; Cropanzano & Ambrose, 2015).

The COJS was created by Jason Colquitt in 2001. This instrument effectively measures an employee's perception of organizational justice and fairness (Colquitt &

Zipay, 2015). The COJS is a widely used survey instrument that examines all four dimensions of perceived organizational justice: DJ, IFJ, IPJ, and PJ. The open-source assessment (see Appendix C) has a history of demonstrated construct validity (Colquitt & Zipay, 2015; Cropanzano et al., 2015; Dahanayake et al., 2018; Enoksen, 2015, 2016; Omar et al., 2018). The COJS is 20 questions. It used a 5-point Likert-type scale in which anchors are 1 = To a Very Small Extent, 2 = To a Small Extent, 3 = To a Moderate Extent, 4 = To a Large Extent, and 5 = To a Very Large Extent. The tool must address the need to be viewed contextually to measure organizational justice (Colquitt & Zipay, 2015; Cropanzano et al., 2015; Enoksen, 2015). The COJS is context-dependent, thus allowing for a shift of verbiage in its questions (Enoksen, 2015). The COJS questions may be tailored to the organization or participants by inserting words in parentheses, as this allows the tool to be applied to leadership, management, and employees (Colquitt & Zipay, 2015; Cropanzano et al., 2015; Enoksen, 2015). Inserting parentheses helps participants read the question as it was intended and removes some survey ambiguity (Colquitt & Zipay, 2015; Cropanzano et al., 2015).

The rationale for using the COJS is its history of use in empirical research to measure perceived organizational justice in specific public industries (Dahanayake et al., 2018; Enoksen, 2016). This tool has been widely accepted as an assessment to measure each of the three and four dimensions of organizational justice in academic and business settings (Colquitt & Zipay, 2015). Enoksen (2016) used the COJS in Norway to measure perceived organizational justice in the public healthcare arena, using the four-factor organizational justice scale. According to Enoksen (2015), the Cronbach's α , internal

consistency for the four-factor model—the COJS—measured high but in range to ensure no organizational-justice dimensional redundancy. The organizational-justice dimensions ranged from .88 to .93 in Cronbach's α . Enoksen recognized the four-factor model attained an RMSEA of .08, which indicates a good fit for the use of the four-factor model over the previous three-factor models on the organizational-justice scale. Moreover, Enoksen demonstrated a 90% confidence interval ranging from .05 to .07 with the four-factor model. In a larger study of 500 participants conducted by Maharee-Lawler et al. (2010), the researchers also used the COJS and determined the α s = .78–.92. for the four-factor model (Maharee-Lawler et al., 2010).

Repeated empirical research has demonstrated a stronger validity with the four-factor COJS model than the individual dimensions (Enoksen, 2015; Maharee-Lawler et al., 2010). Omar et al. (2018) went on to examine the reliability and validity of the four-dimension COJS. Sampling 406 Argentine employees, Omar et al. demonstrated the reliability with the ordinal alpha and composite reliability values greater than .80. Omar concluded that the four-dimension COJS is a sound and useful tool in measuring perceived organizational justice and its four dimensions of PJ, DJ, IFJ, and IDJ. Spagnoli et al. (2017) examined the COJS and noted that the COJS was widely accepted and has excellent internal consistency with result reporting.

The Role Gender Plays in the Workplace

The role of gender is not as simple as male or female, as there appears to be a socially constructed stratification system *prima facie*. Much like social class or ethnicity, gender functions in the business ecosphere on several levels including socioeconomic

availability, religion, cultural customs and interactions, and societal norms (Castaño et al., 2019; Kossek et al., 2017; Koveshnikov et al., 2019; Lee et al., 2018; Sobering et al., 2014). In research and business, gender is more a characteristic than an anatomical binary measurement (Koveshnikov et al., 2019).

Gender diversity is under the business lens due to changing global markets, an increased rate of women entering the workforce, women's economic purchasing strength, and workplace wellbeing (Fine, & Sojo, 2019; 2017; Graham et al., 2017; Kossek et al., 2017). Furthermore, with recent Supreme Court rulings, gender encompasses more than just male and female as the LGBT now cannot be discriminated against (Steiger & Henry, 2020). In examining gender in the workplace, several themes became apparent: the legal aspect of gender in the workplace, the business case, gender barriers, and where women are today in the business culture. I examined the STEM&F industry when analyzing where women are today in the business culture.

Legal Aspect of Gender

Gender discrimination includes sexual harassment, salary difference, lack of opportunities for promotions, and a hostile workplace environment. In the global employment market, France, Italy, the Netherlands, Norway, and Belgium have mandatory gender-quota attainments ranging from 30–40% (Alstott, 2014). Women in the European Union report 40–50% of those employed have been openly discriminated against based on gender. In Canada, 3 in 10 employed stated that they have experienced gender discrimination (Alstott, 2014). Gender disparities remain across 167 global economies (Iqbal et al., 2018).

In the United States, gender is considered a protected class; therefore, no organization can openly discriminate against a person due to gender (Cavico & Mutjaba, 2017); however, that is not to say it does not happen. The United States provides legal protection under the Civil Rights Act of 1964, which now includes the LGBT community (Steiger & Henry, 2020) by a Supreme Court Ruling in 2020. Pregnancy is also included in the discrimination framework. The law requires strong proof of such discrimination beyond hearsay or accusations (Cavico & Mujtaba, 2017). The EEOC closely tracks gender rates in the workplace; however, this information is self-reported (EEOC, 2018). The EEOC also tracks discrimination cases based on gender. Over the past 10 years, the EEOC hoped the number of new cases of gender discrimination reported would decrease, as the United States increased its overall organizational spending in diversity initiatives. According to the EEOC (2018) and as reported by Feldblum and Lipnic (2016), this has not been the case. In 2010, the EEOC reported 12,695 new cases of discrimination were filed. There have been 12,600 cases reported annually over the past 10 years until 2018, where reported cases increased to 13,055. The female to male ratio on gender reporting is 85:15. The EEOC (2018) estimates that U.S. organizations with claims filed against them paid over \$56,600,000 in monetary benefits in 2018 alone.

One in four women will be discriminated against in the U.S workforce and most gender discrimination goes unreported (Feldblum & Lipnic, 2016). The costs of such filings can financially deprive an organization, as it may decrease consumer trust, decrease payable amounts to the employees, decrease retention, and decrease job satisfaction and performance (Does et al., 2018).

Iqbal et al. (2018) examined 167 economies across the globe and looked for legal disparities of gender in the workplace. Using the World Bank's Women, Business and the Law, Iqbal et al. created a ranking list of global economies based on gender equality. The study showed a clear correlation of a country's economic performance to the amount of legal gender disparities. The performance indicators included education, labor force participation rates, leadership and management advancement for women, female financial borrowing, and child mortality rates. They concluded that the larger the number of legal gender disparities, the poorer the performance indicators. This information aids in creating a solid argument for the business case of gender diversity (Iqbal et al., 2018).

The Business Case of Gender Diversity

Extensive research has been done in the last 5 years examining the business case of gender diversity in the workplace. The increased presence of women graduating college as well as in the job market helps drive this research. This research has been compiled based on outside industry experience rather than in the academic walls. The business case for gender diversity in the workplace falls into two categories: financial performance and soft skills.

Financial Performance

Lagerberg (2015) examined the financial performance of 1,050 organizations in the United States, United Kingdom, and India. The focus was to determine if gender diversity impacted the organization's financial statements. Lagerberg concluded that in the United States, the S&P top 500 organizations—those with gender diversity on boards and leadership—significantly outperformed organizations that were male only. The return

on investment was an increase of 1.9%. This was similar in India, as the CNX 200 found a .85% performance increase. The United Kingdom's impact was slightly lower with an increase of .53%.

Noland et al. (2016) analyzed 21,980 firms from 91 countries and concluded that gender diversity in leadership, boards, and C-suits improved the organization's financial bottom line. This improved performance is due to increased skill diversity attracting and retaining better talent. Organizations with at least 30% of female executives saw an increase in profits of over 6% (Noland et al., 2016). The Global Leadership Forecast (Development Dimensions International, 2018) analyzed gender demographic data from 2,400 organizations in 54 countries. They determined organizations that have at least 30% gender diversity company-wide and at least 20% gender diversity at the senior level significantly outperform those organizations that fall short. This improvement is found not only in profit margins but also in change management, leadership initiatives, and business sustainability (Development Dimensions International, 2018).

Phadion International (2018) conducted a survey focused on the business case of gender diversity. Phadion International surveyed 30 countries and found although 69% of those surveyed believed in a strong business case for gender diversity, 40% did not see a benefit. They also noted only 25% of those surveyed received any gender-diversity training. Seventy percent of respondents observed human-resource professionals focused on gender diversity as a people benefit rather than a business benefit and noted the need for gender-diversity training to focus on the business case as well as people. When

gender-diversity training is not inclusive of the business case, employees tend not to link this diversity with success and performance (Phadion International, 2018).

Soft Skills

Soft skills in the workplace include job satisfaction, retention of employees, communication, conflict management, decision making, interpersonal relationships, and skill-gap improvements. Gender diversity has been linked to decision making, group dynamic, conflict and problem solving, and global competitiveness skills (Ansari et al., 2016). The skill gap in technology also appears to be a benefit of gender diversity and inclusion, as different genders bring different perspectives in learning and application (McDonald, 2018). Gender diversity and problem solving are strongly linked due to the different perspectives men and women bring forth when handling conflict. Often, an organization uses performance as the measurement tool; however, this does not show the true picture (Madera, 2018; Orbach, 2017).

Job satisfaction and employee retention is a theme found in literature when referencing the business case of gender diversity. It appears there is not enough current research to make a clear determination. Nielsen and Madsen (2017) examined job satisfaction and job retention rates of 2,818 employees of 13 different occupations in the Danish public sector. They conducted a multivariate analysis of the relationships between gender diversity, job satisfaction, and turnover intentions. Nielsen and Madsen did not find a significant correlation between gender diversity and job satisfaction. The study revealed a weak correlation between gender diversity and retention; however, this

correlation could be due to employees' perceived organizational justice (Nielsen & Madsen, 2017).

Where Women Stand in U.S. Business

In 2014, 57.6% of all bachelor and higher degrees were awarded to women (Alstott, 2014). The numbers have remained the same in 2018. Deloitte's 2017 report on women in the boardroom showed only 15% of boardroom seats were filled with women (Deloitte, 2017). Catalyst reports that equality in leadership and the C-suite will not happen until 2060 because the rate is slow at a 3% growth annually (Human Resource Management International Digest, 2018). In the United States in 2016, 26% of senior roles were filled by women, yet 31% of business overall had no women in senior roles. In 2017, women represented only 16.9% of all Fortune 500 C-suites, with only 4.6% being CEOs (Phadion International, 2018). The gender diversity movement focus would like to increase this number to 20% by 2020 along with improve the number of women in senior leadership in the organizational structure (Wyman, 2016). According to The Gender Diversity Index, women were still below the 20% goal at 17.7% in 2018 (Phadion International, 2018).

