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Adding Insult to Injury: Barriers to Employment for Individuals with Rheumatic Diseases

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Abstract

Rheumatic conditions are autoimmune and inflammatory diseases in which the immune system targets an individual's joints, muscles, bones, and organs resulting in symptoms like chronic pain, fatigue, and "brain fog." Despite the debilitating nature of most rheumatic conditions, the Americans with Disability Act only offers inexplicit protections for patients seeking employment, resulting in several reported obstacles. Previous research suggests that a lack of awareness on the part of employers contributes heavily to workplace barriers for employees with rheumatic diseases. Our study aimed to explore the workplace dynamics between individuals in management positions and employees with rheumatic diseases to identify specific problem areas. Participants from both groups were surveyed about their experience with rheumatic diseases and perceptions of ableism within their work setting. Surveys included several free-response questions for patients and employers to share their personal thoughts and recommendations for improving the work accommodations available to individuals with rheumatic diseases. We utilized the social model of disability to focus on work organizations' contributions to existing barriers. The survey responses were

analyzed qualitatively and quantitatively to characterize shared experiences of ableism in hopes of identifying methods to better employment access for patients. This information not only benefits those suffering from these diseases but also all stakeholders in work organizations by enhancing workplace conditions and increasing employee retention rates.
Keywords: workplace barriers, rheumatic conditions

INTRODUCTION

Rheumatic Conditions

Rheumatic conditions, such as rheumatoid arthritis, lupus, osteoporosis, and sarcoidosis are the result of the body's immune system attacking itself. Common targets of rheumatic conditions include joints, tendons, ligaments, bones, and muscles, although there are some cases in which vital organs, such as the lungs, heart, and nervous system are also attacked (Mayo Clinic). There are also a number of common indicators that rheumatic conditions present.

Notably, these diseases can be characterized by one or more of the following symptoms: pain in the joints, difficulty with movement of certain parts of the body, soreness, stiffness, lessening of discomfort with mild exercise but worsening of discomfort with intense exercise, aggravated symptoms in reaction to climatic changes such as pressure, and lessening of symptoms in response to warming of the specific origin of pain (Hardin, 1990). In addition to the physical symptoms, there are many negative social and mental health implications of rheumatic conditions. For example, it was found that patients with rheumatoid arthritis showed increased susceptibility to anxiety, depression, cognitive impairments, disturbed sleep

patterns, and an overall decrease in the quality of life. Not only do these impacts present their own set of obstacles, but they also are known to intensify the negative long-term effects of rheumatoid arthritis (Lwin et al., 2020). As previously noted, rheumatic conditions present a unique set of multifaceted implications that have the ability to negatively influence all aspects of life, including professional and career pursuits.

Previous Literature

Previous studies have analyzed several of the barriers that have been presented concerning the relationship between employment and having rheumatic conditions. Since disability in the workforce is overwhelmingly attributed to rheumatic conditions, it has been a topic of interest for many researchers. For instance, one study was conducted by examining the effects of fatigue caused by rheumatic conditions with respect to the workplace. After completing a qualitative analysis of survey responses from participants with rheumatic conditions, it was determined that there were three main identifiable challenges presented in the workplace. These included the negative effects of the symptoms of their conditions, such as pain, difficulties interacting with the work environment and other employees, and complications in coping with the emotional impact of the work they were doing. This study also established that the main repercussions of the participants' symptoms included lowered cognitions, such as difficulty with attention and concentration, brain fog, mental fatigue and problems with memory. In addition, their mood was also heavily impacted, resulting in frequent impatience and irritation, guilt, lack of motivation, and symptoms of depression. They also had to cope with physical symptoms like fatigue and pain, which caused patients in

the workplace to take frequent breaks. However, this was met with opposition for some employees in the study, as their employers did not fully understand their needs for accommodations, especially the ones rooted in fatigue. Consequently, some participants in the study even shared that they did not communicate their conditions to their employers in order to avoid being terminated from their positions and not receiving equal opportunities for job growth (Connolly et al., 2015). In fact, this is not a singular occurrence among employed individuals with rheumatic conditions. In a study completed for the University of Gothenburg Centre for Person-Centered Care, it was determined that in working individuals with rheumatoid arthritis, there were difficulties in disclosing and gaining understanding about the fatigue and other symptoms they faced from their coworkers and colleagues, as well as from their employers (Feldthusen et al., 2013).