Gender diversity is a global issue, as gender disparities in leadership and the C-suite are seen globally. Although businesses understand the financial gain of having women in the boardroom, they have yet to understand how to get them there. Women often face gender barriers that stop advancement in their fields.

Gender Barriers

There are several initiatives in place to increase gender diversity in the workplace; however, a substantial gap still exists for women in management, leadership, and the C-suite. Several barriers hold women back from advancing in the workplace outside of discrimination. These barriers include salary and advancement gaps and sexual harassment (Remington & Kitterlin-Lynch, 2018). The two themes in these barriers are the social construct of gender and organizational culture.

Social Construct of Gender

The role of gender in business is highly driven by international competitiveness of business as well as global trends changing how business is conducted (Alstott, 2014; Koveshnikov et al., 2019). Koveshnikov et al. (2019) examined 106 journal articles to determine how gender impacts multinational corporations. The social construct of gender in business became quite clear throughout the 106 articles, as the term “masculine” was equated to aggressive, competitive, assertive, risk-taking, and exploratory of growth opportunities. Koveshnikov et al. examined how scholars defined gender in business and concluded the definition of gender research often referred to gender-like characteristics rather than gender itself. Although scholars do use gender as a demographic and headcount, the social characteristic perspective may be a better means to understand this phenomenon. The breakdown of the study is as follows: of the 105 studied, N=38 compared and contrasted men and women, N=32 gender as a cultural macrovariable, N=22 gender as the control variable, and N=13 doing gender in international business.

Koveshnikov et al. concluded that the anatomical binary system is flawed in international studies and oversimplifies gender in business.

Gender inequality is a social problem (Sobering et al., 2014). Sobering et al. (2014) examined gender as a construct rather than a determined sex. The study determined that differences in gender from a business sense are still being determined. The issue is greater than male versus female, and inequality is a challenge to translate. This is a barrier because gender is measured in demographic data rather than competency, and can block advancements due to stigmatism, stereotypes, and biases in place (Sobering et al., 2014).

Organizational Culture

Kumar et al.'s (2018) study focused on gender differences and organizational climate variables in two Indian organizations. Kumar et al. analyzed the results of 545 participants from government utility and 8,853 participants from a private company. The organizational climate variables included clarity of goals, perceived equity, welfare measures, and outward focus of the organization. The study concluded that gender differences and organizational climate variables do rely on the organizational culture. A secondary finding determined the organizational culture may define equality and career advancements.

Women rank above men in advanced degrees yet struggle to advance in the organizational culture (Diehl & Dzubinski, 2016; Koveshnikov et al., 2019). Women are also marginalized and underrepresented in the technology and financial fields (Diehl & Dzubinski, 2016). Diehl and Dzubinski (2016) analyzed two qualitative studies focused

on gender barriers for advancement. Face-to-face interviews were conducted in both studies with participants totaling N=38. They uncovered 27 barriers which all relate to organizational culture. Those barriers include exclusion from informed networks, lack of support, sponsorship and mentoring, gender unconsciousness, discrimination, a male culture in the organization, organizational ambivalence, and unequal standards.

The organizational culture must become more inclusive of what each gender needs. From the female perspective, there must be more flexibility, mentorship, and sponsorship, with a pipeline for women to advance into board seats (Orbach, 2017). A gender-inclusive culture would provide workplace safety for women to take risks and develop the skills needed to advance.

There is mounting research around women, gender equality, and inclusion in organizations (Kossek et al., 2017). There must be a paradigm shift within municipal and city governments that pull women into the workplace rather than having them opt out. There is a need for training around gender bias and differences in the workplace (Kossek et al., 2017). Kossek et al. (2017) examined four factors for opting out of the STEM&F workforce: career preference, gender role bias, work-family, and national socioeconomic perspectives. Kossek et al. examined both the individual and organizational implications in all four factors. The study concluded that organizations must create an environment where organizational justice and inclusion is apparent, and where gender differences and workplace needs are factored into the organizational environment. These differences must be addressed to retain all employees (Kossek et al., 2017).

There are several dimensions an organization can provide to attract women. Evidence-based diversity training and research on transitioning the gap would prove useful. Workplace barriers for advancement must be identified and positively addressed. The foundation for gender inclusion includes fairness, talent, and support in the organization (Kossek et al., 2017).

Gender in the STEM&F Industry

The STEM&F industry has demonstrated a higher level of gender and sex discrimination and biases compared to other industries (Bier, 2017; Blumenstein & Bennett, 2018; Gilrane et al., 2019; Graham et al., 2017; Santhebennur, 2017; Saxena et al., 2019; Shein, 2018; Szala, 2018). According to the Bureau of Labor Statistics (2018), women in STEM in 2017 held the following percentages of the workforce; highly technological was less than 20%, engineering at 16.2%, mathematics and computers at 25.5%, and less than 16% of boards were made up of women. Santhebennur (2017) argues the financial industry is below STEM in gender discrepancies as women fill only 15% of executive seats, yet women represent over 55.7% of the financial workforce.

The U. S. Government Accountability Office (2015) reported that there has been no shift in gender management since 2007. This is widespread across of levels of management under the STEM&F industry. The potential results of this stagnation equate to women not advancing at a rate to reach goals established by the Gender Diversity Index. These data present an even louder business case for workplace diversity as the STEM&F arena is well behind the curve (García-Sánchez et al., 2017; Keune et al., 2019; Santhebennur, 2017; Shein, 2018; Szala, 2018).

The Boardroom

Harjoto et al. (2018) stated that one reason a gap in diversity amongst the financial industry exists is the prevalence of homogeneous boards. They examined 15,125 financial firms between 1998 and 2014. Harjoto et al. concluded task-oriented diversity attributes—including tenure and expertise—led to lower investment returns. This implies that boards diverse in gender, experience levels, and specialization are more effective in planning and overseeing corporate investments.

Wiley and Monllor-Tormos (2018) researched the line board gender diversity and firm performance. The study focused on STEM&F organizations from 2007 to 2013. The end goal was to determine the ratio of women to men needed to drive performance and ensure sound results. The results demonstrated a significant U-shaped relationship between the number of female directors and performance. The study revealed that at least 30% of women are needed on the organizational board to increase performance. This finding gives the STEM&F industry a number to strive for (Wiley & Monllor-Tormos, 2018).

Salary Gap

One area of differential proportions is the present salary gap found in the STEM&F industry. Men make more money than women, yet their roles, education, and responsibilities are the same (Holst & Kirsch, 2016). According to the Bureau of Labor Statistics (2018), men are making on average 20–31.2% more than women within the STEM&F field. Furthermore, reports in financial management reveal that men earn 27.2% more than their female counterparts. Genn (2019) points out that gap is smaller in

government and municipalities, however the gap is still 18% and may be misleading as not all data were reported.

Janssen et al.'s (2016) research demonstrated a strong relationship in organizational culture between discriminatory or negative attitudes toward gender equality and the range and size of gender pay gaps. Janssen et al. (2016) examined voting data from banking institutions that focused on equal rights addendums. Data were collected from the Swiss Earnings Structure Survey from 1994–1998. The voting data were analyzed using regression and descriptive data. A robust number of responses was gathered from 332,087 employees, with a demographic breakdown of 109,058 women and 223,029 men. A total of 1,277 firms with 4,457 establishments were included in the Earnings Structure Survey data collection. The data analysis revealed a regression of line that demonstrated that the gender pay gap was approximately 10% lower in companies where approximately 85.2% of voters approved of the equal rights amendment. Furthermore, R -squared = 0.440, indicating more than half of the discrepancy of gender pay gaps can be attributed to changes in voter approval rates.

The STEM&F industry is making strides to use workplace diversity to attract and retain talent. The STEM&F industry is behind in workplace diversity as the majority of employees are White men (Garcia-Diaz, 2017; Wiley & Monllor-Tormos, 2018). This has had a negative impact on both attracting and retaining women and other minorities in the industry. Currently, there is a push to attract demographic diversity due to the urgency of new research. Tucker and Jones (2019) used data provided by the EEOC to examine trends around diversity in the financial industry. The study revealed that the

industry was not only lacking in demographic diversity, but over 75% of financial-services CEOs had adopted a strategy to improve workplace diversity. These CEOs also believed that their adopted strategies had improved collaboration, innovation, reputation, and retention (Tucker & Jones, 2019).

Workplace diversity drives potential employees to join STEM&F organizations rather than discredit them (Saxena et al., 2019; Penn, 2019; Young, 2018). The need and business case for increased attraction and retention of women in the STEM&F industry is clear (Bier, 2017; García-Sánchez et al., 2017; Saxena et al., 2019; Szala, 2018), and inclusion is the recommended framework for achieving retention.

Robin et al. (2019) examined the public health landscape. They examined 399 local governmental health departments and evaluated the individual's perception on workplace environment, training, job satisfaction, and salary. Over a quarter of participants who noted that they were planning on leaving within the next year, excluding retirement, listed the following reasons: salary (46%, 95% CI: 42%–50%), lack of opportunities for advancement (40%, 95% CI: 38%–50%), and workplace environment (30%, 95% CI: 27%–32%). This workforce was composed of 89% women.

This has had a negative impact on both attracting and retaining women and other minorities in the industry. Currently, there is a push to attract demographic diversity due to the urgency of new research.

Summary

Chapter 2 provided a literature review of workplace diversity, the gaps in literature around diversity training, diversity-training theory, perceived organizational

justice, and the role of gender in the workplace. This chapter offered an examination, synthesis, and analysis of today's most recent peer-reviewed articles found in the Walden University Library. This chapter provided the theoretical framework for the diversity training proposed in Chapter 3. It also provides a strong rationale for the use of perceived organizational justice and the COJS as the measurement tool.

Chapter 3: Research Method

U.S. employers spent more than \$8,000,000,000 annually on diversity training, with little to no proof of the effectiveness of the provided training (Lipman, 2018). The empirical research failed to describe understanding of whether diversity training improves perceived organizational justice (e.g., Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Ehrke et al., 2014). Furthermore, a need persists for more research in specific industries, including STEM&F, with a large sample size to further demonstrate the business case for diversity training and define its impact outside the academic setting (Alhejji et al., 2016; Bezrukova et al., 2016; Enoksen, 2016; Saxena et al., 2019).

In this study, I explored the impact of gender-diversity training, built on diversity-training theory, on attitudes about perceived organizational justice. The site focus was within the STEM&F industry. Chapter 3 includes the rationale for the study, the study design, methodology, and threats to validity. In addition, this chapter includes information about how data were accrued and specific methods of analysis. The chapter also includes a justification for using the COJS (Colquitt & Zipay, 2015) measurement tool in this study.

Research Design and Rationale

Several quantitative empirical research studies described the impact of diversity training on organizations' organizational justice (e.g., Gompers & Kovvali, 2018; Harjoto et al., 2018; Kalinoski et al., 2013), inclusion (e.g., Dahanayake et al., 2018; Lazauskaitė-Zabielskė, 2017; Roczniowska et al., 2018; Saifi & Shahzad, 2017), and diversity-training

theory (e.g., Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018).