In another study done by the Boston University School of Medicine, it was determined that out of the participants, all of whom had rheumatic diseases, over two-thirds expressed that they faced some type of barrier in the workplace. Particularly, barriers were reported in accessing different worksites, completing physical tasks, navigating working conditions, and performing task-related activities. Although some participants reported that they received accommodations, including modified working hours, ability for extra rest periods and breaks, and special assistive equipment, 13% of the employees with rheumatic conditions that were surveyed still expressed that they were not satisfied with the accommodations provided by their employers (Allaire et al., 2003).

Americans with Disabilities Act

Despite the considerable number of patients with rheumatic conditions who do not

receive sufficient accommodations in the workplace, there are laws that are meant to protect people with disabilities. The Americans with Disabilities Act (ADA), signed into law in 1990, is a range of legislative acts established to inhibit the discrimination of any individual on the basis of disability and to provide more accessibility. Although the law consists of five titles which implement different protections, Title I under the Americans with Disabilities Act provides a unique set of guidelines for employers to follow in terms of employing an individual with a disability. For example, all qualified individuals must be provided with an utmost equality when it comes to employment opportunities. Specifically, Title I of the Americans with Disabilities Act prohibits any form of discrimination - intentional or unintentional - with respect to job recruitment, the hiring process, promotion opportunities, job training, compensation and salary, among several other aspects of employment (Americans with Disabilities Act, 1990).

Regardless of the extensive and encompassing protection that the Americans with Disabilities Act provides, the prevalence of employees with rheumatic conditions who are unaccommodated remains high, as previously examined. This is because much of the legislation can be argued to be left open to interpretation, and there are certain ways for employers to work around providing accommodations. For example, there is no place in the Americans with Disabilities Act that explicitly states protections for individuals with rheumatic conditions. Therefore, many employers may not provide the proper accommodations for their employees suffering from symptoms of these diseases.

Purpose of the Study

As supplied by previous research, it has been frequently noted that having rheumatic

conditions often led to negative impacts on the patients' professional pursuits, and the Americans with Disabilities Act of 1990 does not always fully protect these individuals. However, the perspective of employers, specifically in terms of employing individuals with rheumatic conditions, has yet to be thoroughly analyzed. Therefore, this study was initiated to answer the research question "How do the perceptions of rheumatic diseases in the workplace differ according to patient versus employer status, and how do these perceptions come into play in characterizing the workplace dynamic?" Furthermore, the two viewpoints can be analyzed to produce several identifiable barriers to employment.

FRAMEWORK

A recurring point of contention mentioned in many studies focused on the workplace conditions of patients with rheumatic diseases is the interactions between employers and employees. For example, in one study several participants mentioned the gap between the accommodations they needed and the employers' perceptions of their symptoms. When patients were suffering from debilitating and yet invisible conditions like fatigue, employers could not fully understand their need for more breaks and paid time off (Connolly et al., 2015). A study for The University of Gothenburg Centre for Person-Centered Care corroborated this by highlighting a lack of awareness on the point of employers as a root cause of workplace barriers for patients with rheumatoid arthritis. A lack of understanding from employers often caused employees to

withhold information about their symptoms and try to deal with their condition without asking for the necessary accommodations (Feldthusen et al., 2013).

This conflict between patient of rheumatic diseases and their employers has not been

investigated thoroughly in the past since studies have focused entirely on the patient perspective. However, given the power and nature of management positions, employers arguably have a responsibility to address the workplace barriers faced by employees suffering from these diseases.