Throughout these studies, researchers noted a consistent set of limitations including small sample sizes, lack of evidence outside the academic setting, and lack of conclusive evidence that diversity-training theory impacts perceptions of organizational justice. In addition, research specifically failed to describe the application of diversity-training theory outside the academic setting and its impact on perceived organizational justice outcomes (Alhejji et al., 2016; Bezrukova et al., 2016; Enoksen, 2016; Fujimoto & Härtel, 2017; Fujimoto et al., 2013; Gebert et al., 2017).

In this study I used a traditional quasiexperimental research design with a baseline, posttraining, and 2-month follow-up to understand the effect of gender-diversity training and diversity-training theory on employees' perceptions of organizational justice. Because attrition is a risk in this research, I needed at least 84 participants to demonstrate a repeated mixed ANOVA with a sample size effect of .02.

I used the COJS to measure differences in perceived organizational justice between those individuals who received gender-diversity training (the intervention group) and those who did not (the control group). This scale measured the dependent variable of perceived organizational justice with secondary aggregate dependent variables of PJ, DJ, IPJ, and IFJ (Enoksen, 2015). The independent variable was a gender-diversity training workshop, titled Building Gender Inclusion. This training was created using empirical research on diversity-training theory through a systemic literature review compiled by Alhejji et al. (2016), Bezrukova et al. (2016), and Fujimoto and Härtel (2017). All three groups of authors compiled comprehensive data surrounding diversity-training theory and

its past applications in the academic and business settings, creating a solid diversity-training framework of best practices under the theoretical umbrella. Likewise, Lipman (2018) noted the need for current diversity training to focus on inclusive language rather than pointing out differences. Lipman also noted the need to take the word diversity out of the title to eliminate negative biases commonly found in diversity-training participants.

I collected the following demographic variables of gender, age, and ethnicity. I used this variable to disaggregate the data and analyze between-group differences in the dependent variable. Participants were randomly assigned to each group. Group A was the intervention group and attended the gender-diversity training in October. Group B was the control group and did not receive gender-diversity training during the research time frame. However, this group will receive the training at another time outside the research parameters.

This study addressed a gap in literature around diversity-training theory and perceived organizational justice while expanding empirical research with a larger sample size taking place outside the academic setting. This study had a large sample size ($n=205$) in a specific industry: STEM&F. This format is unique academically as well as in the field of organizational psychology. Currently, empirical evidence does not examine diversity-training theory, perceived organizational justice, and attitudinal shifts (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Enoksen, 2016; Ehrke et al., 2014; Fujimoto & Härtel, 2017). Study findings may help organizations provide future training that delivers results based on evidence.

Methodology

Population

The study population included employees in Manchester, New Hampshire with a dense population under STEM&F job roles, which fits Denison (year) model of organizational culture. In using the Denison model, prior organizational-justice biases were to be minimized (Denison et al., 2013). This model also helped minimize confounding variables that include diversity, hiring practices, and inclusion initiatives already in place. The Denison model was ideal due to the uniqueness of STEM&F and their counter-focus on the surrounding community.

Because the study design was quasiexperimental, participants volunteered to participate in the surveys and were randomly assigned via Excel into the group/training they attended. They were either placed in Group A, who took the training in the fall of 2020, or in Group B, who will not receive the training until the spring of 2021. Randomly assigning groups allowed equal opportunities for participants to participate in the intervention or control groups. Because this study explored a large participant pool ($n=462$), participants who self-selected to participate tended to follow through to the study's completion (see Lavrakas, 2008). This style of sampling also aligns with diversity-training theory of self-selection to attend diversity training called Building Gender Inclusion (Bezrukova et al., 2016; Fujimoto & Härtel, 2017).

Procedure for Participant Recruitment

The organization identified 562 employees based on the inclusion criteria to participate. The sampling frame included the following inclusion criteria for

participation: participants from all gender categories, any ethnic background, management or above, and who had a role/job description that was STEM&F-related. Participants were excluded based on the organizational exclusion criteria which stated participants must have been working for the company for 1 year and must have received at least a grade of 3 on their most recent performance appraisal. The employee's current manager completed performance appraisals in January 2019 and rated the employee's performance on a scale of 1–5. Invitations to participate were sent out to employees and employees self-selected to attend the take part in the surveys. Once they agreed to participate and had taken the baseline COJS, employees were randomly assigned into Group A or B through Qualtrics.

Due to COVID-19, employees partaking in this study remained offsite and the training was conducted on Zoom. Group A was the intervention group and attended the gender-diversity training in October 2020. Group B was the control group and did not receive the gender-diversity training during the study's time frame. They will, however, receive the training at another time outside the research parameters.

I requested participants' informed consent in the initial e-mail about the study. I assured all participants' responses are kept confidential; Qualtrics coded participants' e-mails with a unique identifier and the organization does not have access to that identification. The informed-consent page included a brief description and rationale for the study, confidentiality and anonymity statements, and an explanation of the process for collecting data. Potential participants were also notified that all data collected were destroyed once the analysis was complete. By agreeing to move forward with the baseline

COJS, participants provided their consent. The survey reminded participants of their informed consent each time the survey was sent out. This saved time and ensured ethical accountability for the data collected. Because I used three surveys (baseline, posttraining, and 2-months after the study's completion), participants could opt out of the study at any time by not moving forward with the next step. The data were systematically pulled by Qualtrics.

Sampling Procedures

The organization provided all e-mail addresses for both groups in an Excel spreadsheet 3 weeks prior to the training date. The spreadsheet was uploaded to Qualtrics, which assigned unique identifiers. In the event the organization added additional employees, the organization had agreed to send me those potential participants' e-mail addresses. There was no need for manual input of potential participants' data as there were no new participants once the Excel file was uploaded into Qualtrics. I sanitized all e-mail addresses and Excel files shared by the organization using Safewiper software once Qualtrics assigned the unique identifiers. Walden University's approval number for this study is 05-21-20 0547598.

Three weeks prior to the training, Qualtrics sent an invitation with the baseline COJS by e-mail to all employees listed in the Excel file. This e-mail gave a brief overview of the research, outlined how the information was to be gathered, and highlighted the duration and need to complete the three surveys (see Appendix E). Additionally, I presented the informed consent requesting participation in the study. I attached a link to the baseline COJS, a 20-question survey (see Appendix C). I

encouraged participants to participate at that time by taking the baseline COJS. Qualtrics was scheduled to resend this e-mail 2 weeks later. Participants volunteered to participate in this study once they completed the baseline COJS.

Participants were randomly assigned through Qualtrics to Group A or Group B once the baseline survey closed (at Week 2). Those assigned to Group A were notified of the upcoming training data. After the training, a second e-mail with the posttraining COJS was sent through Qualtrics to both groups. The unique identifier placed on their e-mail address then aligned participants with their baseline COJS. Again, informed consent was provided. The unique identifier helped ensure confidentiality, as neither I nor the organization knew how the employees responded.

At the 2-month marker, after the close of the posttraining survey, the final COJS was emailed to all participants. Informed consent was again provided and captured. Qualtrics aligned all data collected to the unique identifier and baseline COJS.

Data Collection

I collected data responses through a self-administered questionnaire through Qualtrics, e-mailed to all employees. Once an employee volunteered to participate, Qualtrics assigned a unique participant identifier based on their workplace e-mail address. Also, because participants had to respond to every COJS, Qualtrics tracked who had completed it and who had not, thereby saving time. Survey data accrued and Qualtrics downloaded the data in .sav format for SPSS. Survey questions were accompanied by key terms and definitions for clarification to ensure all participants answered the survey questions with the same understanding.

On the day of the training, participants assigned to Group A attended the training. Due to COVID-19, training was completed through Zoom. No comments were made regarding the assessment during the training. That evening a triggered e-mail from Qualtrics was sent to all participants (in Groups A and B) to take the posttraining COJS. Qualtrics continued to send reminder e-mails for the next 14 days to all those who had agreed to participate but had not yet completed the posttraining COJS. This format allowed me and the organization to remain outside of the study. Once participants took the posttraining COJS, they were placed as pending for the final COJS 2 months after participation in the training.

Two months after the close of the posttraining COJS, Qualtrics sent out e-mails to all participants who had completed the posttraining COJS in both groups, asking them to finish the research with the completion of the final COJS. I collected demographic data that included gender, age, and ethnicity. The sampling window again was 14 days, such that Qualtrics continued to remind those who had not completed the final COJS to do so. When the sample window closed, only those participants who completed all three COJS's were included in the analysis.

Data responses were collected through Qualtrics and saved to SPSS statistical software for analysis. To determine sample size to obtain a given effect size and power analysis, I used G*Power 3.1.2 with the standard p value of .05 and the power was set to .80 (see Cohen, 1988). Also, due to the potential for various effect sizes, I ran an analysis for a small (.2), moderate (.5), and large (.8) effect size. My goal was to determine how big an effect the intervention (diversity training) had. According to Cohen

(1988), the higher the effect size, the bigger the effect (and the larger the sample size). I ran additional power analyses separately for each statistical test, as the power was different for each one because each test used different inferences (see Table 1).

Table 1

Sample Size and Effect: G Power*

Test type	Effect size	Sample size needed
Correlation	.20 (small)	193
	.50 (moderate)	29
	.80 (large)	9
Repeated Mixed ANOVA	.20 (small)	84
	.50 (moderate)	18
	.80 (large)	10
ANCOVA	.20 (small)	199
	.50 (moderate)	34
	.80 (large)	16

Constructs Operationalization and Instrumentation

The instrument selected to measure potential attitude shifts in perceived organizational justice was the COJS. The COJS is a widely used survey instrument that examined all four dimensions of perceived organizational justice: DJ, IFJ, IPJ, and PJ. The COJS assessment has a history of demonstrated construct validity (Colquitt & Zipay, 2015; Dahanayake et al., 2018; Enoksen, 2015, 2016; Omar et al., 2018). The COJS, created by Colquitt & Zipay (2015), had 20 questions, and used a 5-point Likert-type scale in which anchors were 1 = To a Very Small Extent, 2 = To a Small Extent, 3 = To a Moderate Extent, 4 = To a Large Extent, and 5 = To a Very Large Extent. The COJS questions may be tailored to the organization or participants by inserting words in parentheses (Colquitt & Zipay, 2015; Enoksen, 2015). Inserting parentheses helped

participants read the question as it was intended and removed some survey ambiguity (see Colquitt & Zipay, 2015).

The rationale for using the COJS was based on its history of use in empirical research to measure perceived organizational justice in specific public industries (Dahanayake et al., 2018; Enoksen, 2016). This tool had been widely accepted as an assessment to measure each of the three and four dimensions of organizational justice in academic and business settings (Colquitt & Zipay, 2015). Enoksen (2016) used the COJS in Norway to measure perceived organizational justice in the public healthcare arena using the four-factor organizational justice scale. According to Enoksen (2015), the Cronbach's α , internal consistency for the four-factor model—the COJS—measured high but was in range to ensure no organizational-justice dimensional redundancy occurred. The organizational-justice dimensions ranged from .88 to .93 in Cronbach's α . Enoksen recognized the four-factor model attained an RMSEA of 0.08, which indicated a good fit for the use of the four-factor model over the previous three-factor models on the organizational-justice scale. Moreover, Enoksen demonstrated a 90% confidence interval ranging from 0.05 to 0.07 with the four-factor model. In a larger study of 500 participants, conducted by Maharee-Lawler et al. (2010), the researchers also used the COJS in a study with a large sample size and determined the α s = .78–.92. for the four-factor model. I received permission to use the COJS from Colquitt.

Repeated empirical research has demonstrated a stronger validity with the four-factor COJS model than the individual dimensions (Enoksen, 2015; Maharee-Lawler et al., 2010). The operational definition for the independent variable is training and is

manipulated by either the participant receiving gender-diversity training or not receiving this training. The gender-diversity training comprises instructional courses where the focus is on gender and the outcome aims to improve positive intergroup interactions and interpersonal relationships between men and women in the workplace, decrease gender discrimination, and improve participants' knowledge and motivation to interact with people of both genders. It should yield positive intergroup interactions, reduce prejudice and discrimination, and provide tools that help individuals work together effectively, thus raising personal awareness (Alhejji et al., 2016; Dahanayake et al., 2018; Lindsey et al., 2015; O'Brien et al., 2015; Pendry et al., 2007).

The gender-diversity training Group A received, titled Building Gender Inclusion, used a combination of aspects from the diversity-training theoretical framework. This combination has been researched and empirically proven to provide statistically significant positive outcomes on behavioral and attitudinal shifts; however, the research has been limited to small sample sizes in academic and business settings. Group A was exposed to gender-diversity training based on significant findings on diversity-training theory. According to Alhejji et al. (2016), Bezrukova et al. (2016), Buengeler et al. (2018), Fujimoto and Härtel (2017), and Kalinoski et al. (2013), those content parameters include organizational settings with integrated approaches and voluntary attendance. The design parameters based on significant findings on diversity-training theory included the focus to be inclusive, the duration to be long term, the type to be a combination of awareness and behavior, and the instruction method to be diverse (Bezrukova et al., 2016; Ehrke et al., 2014; Lipman, 2018).

The operational definitions for the dependent variable of perceived organizational justice were the perception one has for equality and fairness in the organization (Colquitt & Zipay, 2015). The secondary aggregate dependent variables, according to Colquitt and Zipay (2015), were PJ (the fairness of the procedure to an outcome), DJ (the fairness of decision outcomes such as pay), IPJ (the treatment an individual receives), and IFJ (the information provided to employees around how decisions are made).

Data Analysis

I downloaded and cleaned all responses from Qualtrics in a .sav form useful for SPSS software. Data from respondents who failed to complete all three surveys were excluded. Using SPSS, I computed descriptive statistics (frequency, percent, mean, standard deviation, and range) to examine the responses. I hypothesized that a significant difference would emerge between Groups A and B. I conducted a mixed ANOVA using posttraining scores as the covariate 2-month follow-up scores and *Chi Squared* to determine if a correlation emerged among the secondary aggregate dependent variables (Warner, 2013). The following research questions and hypotheses guided this study:

RQ1: Does completing gender-diversity training significantly change employees' baseline perceptions of organizational justice posttraining and 2 months later?

H₀: Completing gender-diversity training has no significant change on employees' baseline perceptions of organizational justice posttraining and 2 months later.

H₁: Completing gender-diversity training has a significant change on employees' baseline perceptions of organizational justice posttraining and 2 months later.

RQ2: Does completing gender-diversity training significantly change employees' perceptions of the organizational-justice subscales of PJ, DJ, IPJ, and IFJ?

H₀: Completing gender-diversity training has no significant change on employees' perceptions of the organizational-justice subscales of PJ, DJ, IPJ, and IFJ.

H₁: Completing gender-diversity training has a significant change on employees' perceptions of the organizational-justice subscales of PJ, DJ, IPJ, and IFJ.

Results were provided to the organization at the conclusion of the study in a white paper, explaining the data, prior to publication of the study. The organization has the option to share the results with their employees. This allows the organization to gain a better understanding of how their employees perceive their own organizational justice. It also allows the organization to take further steps in the future to create better training classes.

Threats to Validity

One threat to validity in this study was the unique workplace environment due to COVID-19. As participants were randomly assigned there was no continuum of the workplace environment. The outside media, risk of illness, and workplace seclusion may have hindered participants' motivation and acquiescent biases. This may have skewed

final COJS results in both groups based on participants' demographics. One way to manage this threat is to have a large sample size, which provides a robust sample size in each group. A large sample size is more likely to be diverse in gender, time, and level in the organization. From data collection and testing, the larger the sample size, the smaller the margin of error, and a more precise measure of the mean score for each group (Cohen, 1988).

A second possible threat to validity was the experimental mortality threat from subject attrition. The length of the study was 112 days. Due to the shorter study timeline, I expected a 5% attrition rate, particularly between the immediate postintervention assessment and the assessment at the 2-month postintervention mark (Dumville et al., 2006). If the attrition rate was above 20%, I risked experimental bias as participants with a prior bias may have been those who continued with the study, thereby providing a significant threat to internal validity (Dumville et al., 2006). To mitigate this threat, I used Qualtrics to track and remind participants to take the survey. I also conducted oversampling due to the mortality concern. According to Brueton et al. (2011), reminders 5 to 6 days postsurvey and only reminding those who have not taken the survey may improve retention rates. As part of informed consent, I provided a brief overview of the study with each survey, helping to keep participants motivated to complete the study, thereby driving down attrition rates (Brueton et al., 2011).

Prior to COVID-19, the social-conformity issue was a risk to data validity. Those in Group A may have been able to alter their workplace behaviors by mimicking those around them. The decision to conform their behaviors based on their peers' behaviors

may not provide lasting shifts in behavior and attitudes. Due to COVID-19, most employees were based at home rather than the office. I also hoped the duration of the study mitigated any behavior mimicking. Participants were randomly assigned, which helped reduce the social-conformity issue, as the posttraining and final COJS were completed by both groups.

Ethical Procedures

I adhered to all ethical standards in compliance with Walden University's Institutional Review Board (IRB). I provided a letter of cooperation for the organization's participation (see Appendix F) prior to IRB approval. This letter included an explanation of the research, details of participation, and whom the target participants were. It also explained how the data were to be collected through surveys. I emphasized the voluntary nature of participation and the organization's and participants' privacy. Letters of consent from the organization and informed consent were ongoing for all study participants.

Ethical consideration for all participants included informed-consent guidelines established by the Walden University IRB. I included an informed-consent form on every survey. As part of informed consent, all participants had the right to refuse a response to any survey questions with a selection of "prefer not to answer." Participants were also allowed to withdraw from the study at any given time by not taking the assessment or responding on the informed-consent page that they wished to no longer participate.

I took all necessary steps to ensure participants' privacy. Participants' identities were shielded from me and the organization. I did not have ongoing conversations with members of the organization during the study. Neither the organization nor I knew who

was participating. Through Qualtrics, I randomly assigned unique user-identification numbers based on participants' e-mail addresses for all data collection. This assigned user-identification number was for group-assignment and data-collection purposes. These identifiers were kept confidential as neither the organization nor I had access to this information. The unique identifier also protected all information collected on demographics to eliminate researcher bias and provided participant confidentiality. Additionally, Qualtrics uses disabling IP-address tracing to make the survey anonymous.

For data collection, Qualtrics enabled SSL encryption to protect all data, providing an addition layer of participant-confidentiality protection. All surveys were stored on the Qualtrics frame. According to Qualtrics' data-collection policy, the following are assured: data were stored/processed in a manner consistent with industry security standards. Qualtrics has appropriate technical, organizational, and administrative systems, policies, and procedures designed to ensure the security, integrity, and confidentiality all data collected (Qualtrics, 2018). Once the unique identifier was assigned to participants, their e-mail addresses were sanitized off my computer through Safewiper, an external data-erasing software. The identifiers, e-mail addresses, and data collected through Qualtrics were downloaded from Qualtrics onto a data card at the close of the study. I will retain the data on a data card in a locked safe for 5 years.

I have no conflict of interest with the organization. I have no monetary gain from this study and have not been promised any reward from the organization or participants for their participation in the study. Participants were voluntary with no rewards promised.

Employees who did not participate were not penalized, and the employers and I have no way to know which employees participated.

Summary

Chapter 3 discussed the research and analysis processes of this study. The goal of this study was to understand the impact gender-diversity training has on perceived organizational justice using diversity-training theory. The measurement tool was the COJS four-factor model, which evaluated PJ, DJ, IPJ, and IFJ. Participants in this quantitative quasiexperimental study were employees who were performers within the selected organization. The large sample size and industry focus provided important information on how best to deliver training that is unique to this study and fills a gap in the research.

In Chapter 4, I discuss the results of the study and draw conclusions from the findings. I processed the results through SPSS to help interpret the data. I also address and discuss the three research questions.

Chapter 4: Results

The purpose of this study was to explore the impact of gender-diversity training on attitudes about perceived organizational justice based on diversity-training theory. The literature gap noted empirical research failed to describe an understanding of whether diversity training improves perceived organizational justice (Alhejji et al., 2016; Bezrukova et al., 2016; Buengeler et al., 2018; Ehrke et al., 2014). Furthermore, a need persists for more research in specific industries with a large sample size (for example, STEM&F) to further demonstrate the business case for diversity training and define its impact outside the academic setting (Alhejji et al., 2016; Bezrukova et al., 2016; Enoksen, 2016; Saxena et al., 2019).

Following IRB approval, data collection occurred over 112 days. The baseline COJS was launched on Day 1 and the final COJS on Day 112. This chapter summarizes the results from data collection and recruitment, response rates, and demographic and descriptive characteristics are provided for COJS overall and the four subscales. Finally, I include a summary to answer the research questions based on the results.

Intervention Fidelity

According to Gearing et al. (2011), intervention fidelity includes the following aspects: intervention design, training of providers, intervention delivery, receipt of intervention, and enactment of skills gained from intervention. Due to COVID-19 and the changes to the workplace in 2020 and 2021, it is worth noting intervention fidelity and commenting on where it may have been compromised. Intervention design remained intact as the diversity training program framework was not compromised. The trainer was

a certified professional trainer through the American Management Association. The measurement tool, COJS, also remained the same.

The intervention delivery did change as the intervention was created to be delivered face to face. However, with COVID-19, this training had to be done virtually. Also, the employees were working from home or masked and spaced 6 feet apart within the workplace. The majority of employees (83%) were working from home during the study. This information was not part of the demographics embedded in the COJS; however, it was gathered through a Zoom quick poll. This may also impact the receipt of intervention as there were constraints around Zoom's capability with each employee as it was difficult to assess nonverbal cues during the training. All employees had to have their cameras on during the training.

The enactment of skills gained for the intervention were not measured with the COJS. However, participants could ask questions during the Zoom training as well as email follow-up questions to the trainer. Management and leadership were not able to report any observations within the organization due to the stay-at-home orders in place because of COVID-19.