Our study utilized the social model of disability as the framework for investigating the workplace dynamics between employees with rheumatic diseases and employers. The United Nations defines disabled persons as “those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others” (UN 2012). This definition brings attention to the societal participation that can hinder one’s ability, leading to a perception of disability. This falls under the social model of disability, which claims that people are disabled by the barriers in society, rather than the actual impairment. This model has gained traction in recent years as more research has begun to focus on the social construction of disability as well as the concept of participation. Participation in reference to disabilities is the extent of an individual’s involvement in life situations in relation to their impairment, health condition, activity, and contextual factors. The idea that environmental and contextual factors that restrict an individual’s participation are what create the perception of disability puts the responsibility on the societal structures in which disabled persons engage (Wood 1980). Operating under this framework, our study chose to focus on the role that work organizations and employers play in the employment barriers faced by patients of rheumatic diseases.

Specifically, the study aimed to characterize the perceptions of rheumatic diseases in

the workplace from both the perspective of patients and employers. By investigating perceptions from both perspectives, the goal was to gain a more comprehensive picture of the employer- employee workplace dynamics which can influence employment barriers for patients of rheumatic diseases.

METHODS

The study took place over two and a half weeks in April 2021. Primary research was used to directly collect data from patients and employers. Primary research allowed for more current data accurately reflecting the workplace barriers existing today. Rather than relying on the previous studies conducted, we utilized primary research methods to direct the investigation towards more socially focused metrics. This freedom to dictate what will be studied allowed for more specificity, which especially was useful in our focus on employer investments in workplace conditions.

One of the main goals of our study was to collect robust and comprehensive data surrounding current workplace conditions. For this reason, online surveys were used to study employers and employees. Since the focus was mainly on general accommodations for rheumatic diseases, individuals from many different backgrounds were surveyed for optimal reliability. A large quantity of results had several diseases, industries, and countries represented. The commonalities in responses despite the differences in backgrounds demonstrated the universality of some of these experiences.

The surveys were given to two sets of participants: employees in management conditions and patients suffering from rheumatic diseases. This cross-sectional format was used to identify the gaps in perceptions between employers and patients. Differences in

understanding would contribute to conflict in the workplace. Surveys were distributed using social media and direct recruitment methods, as approved by the East Carolina University Institutional Review Board.

Patients were mostly recruited through online forums for specific rheumatic diseases, for example, the rheumatoid arthritis subreddit. These forums allowed for efficient communication with individuals who have already self-identified as members of the diseased population.

Employers on the other hand were recruited primarily through direct recruitment and secondarily through industry-focused online forums. Emails were used for direct recruitment. The direct recruitment in employer surveys increased the chances of social desirability bias, however, it also increased efficiency and chances of participation.

Both groups' surveys utilized qualitative and quantitative research methods to analyze perceptions of rheumatic diseases in the workplace. Patients were asked several questions regarding their condition, their perceived barriers, and recommendations for improved accommodations. Employers were asked about their understanding of rheumatic diseases, any job training they have received on accommodating employees with disabilities and the accommodations available in their work organization. Given the sensitive nature of the topic, all surveys were kept entirely anonymous and no identifying information was collected with each response outside of general demographic data. The surveys were also kept short in order to increase convenience for participants.

The following is the list of questions patients were asked:

Age, sex, race/ethnicity, highest level of education

What rheumatic disease(s) have you been diagnosed with? Select all that apply.

How many years have you been living with this/these disease(s)?

Are you currently employed?

Job title (or past job title)

Job industry (ex. education, finance, healthcare, etc.)

Years of experience in your field of work

What is your average annual income?

How physically demanding is your work?

How likely are you to inform your employer about your rheumatic disease(s)?

Have you discussed your rheumatic disease(s) with your employer?

I think my employer understands the obstacles/barriers I face at work due to my rheumatic disease(s)

What obstacles/barriers have you faced in your workplace as a result of your rheumatic disease?

What accommodations are available in your workplace for employees with physical disabilities? If there are none or if you are not sure, write "n/a."

Have you ever requested any form of reasonable workplace accommodation from your employer?

If yes, how effectively were you provided with these accommodations?

How satisfied were you with the accommodations provided by your employer?

I have faced prejudice and/or negative behavior from my employer and coworkers due to my rheumatic disease.

How effective is your employer in resolving issues relating to workplace prejudice resulting from rheumatic diseases?

Are you satisfied with your current job and employer?