Sample Description

There were 567 participants eligible for this study, as provided by human resources; 103 were ineligible due to inclusion criteria of job role outside of STEM&F, resulting in 464 eligible participants. The summary of eligible contacts included 464 employees who received the invitation to participate, with 14% having an invalid email address, thus they were not included. A total of 237 participants agreed to participate in

the study at baseline, however 13.63% fell out of the study due to not completing either the posttraining or final COJS. The final sample size was $N = 205$. The distribution of groups are as follows, Groups A the intervention group, $N= 104$ and B the control group, $N= 101$. Participants were able to cease their participation at any time by not completing a survey.

Data Collection

The study site was an organization in Manchester, New Hampshire. A total of 464 potential participants were identified through the human-resources department within the inclusion/exclusion data. Three weeks before the training date, an introduction letter (see Appendix E) with the baseline COJS was emailed through Qualtrics asking for volunteers to participate. A total of 237 employees agreed to take part in the study and were randomly assigned to Group A (the intervention group) or Group B (the control group) through Qualtrics. A total of 205 completed all three COJS: Group A ($N = 104$) and Group B ($N = 101$). To increase response rates, I followed Dillman et al.'s (2009) recommendations for mixed ANOVA emailed survey responses.

The baseline COJS with the introduction letter and informed consent form was sent to all 464 employees on Day 1. Once the employee agreed to participate in the study, they completed the baseline COJS. The baseline survey closed on Day 14. No other participants could sign up to participate in this research. Qualtrics then randomized those who completed the baseline survey at Week 2 (Day 14) into Group A or Group B. Group A was then notified on Day 14 of the upcoming training date. The training occurred the morning of Day 24 and the posttraining COJS was sent to participants that afternoon. The

survey provided instructions to participants who were interested in continuing the study to click the link and begin their review of the consent form. Two days later (Day 26), an additional request to complete the survey was sent to those who had not yet completed the posttraining COJS. Five days later (Day 31) a second request to complete the survey was sent to those who had not yet completed posttraining COJS. Seven days later (Day 38), a final reminder as well as a thank you was sent to those who had completed the posttraining COJS. Two months later (Day 98), the final COJS was emailed with informed consent. The process was then repeated for the next 2 weeks, through Day 112, for the final COJS.

Demographics

Of the 205 participants, 122 (59.5%) were males, 80 (39%) were females, and three participants (.01%) listed themselves as nonbinary or refused to answer. Ethnicity was described as White, Black, American Indian, and Asian. The largest proportion was White with 188 participants (91.7%), and the age grouping of 56–79 represented 52.4% of the participant population. There appeared to be equal distribution of demographics between the two groups. A chi-square test of independence was performed to examine the relation between gender and the two groups ($\chi^2(3, 206) = 6.601, p = .01$; see Table 2).

Table 2*Descriptive Statistics*

Variable	<i>Intervention Group</i> <i>N=104</i>	<i>%</i>	<i>Control Group</i> <i>N=101</i>	<i>%</i>	<i>Pearson Chi-Square</i> <i>Sig</i>	<i>Totals</i>
Gender					.086	
Female	46	44.20%	34	33.66%		80
Male	56	53.84%	66	65.34%		122
Non-Binary	2	1.90%	0	.00%		2
Unknown	0	.00%	1	.19%		1
Ethnicity					.572	
White	93	89.42%	95	94.05%		188
Black	4	3.84%	4	.39%		8
American Indian	6	5.76%	3	.29%		9
Asian	1	.96%	0	.00%		1
Age					.291	
25-35	3	2.88%	3	.29%		6
36-55	52	50%	40	39.60%		92
56-74	49	47.11%	59	58.41%		108

Distribution of Data

Before running the mixed ANOVA, I tested the overall COJS as well as each subscale for normality by group ($p > .05$). The data were normally distributed, as assessed by Shapiro-Wilk's test of normality ($p > .05$). There was homogeneity of variances ($p > .05$) and covariances ($p > .001$), as assessed by Levene's test of homogeneity of variances and Box's M test, respectively. Mauchly's test of sphericity indicated that the assumption of sphericity was met for the two-way interaction. However, the distribution showed significant kurtosis (see Table 3). There were several outliers found in the outcome and all subscale final COJS results. Before deleting these outliers, I ran a square and log transformation on the variables; however, it did not correct the kurtosis. In

reviewing the responses to the outliers, the outliers appeared to show acquiescence bias. I allowed for the mixed ANOVA to correct the outliers due to the small sample size.

Table 3*Distribution Statistics for Subscales and Overall Scale*

	Group	Mean	SD	Skewness	SE	Kurtosis	SE
Baseline COJS	Intervention Group	3.44	.94	-.466	.23	-.167	.469
	Control Group	3.4696	.90504	-.284	.24	-.220	.476
Post Tng COJS	Intervention Group	3.5555	.92457	-.535	.23	.066	.469
	Control Group	3.3531	.83949	-.503	.24	.230	.476
Final COJS	Intervention Group	2.8612	.77175	-.161	.23	.906	.469
	Control Group	3.4761	.85794	-.033	.24	-.883	.476
Baseline Distributive Justice	Intervention Group	3.1803	1.0677	-.204	.23	-.884	.469
	Control Group	3.1312	1.0814	-.276	.24	-.697	.476
Post Tng Distributive Justice	Intervention Group	3.2212	1.0962	-.288	.23	-.597	.469
	Control Group	3.0842	1.0321	-.337	.24	-.849	.476
Final Distributive Justice	Intervention Group	2.4351	.78285	.166	.23	-.053	.469
	Control Group	3.2129	1.1414	-.177	.24	-.648	.476
Baseline Interpersonal Justice	Intervention Group	4.0361	1.0614	-1.301	.23	1.223	.469
	Control Group	4.0495	.98807	-.965	.24	.389	.476
Post Tng Interpersonal Justice	Intervention Group	4.0601	.92267	-1.139	.23	1.657	.469
	Control Group	3.9554	1.0008	-1.082	.24	.886	.476
Final Interpersonal Justice	Intervention Group	3.4731	1.0568	-.745	.23	.135	.469
	Control Group	3.9069	.99421	-.989	.24	.533	.476

	Group	Mean	SD	Skewness	SE	Kurtosis	SE
Baseline Procedural Justice	Intervention Group	3.1577	1.0960	-.233	.237	-.817	.469
	Control Group	3.3089	1.0908	-.293	.240	-.689	.476
Post Tng Procedural Justice	Intervention Group	3.3519	1.0956	-.337	.237	-.803	.469
	Control Group	3.0634	1.0201	-.228	.240	-.701	.476
Final Procedural Justice	Intervention Group	2.5558	.84254	.182	.237	.354	.469
	Control Group	3.2277	.91958	-.062	.240	-.812	.476
Baseline Informational Justice	Intervention Group	3.4111	1.1766	-.361	.237	-.906	.469
	Control Group	3.3886	1.1897	-.259	.240	-.820	.476
Post Tng Informational Justice	Intervention Group	3.5889	1.1125	-.618	.237	-.420	.469
	Control Group	3.3094	1.1029	-.320	.240	-.676	.476
Final Informative Justice	Intervention Group	2.9808	1.1270	.506	.237	-.375	.469
	Control Group	3.5569	1.0570	-.469	.240	-.474	.476

Research Question 1

RQ1: Does completing gender-diversity training significantly change employees' baseline perceptions of organizational justice posttraining and 2 months later?

*H*₁: Completing gender-diversity training changes employees' perceptions of organizational justice posttraining and 2 months later.

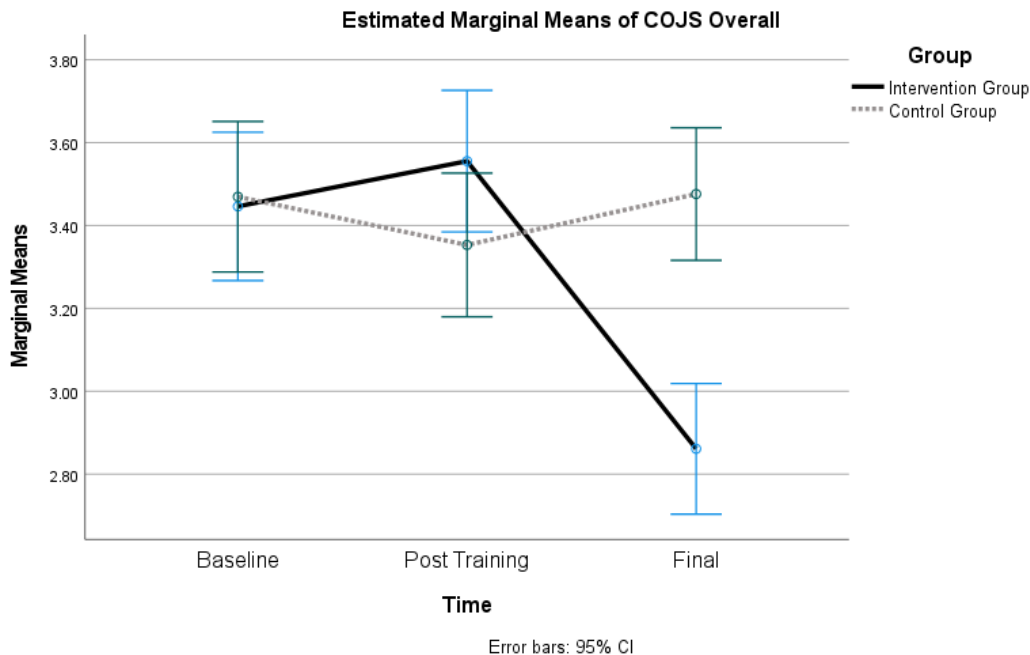
A mixed ANOVA was run to test for mean differences in COJS baseline, posttraining, and final scores by intervention and control group (see Table 3). There was a statistically significant interaction within intervention between time and groups

($F(2,406) = 12.247, p < .01, \text{partial } \eta^2 = .057$), and a statistically significant interaction between the intervention and time on overall COJS score ($F(2,406) = 7.57, p < .01, \text{partial } \eta^2 = .036$). The main effect of group showed a statistically significant difference in mean overall COJS score between intervention groups ($F(1,203) = 3.99, p < .01, \text{partial } \eta^2 = .019$). Data are mean \pm standard error, unless otherwise stated. The intervention group, overall COJS, was not statistically significantly different between baseline COJS and posttraining scores ($0.10, \pm 0.12 \text{ score}, p = 1.0$); however, COJS final scores were statistically significantly reduced compared to posttraining scores ($.694, \pm 0.12 \text{ score}, p < .001$; see Table 4).

Table 4

Pairwise Comparison for Overall COJS Scores

IDVGroup	(I) Time	(J) Time	Mean Difference (I-J)	Std. Error	Sib. ^b
Intervention Group	1	2	-.109	.120	1.000
		3	.585*	.122	.000
	2	1	.109	.120	1.000
		3	.694*	.117	.000
	3	1	-.585*	.122	.000
		2	-.694*	.117	.000
Control Group	1	2	.116	.122	1.000
		3	-.007	.124	1.000
	2	1	-.116	.122	1.000
		3	-.123	.119	.903
	3	1	.007	.124	1.000
		2	.123	.119	.903

Figure 1*Graph of the Interaction Between Group and Time***Research Question 2**

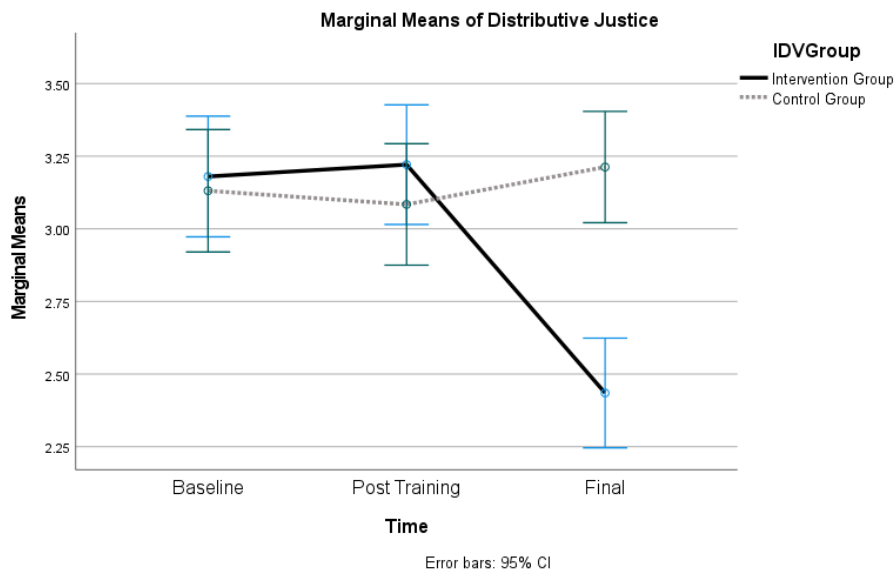
RQ2: Does completing gender-diversity training significantly change employees' perceptions of the organizational-justice subscales of PJ, DJ, IPJ, and IFJ?

H₁: Completing gender-diversity training changes employees' perceptions of the organizational-justice subscales of PJ, DJ, IPJ, and IFJ.

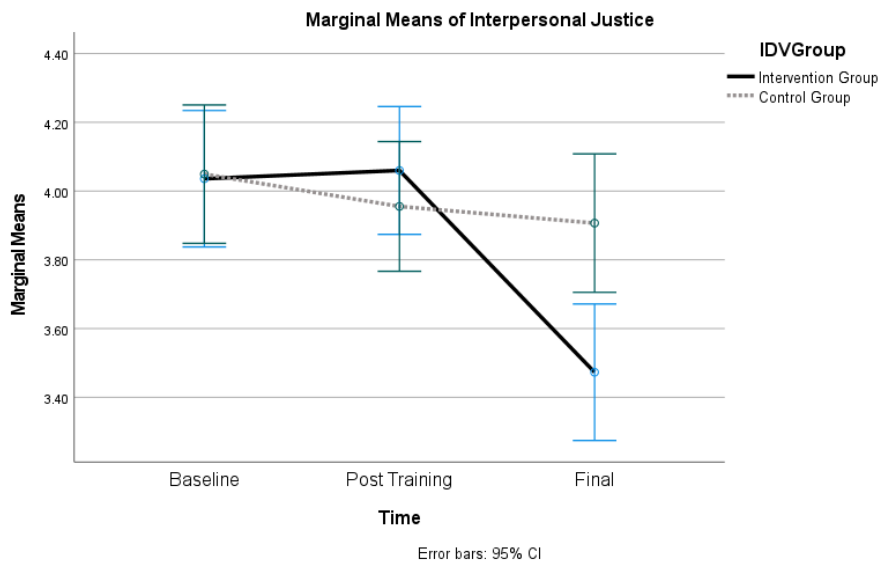
A mixed ANOVA was run to test for mean differences in COJS baseline, posttraining, and final scores by intervention and control group (see Table 3). The data were normally distributed for all subscales, as assessed by Shapiro-Wilk's test of normality ($p > .05$). There was homogeneity of variances ($p > .05$) and covariances ($p > .001$), as assessed by Levene's test of homogeneity of variances and Box's M test,

respectively. Mauchly's test of sphericity indicated that the assumption of sphericity was met for the two-way interaction ($p > .01$).

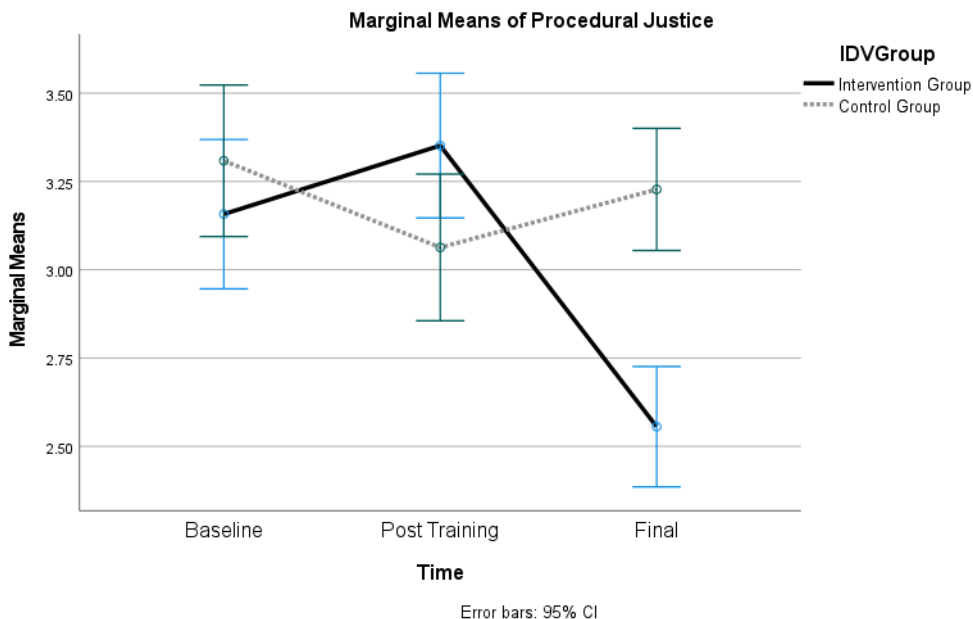
DJ. There was a statistically significant interaction within intervention between time and groups ($F(2,406) = 11.97$, $p < .01$, partial $\eta^2 = .056$), and a statistically significant interaction between the intervention and time on DJ score ($F(2,406) = 6.837$, $p < .01$, partial $\eta^2 = .033$). The main effect of group showed that there was a statistically significant difference in mean DJ score between intervention groups ($F(1,203) = 5.62$, $p < .01$, partial $\eta^2 = .027$). Data are mean \pm standard error, unless otherwise stated. For the intervention group, DJ was not statistically significantly different between baseline and posttraining scores (-0.41 , ± 0.15 score, $p = 1.0$; see Figure 2); however, final scores were statistically significantly reduced compared to posttraining scores ($.786$, ± 0.16 score, $p < .001$).

Figure 2*Marginal Means for DJ*

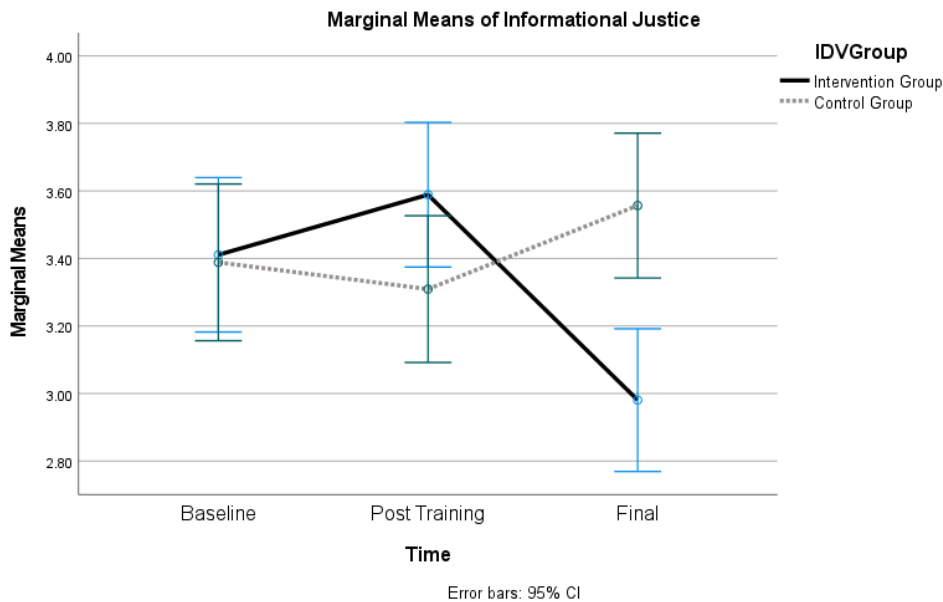
IPJ. There was not a statistically significant interaction within intervention between time and groups ($F(2,406) = 4.17, p = .019, \text{partial } \eta^2 = .020$); however, there was a statistically significant interaction between the intervention and time on IPJ score ($F(2,406) = 7.86, p < .01, \text{partial } \eta^2 = .037$). The main effect of group showed that there was not a statistically significant difference in mean IPJ score between intervention groups ($F(1,203) = 1.88, p = .171, \text{partial } \eta^2 = .009$). Data are mean \pm standard error, unless otherwise stated. The intervention group, IPJ, was not statistically significantly different between baseline and posttraining scores ($-0.24, \pm 0.13$ score, $p = 1.0$; see Figure 3); however, final scores were statistically significantly reduced compared to posttraining scores ($.587, \pm 0.14$ score, $p < .001$).

Figure 3*Marginal Means for IPJ*

PJ. There was a statistically significant interaction within intervention between time and groups ($F(2,406) = 11.57, p < .01, \text{partial } \eta^2 = .054$), and a statistically significant interaction between the intervention and time on PJ score ($F(2,406) = 7.248, p < .01, \text{partial } \eta^2 = .034$). The main effect of group showed that there was not a statistically significant difference in mean PJ score between intervention groups ($F(1,203) = 1.88, p = .171, \text{partial } \eta^2 = .009$). Data are mean \pm standard error, unless otherwise stated. The intervention group, PJ, was not statistically significantly different between baseline and posttraining scores ($-0.19, \pm 0.16$ score, $p = .551$); however, final scores were statistically significantly reduced compared to posttraining scores ($.796, \pm 0.14$ score, $p < .001$).