What recommendations do you have for employers to improve workplace conditions for employees with rheumatic disease?

The following is a list of questions employers were asked:

Age, sex, race/ethnicity

Job title

Job industry (ex. education, finance, healthcare, etc.)

Years of experience in your field of work

What is your average annual income?

How many employees do you supervise?

Per your knowledge, how many of your employees have a physical disability?

What do you think of when you hear "rheumatic disease"?

Per your knowledge, have you ever had an employee with a rheumatic disease?

Have you seen any of your employees use any form of assistive technology (ex. wheelchairs, crutches, hearing aids, etc.)?

In your perspective, how accessible is your workplace?

On a scale from 1-5, how comfortable would you feel employing an individual suffering from a rheumatic disease?

Did your job training include any information on how to assist/accommodate individuals with disabilities?

What accommodations are available in your workplace for employees with physical disabilities? If there are none or you're not sure, write "n/a."

Have any of your employees discussed their rheumatic disease(s) with you?

What factors prove to be challenges in hiring individuals with disabilities? Select all that apply.

What recommendations do you have for companies to improve workplace conditions for employees with rheumatic diseases?

RESULTS

There was a total of 44 employer surveys completed in this study. By analyzing the demographic data of the surveyed individuals, it was found that the mean age was 52 years old, with 22 participants identifying as male and 12 participants identifying as female. A wide variety of industries was garnered, with 13 individuals working in finance, 5 in health care, 3 in technology, 2 in education, 2 in manufacturing, and the rest in miscellaneous fields. Titles held by some of the participants include Director of Operations, Office Manager, Executive Vice President, and other such positions. The average years of experience and the average number of employees were also calculated, the numbers being 16.6 and 51 respectively. The scope of

their employees who have rheumatic diseases ranges from 0 to over 20. Over half (69%) of respondents identified as Asian or Asian American, with the remaining 31% identifying as white or other. Exactly half reported their highest level of education being a professional degree, 38% reported a 4-year degree, and 12% remained with 2 year, some college, or a doctorate. Finally, 28% of participants' annual income averaged to more than $150,000, with the rest being spread between less than $10,000 to $149,000.