Figure 4*Marginal Means for PJ*

IFJ. There was a statistically significant interaction within intervention between time and groups ($F(2,406) = 11.57, p < .01, \text{partial } \eta^2 = .039$); however, there was no statistically significant interaction between the intervention and time on IFJ score ($F(2,406) = 1.47, p = .23, \text{partial } \eta^2 = .007$). The main effect of group showed that there was not a statistically significant difference in mean IFJ score between intervention groups ($F(1,203) = .912, p = .341, \text{partial } \eta^2 = .004$). Data are mean \pm standard error, unless otherwise stated. The intervention group, IFJ, was not statistically significantly different between baseline and posttraining scores ($-0.18, \pm 0.16$ score, $p = .765$); however, final scores were statistically significantly reduced compared to posttraining scores ($.608, \pm 0.15$ score, $p < .001$).

Figure 5*Comparison of Subscale Means***Summary**

In Chapter 4, I examined the research data. The alternative hypothesis was accepted for both research questions as the data demonstrated a statically significant change to the intervention group on the final COJS. There was a statistically significant interaction within intervention between time and groups and time for overall COJS. Furthermore, while COJS scores were not statistically significantly different between baseline and posttraining COJS, it does show a statistically significantly reduction of final COJS scores compared to posttraining scores for the intervention group.

Results somewhat varied for the COJS subscales; however, there was a statistically significant interaction either between or within intervention group. The intervention group for DJ, IPJ, PJ, and IFJ was not found to be statistically significantly

different between baseline and posttraining. However, again, the final scores were statistically significantly reduced compared to posttraining scores.

Chapter 5 discusses the findings of this study compared to the literature review and current research. The findings, limitations, recommendations, and social change impact are also reviewed.

Chapter 5: Discussion, Conclusions, and Recommendations

Organizational diversity and inclusion have been shown to improve retention, job satisfaction, performance, and organizational justice. The approach to improve organizational diversity and inclusion falls to diversity training within organizations (Alhejji et al., 2016). Yet, according to Lipman, (2018), the U.S. organizations spent a combined average of \$8 billion annually on diversity training with little data supporting that it indeed improves workplace diversity.

In the literature review, current research on diversity training has not provided strong correlations between the application of diversity training and shifts in negative behaviors and attitudes (Alhejji et al., 2016; Bezrukova et al., 2016). Also noted with diversity training was the risk of negative behaviors and attitudes including harassment, space segregation, equality, unconscious avoidance, metastereotypes, and the perception of unjust organizational rules and structure (Alhejji et al., 2016; Gilrane et al., 2019). Furthermore, diversity trainings often do more harm than good, in large part due to poor content and design (Lipman, 2018; Moss-Racusin et al., 2018). In the end, diversity trainings may have created barriers to inclusion, in part because of biased content that does not recognize individual differences and needs (Kalinowski et al., 2013; Lipman, 2018; Noon, 2018).

This research study set out to explore a gap in research regarding whether diversity training, created by using diversity-training theory (see Appendix A), impacted attitudes and beliefs around diversity (Alhejji et al., 2016; Bezrukova et al., 2016; Fujimoto & Härtel, 2017). Several theoretical approaches must be explored, including

organizational justice and its link to diversity-training outcomes, a need for industry-specific applications, aspects of diversity training including content and design, and implications and industry-specific shifts in behavior based on diversity-training-theory application (Gompers & Kovvali, 2018; Harjoto et al., 2018; Hayes, 2017; Lee et al., 2017; Rasool et al., 2018; Schneid et al., 2015). Furthermore, the measurement tool was the COJS, which measures workplace equity/justice beliefs.

This study was set outside the academic setting and had a large sample size and effect. Prior to this study, there was a gap in literature and research completed outside the academic setting with a large effect size. This chapter examines the findings, limitations, recommendations, and implications of the completed research.

Interpretation of the Findings

The purpose of this research was to first examine diversity-training theory in application and determine if there was a significant change on employees perceived organizational justice; and second, the study addressed the impact of gender-diversity training outside the academic setting. The study method was designed to explore diversity-training theory and the changes in COJS overall and subscale scores comparing the baseline, posttraining, and 2-month follow-up scores. The overall findings for both research questions support the arguments of Alhejji et al. (2016), Bezrukova et al. (2016), and Fujimoto and Härtel (2017) on diversity training, who stated diversity training does not change attitudes and beliefs on equity and diversity. Diversity training should be viewed as a learning tool. Fujimoto and Härtel provided the framework for diversity-

training theory, and the overall results demonstrate a change in COJS scores when diversity-training theory is applied.

Research Question 1 asked *Does completing gender-diversity training significantly change employees' baseline perceptions of organizational justice posttraining and 2 months later?* The alternative hypothesis was accepted: there was a significant change from baseline to final COJS scores (2 months later; $p = 0.0005$); however, there was not a significant change from the baseline to posttraining COJS. The mean difference from the baseline COJS to posttraining COJS = .041. The significant change was found in the difference between the posttraining COJS to final COJS, and the mean difference = .786.

The data demonstrated a slight increase posttraining for the intervention group, yet the final COJS determined the difference was a significant decrease in overall COJS scores. This resulted in a decrease of perceived organizational justice 2 months after diversity training. Those results were expected as one goal of diversity training is to improve knowledge; therefore, the employees' perceptions of equity changed based on definitions (Dahanayake et al., 2018). Chang et al. (2019) highlighted the potential of decreased results due to an uptake in knowledge. They suggested there is a need for more than one-off training to see a shift in attitudes. Jordan et al. (2019) noted unconscious biases, past experiences, and justice expectations may often skew diversity training survey results when perceived organizational justice is measured.

Research Question 2 asked *Does completing gender-diversity training significantly change employees' perceptions of the organizational-justice subscales of PJ,*

DJ, IPJ, and IFJ? There was not a significant change from baseline to posttraining COJS in any of the subscales. However, there was a significant change in employees' perception of the organizational justice from posttraining to final ($p=0.0005$) found for all four subscales. The data indicated a decrease in subscale scores for all, however DJ and PJ have the largest decrease in scores. The decrease in the overall scores could be explained by participants learning about perceived organizational justice and equity (Graham et al., 2017).

Diversity-training theory in application leads to the instruction of diversity courses where the focus is on the following: (a) improving positive intergroup interactions and interpersonal relationships, (b) decreasing discrimination, and (c) improving participants' knowledge and motivation to interact with diverse others (Alhejji et al., 2016; Dahanayake et al., 2018; O'Brien et al., 2015; Pendry et al., 2007). The diversity training provided in this study, following diversity-training theory, was applied in an online environment. Chang et al. (2019) discussed the difficulty of the online training environment, however demonstrated positive survey results. This contradicts what this research demonstrated. Furthermore, the results of this study reinforce the present focus and goals of diversity-training theory. A positive shift in attitudes was not noted; however, the study suggests that is due in part to a new learned foundation of equity and diversity.

Limitations of the Study

The COJS is the online questionnaire used to gather responses from all participants in the study. Although the COJS provides responses from employees, it did

not allow face-to-face or exploratory interviews. The rationale for using an online survey was to allow participants to respond to the study questions in a short period of time.

A second limitation was COVID-19 and its timeline. There was no face-to-face interaction between me and the organization, including workplace interactions. Furthermore, employees had limited contact with each other over the past 12 months due to COVID-19 contact restrictions. This may have shifted employees' perspectives regarding leadership and management regarding organizational justice as employees have been out of the workplace since March 2020. There is an increase of autonomy and a decrease in supervision and promotions currently, employees are working from home.

Sampling was the fourth limitation to this study. Participants voluntarily self-selected; therefore, sampling bias may have been present. Participants who self-selected may have had an interest in the issue or topic and brought forth their own personal biases. Participants who had at least 1 year of employment in the city organization, had a job classification in STEM&F, and received a positive employee evaluation in the past year were included. This information was validated through the city's human-resources department.

Recommendations

Diversity-training theory in application aims to achieve the following: (a) improved positive intergroup interactions and interpersonal relationships, (b) decreased discrimination, and (c) improved knowledge and motivation of participants to interact with diverse others (Alhejji et al., 2016; Dahanayake et al., 2018; O'Brien et al., 2015; Pendry et al., 2007). The goal of diversity trainings is to improve knowledge rather than

improve diversity. This study demonstrated a knowledge gain by the decrease of COJS scores.

Further research is needed around each of the theoretical-based moderators for diversity-training theory. These moderators include composition of training and context (approach, setting, duration), design (attendance, focus, type, instruction), group selection (trainee characteristics), and evaluations (Bezrukova et al., 2016; Fujimoto & Härtel, 2017). Furthermore, additional research is needed to examine the role of retention materials within diversity training. Rohrer (2020) focused on the materials used in training, including retention materials, to drive the message long term; however, there appears to be a gap in the literature around retention materials and diversity training.

Throughout the literature review the risk of harm to the workplace specific diversity-training topics should be examined to measure the overall knowledge impact and perceptions of employees. One popular topic is unconscious-bias training. Research has shown this themed training has yet to demonstrate positive effects within the workplace (see Karlsen & Scott, 2019; Noon, 2018). To date, the data collected show diminished results on employees often due to the lack of theory and reinforcement of biases in the training materials (Moss-Racusin et al., 2018; Noon, 2018).

The final recommendation is to examine diversity training and its overall impact on inclusion through organizational justice as it relates to organizational culture. Brown (2018) argued training is more for organizational culture and inclusion than improving diversity. In addition, inclusion platforms are now encompassing diversity training as part of its framework.

Implications

One unique attribute of this quantitative study was its focus on STEM&F employees where there is evidence of gender disparities (Amirkhanyan et al., 2019; Cooper & Gerlach, 2019; Gilrane et al., 2019; Robin et al., 2019; Saxena et al., 2019). Organizations and human-resource managers will likely benefit from this study as it demonstrates a shift in knowledge rather than attitudes, which aligns with the goals of diversity training. Furthermore, in utilizing the diversity-training-theory framework provided by Fujimoto and Härtel (2017) in this study, organizations, trainers, and human-resources departments now have a training framework with proven results.

The second value falls to the quantitative data on diversity training, which demonstrated diversity training is a learning tool rather than a driver of attitude shifts in equity. This research aligns prior researcher where diversity training is utilized and what the business outcomes should look like. At the organizational level, this study is applicable to leadership, management, and human-resources and training departments.

The third value is the community engagement. When organizations are diverse and there is an understanding of diversity, the community heterogeneity and engagement rate significantly increases (Schultz et al., 2019; Woodson, 2020). A community engaged with the organization and its workforce tends to demonstrate a positive cohesion (Young, 2019). Young goes on to demonstrate that this cohesion improves the recruitment of diverse candidates within the organization.

Finally, this study provides an understanding of how gender-diversity training impacts organizational justice. As there was a decrease in COJS posttraining scores, one

could argue we must create a training that focuses on the language of diversity. This information helps organizations use such trainings to mitigate barriers to gender diversity, thus achieving a gender-inclusive organizational atmosphere that may increase job satisfaction and organizational health (Bezrukova et al., 2016). Additional findings provide a secondary benefit of enhanced equality, fairness, and improved ethical decision-making skills for participants. The gender-diversity issue is quite timely as the STEM&F industry is aggressively seeking the best means to improve gender inclusion in the workplace through gender-diversity training (Amirkhanyan et al., 2019; Cooper & Gerlach, 2019; Robin et al., 2019; Saxena et al., 2019; Wiley & Monllor-Tormos, 2018; Valenzuela, 2017; Young, 2019). This study further reinforces the diversity-training goals of a) improving positive intergroup interactions and interpersonal relationships, b) decreasing discrimination, and c) improving participants' knowledge and motivation to interact with diverse others, which aligns with improving workplace inclusion.

Significance to Social Change

The social-change implication of this study is four-fold. The first implication is that this study provides insights on how diversity-training theory applies to perceived organizational justice. Additionally, this study demonstrated how each of the four subscales of organizational justice were impacted, with PJ having the largest decrease in overall score. An organization may apply this knowledge to its workforce, specifically to areas that may lack equity. The outcomes of this study will assist human-resource management and training departments with a platform on diversity-training theory and how to implement diversity training.

Second, this study draws attention to diversity training and inclusion.

Organizations understand the need for inclusion; however, organizations are unclear how to attain inclusion (Lipman, 2018; Noon, 2018). This study provides another tool for organizations to assist in creating an inclusive workplace. Organizations may be able to shift their focus from diversity training as the means to improve inclusion and focus on new initiatives under examination.

Third, there is a need for new measurement tools in the inclusion space (Amirkhanyan et al., 2019; Cooper & Gerlach, 2019). Organizational behaviorists, human-resource managers, and training teams are continuously searching for effective measurements to justify the return on investment for training. The COJS provided insight as a measurement tool for workplace equity in this study.

Finally, this study, although focused on STEM&F and gender, helps other industries understand how diversity training impacts organizational justice. This study provides a blueprint for diversity-training programs in other industries.

Conclusion

Diversity training is a timely topic given the current atmosphere. To date, the STEM&F industry has demonstrated a higher level of gender and sex discrimination and biases compared to other industries (Bier, 2017; Blumenstein & Bennett, 2018; Gilrane et al., 2019). In addition, according to the Bureau of Labor Statistics (2018), less than 20% of the STEM workforce are women. Yet, the role of gender in business is highly driven by international competitiveness of business as well as global trends changing how business is conducted (Koveshnikov et al., 2019). While women rank above men in

advanced degrees they struggle to advance in the organizational culture (Diehl & Dzubinski, 2016; Koveshnikov et al., 2019). Women are also marginalized and underrepresented in the STEM& F industry according to the work done by Diehl & Dzubinski, 2016. The descriptive statistics (see Table 2) are an example of what the industry has noted. There is a gap in the male to female ratio within the study site, and this site focused on management. More research would be needed to see how this gap increases or decreases on leadership advancement.

Koveshnikov et al. notes a barrier for gender advancement is the anatomical binary system is flawed and oversimplifies gender in business and the organizational construct struggles to adapt. Furthermore, significant barrier within STEM&F strongly include a male culture in the organization, organizational ambivalence, and unequal standards or lack of organizational justice (Diehl & Dzubinski, 2016). Omar et al., 2018 argued in their research the need for diversity training to utilize organizational justice as a measurement of learning to lessen the diversity barriers. Organizations are focused on diversity training to drive diversity, in hopes to shift attitudes and beliefs on diversity and equity; however, research has shown that it may do more harm than good and is not the role of diversity training (Alhejji et al., 2016; Gilrane et al., 2019). While this research did not look at the downfalls of diversity training, it did examine if there was a shift in attitudes and beliefs once training was concluded and then again 2 months later.

This study demonstrated that diversity training impacted employees' knowledge of organizational justice. The intervention group demonstrated the overall COJS scores as well as the subcategory scores all significantly decreased, a negative response, from

baseline to the final COJS 2 month later. There was a non-significant margin increase within the intervention group immediately after training noted in the post training COJS; however, again a significant decrease for the final COJS. This shows the uptake of knowledge as to what organizational justice is – however does not demonstrate a shift in beliefs or attitudes (Alhejji et al., 2016).

This result further supports Brown (2018) focus of inclusion and equity as a means for improved workplace diversity. Diversity training is a tool that can improve one's knowledge of individual differences, leading to understanding and inclusion within the workplace. Research has demonstrated perceived organizational justice is a foundation in creating an inclusive and diverse organizational culture (Koveshnikov et al., 2019). The organizational culture must become more inclusive of what each gender needs with diversity training as a knowledge tool rather than a driver. There is mounting research around women, gender equality, and inclusion in organizations through the utilization of diversity training with a focus on equity and justice (Kossek et al., 2017).

The purpose of this study was to examine gender-diversity training, utilizing diversity training theory, to determine if there was a significant change on employees perceived organizational justice. It also was addressed the impact of gender-diversity training outside the academic setting as the site was within STEM&F. The results suggest diversity training improved knowledge of equity/ justice as the scores decreased post training to final COJS. This decrease demonstrates an increased awareness of what justice means within the construct of the organization. Participants ranked their perception of organizational justice within the workplace lower once they gained

knowledge around workplace equity. While there remains the need for more research to be done around diversity training theoretical moderators, the role those moderators play in decreasing diversity barriers and the overall impact organizational justice has on inclusion, this study further demonstrated diversity is a knowledge tool rather than a solution for improved diversity.

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Appendix A: Training Framework

Context	Employees are brought into a safe learning environment Language – Positive and ethical language, absent blame; moral awareness part of decision making process
Approach	Gender inclusion training Integrated approach uses hands-on group activities and retention messages
Setting	Organizational setting with an educational theme of learning, face to face as well as online (retention) mix
Duration	2-4 hours face to face; retention biweekly
Design	Inclusion focus highlights customer needs, conflict management and problem solving
Attendance	Voluntary
Focus	Group focus – gender and ethnicity Focus will be team-based
Type	Integrated training; metacognitive awareness, attitudinal and behavioral
Instruction	Focus on: themes, not people (focus on the outcome theme versus the “ism” or protected groups); consider the instructors (are they biased, knowledgeable, engaging); consider the diversity voice (is the message inclusive and embraced by the organization?); and the strategic integration of majority allies (include their stories and experiences)
Trainee characteristics	Integrated
Measuring effectiveness of diversity training	Perceived organizational justice scale

Appendix B: Justice Rules

(Cropanzano & Ambrose, 2015, pp189)

Type	Name	Description
Procedural ^a	Process Control	Procedures provide opportunities for voice
	Decision Control	Procedures provide influence over outcomes
	Consistency	Procedures are consistent across persons and time
	Bias Suppression	Procedures are neutral and unbiased
	Accuracy	Procedures are based on accurate information
	Correctability	Procedures offer opportunities for appeals of outcomes
	Representativeness	Procedures consider concerns of subgroups
Distributive ^b	Ethicality	Procedures uphold standards of morality
	Equity	Outcomes are allocated according to contributions
	Equality	Outcomes are allocated equally
Interpersonal ^c	Need	Outcomes are allocated according to need
	Respect	Enactment of procedures are sincere and polite
Informational ^c	Propriety	Enactment of procedures refrain from improper remarks
	Truthfulness	Explanations about procedures are honest
	Justification	Explanations about procedures are thorough

Note. ^a Rules taken from Thibaut and Walker (1975) and Leventhal (1980), ^b Rules taken from Adams (1965) and Leventhal (1976), ^c Rules taken from Bies and Moag (1986) and Greenberg (1993).

Appendix C: Colquitt's Organizational Justice Scale

Please answer the following questions on a scale of 1- 5 whereas 1=To a Very Small Extent, 2=To a Small Extent, 3=To a Moderate Extent, 4=To a Large Extent, 5=To a Very Large Extent. You may also choose not to answer

This survey is about you and how you perceive the workplace and supervisor treat you

To what extent:

1. Do your evaluations and promotions reflect the effort you have put into your work?
2. Are you rewarded appropriate for the work you have completed?
3. Does evaluations and promotions reflect what you have contributed to your work?
4. Do you agree with the feedback given your performance?
5. Does your supervisor treat you in a polite manner?
6. Does your supervisor treat you with dignity?
7. Does your supervisor treat you with respect?
8. Are you promoted based on work performance?
9. Does your supervisor refrain from improper remarks or comments?
10. Regarding your supervisor decisions about evaluations, promotions, and assignments: To what extent are you able to express your views during evaluations those procedures?
11. Regarding your supervisor decisions about evaluations, promotions, and assignments: To what extent are you can you influence decision procedures?
12. Regarding your supervisor decisions about evaluations, promotions, and assignments: To what extent are you are the procedures applied consistently?
13. Regarding your supervisor decisions about evaluations, promotions, and assignments: To what extent are the procedures free of bias?
14. Are those procedures “your supervisor uses to make decisions about pay, rewards, evaluations, promotions, assignments” based on accurate information?
15. Is your supervisor candid when communicating with you?
16. Does your supervisor explain decision-making procedures thoroughly?
17. Are your supervisor explanations regarding procedures reasonable?
18. Does your supervisor communicate details in a timely manner?
19. Do your supervisors tailor communications to meet individuals' needs?

Demographic collection:

How do you identify:

Gender Identify:

- Male, Female, Transgender, Gender Fluid

Appendix D: Site Request Letter

Dear

I am seeking a research site within the municipality/ STEM&F industry to explore is the effectiveness of organizational gender-diversity training based on diversity-training theory and its impact on perceived organizational justice in the municipality system.

Process:

Employees will be asked to voluntarily take a confidential survey that presents itself three times over the next 2 months (baseline, post training and 2-month follow-up) comprised of 24 questions. This will be an online survey.

Those who volunteer to participate will be provided unique identifiers aligned to their email addresses. This will allow for confidentiality. The organizations name will be excluded from all research documents and will not appear in the study.

Thank you for your consideration.

Lauran Star Raduazo
Walden University

Appendix E: Site Invitation

Good Morning,

I am Lauran Star Raduazo, a Ph.D. student at Walden University. I am partnering with your organization and inviting you to participate in a research study that will complete my dissertation. The study is about diversity training theory, and its impact on workplace equality.

Here is what it will entail:

- You will be asked to take 3 online survey: baseline, post training and two months later.
- The surveys will be emailed to you and should only take 15 minutes each.

All information will be kept confidential. The survey source will provide unique identifies that are linked to your email address. All responses are confidential. Once the data is collected all responses will be kept on a thumb drive in my safe for 5 years, then destroyed.

Thank you,
Lauran Star Raduazo

Appendix F: COJS Permission

Re: approval/ permission to utilize your COJS in my
dissertation. Jason A. Colquitt [REDACTED]

Wed 4/29/2020 4:15 PM

To: Luran Raduazo <[REDACTED]>

Hi Lauren,

Permission

granted. Best of luck!

Jason

On Apr 29, 2020, at 2:37 PM, Luran Raduazo <[REDACTED]>

wrote:

Good Afternoon Dr. Colquitt,

I am Luran Star Raduazo, a Ph.D student at Walden University, in my final dissertation phase. I am hoping to receive your permission to utilize the Colquitt Organizational Justice Survey as my measurement tool in my dissertation study.

After critical review of all organizational justice scales available, the COJS meets the needs of my research questions (and has the best data in support of its use).

Please advise.

Thank you

Luran Star Raduazo