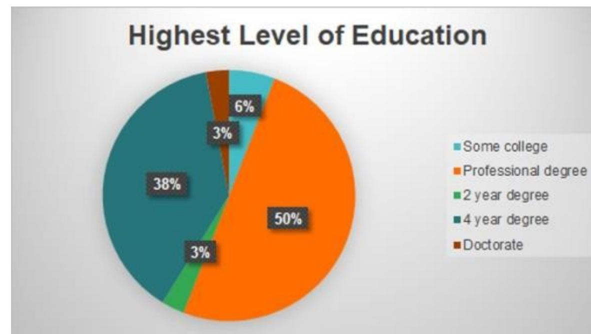

Figure 1.1. Employers' Average Highest Level of Education

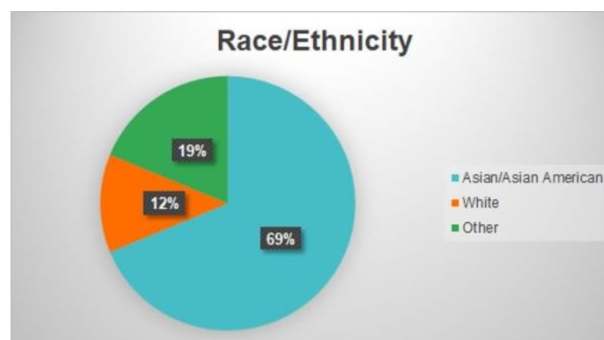

Figure 1.2. Employers' Race/Ethnicity

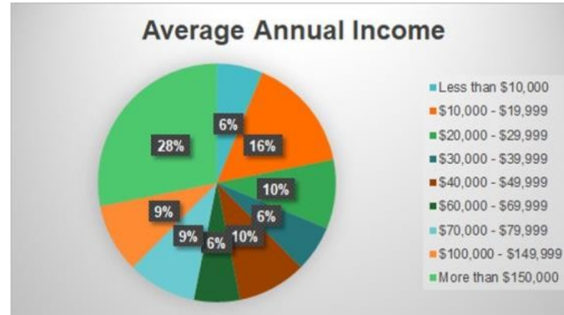

Figure 1.3. Employers' Average Annual Income

To examine the perception of rheumatic disease in the workplace, employers were first asked what they thought when asked about the term "rheumatic disease." 7 participants responded with "joint pain," 4 with "arthritis," and 2 with "bone pain/disease." However, a large part of responses indicated that they were unaware of the implications, with 10 responses of "no idea." The next question inquired as to whether the employers' workplace had accommodations available for their disabled employees. 9 responded with a range of material accommodations, including wheelchair accessibility, handicapped parking and bathroom stalls, and specialized elevators. 26 answered with none at all. They were also asked what factors they believed to be challenges when hiring individuals with disabilities. 22 employers responded with the physical demand of work and 10 responded with the lack of adequate knowledge. 6 responded with skepticism regarding coworkers' attitudes, 5 with the fear of potential lawsuits, 2 with an aversion to accommodation costs, and 4 with other unlisted reasons. Finally, when asked for recommendations of how to remedy the barriers for their workers, common repeats were improved environment, increased awareness, and proactively supporting their employees.

Figure 2.1. Employers' Perspective Accessibility of Workplace

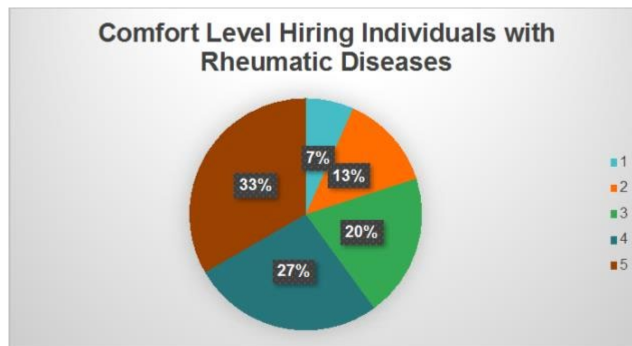

Figure 2.2. Employers' Comfort Level Hiring Individuals with Rheumatic Diseases

Figure 2.3. If Job Training Covers Disabilities Accommodations

From the patients' perspective, there were a total of 98 surveys completed. Analyzing the demographic data found that the mean age of participants was 53 years old, with 86

individuals identifying as female and 9 identifying as male. The top three answers chosen when asked “what rheumatic disease(s) have you been diagnosed with?” were rheumatoid arthritis (39 patients), Raynaud’s Syndrome (27 patients), and lupus (23 patients). There were a variety of job industries reported, with 23 participants in healthcare, 13 in education, 6 in retail, and the remainder in miscellaneous areas (including government, technology, and construction). 89% of respondents identified as white, 40% reported their highest level of education to be a 4-year degree, 25% said a professional degree, with the remaining 35% answering high school graduates, some college, 2-year degree, or doctorate. The largest percentage of participants (16%) reported an average annual income of $40,000 to $49,999.

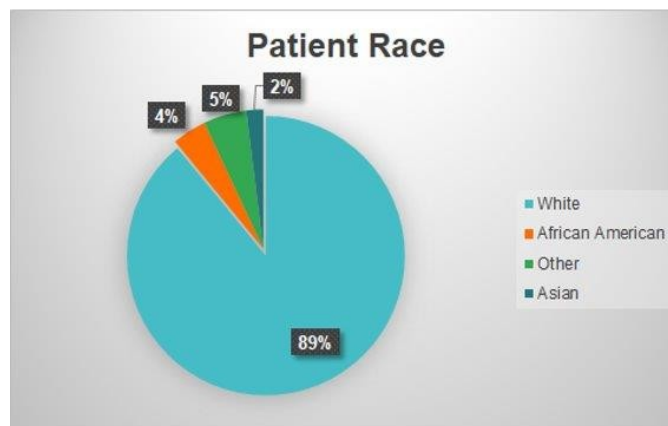

Figure 3.1. Patients' Race/Ethnicity

Figure 3.2. Patients' Average Annual Income

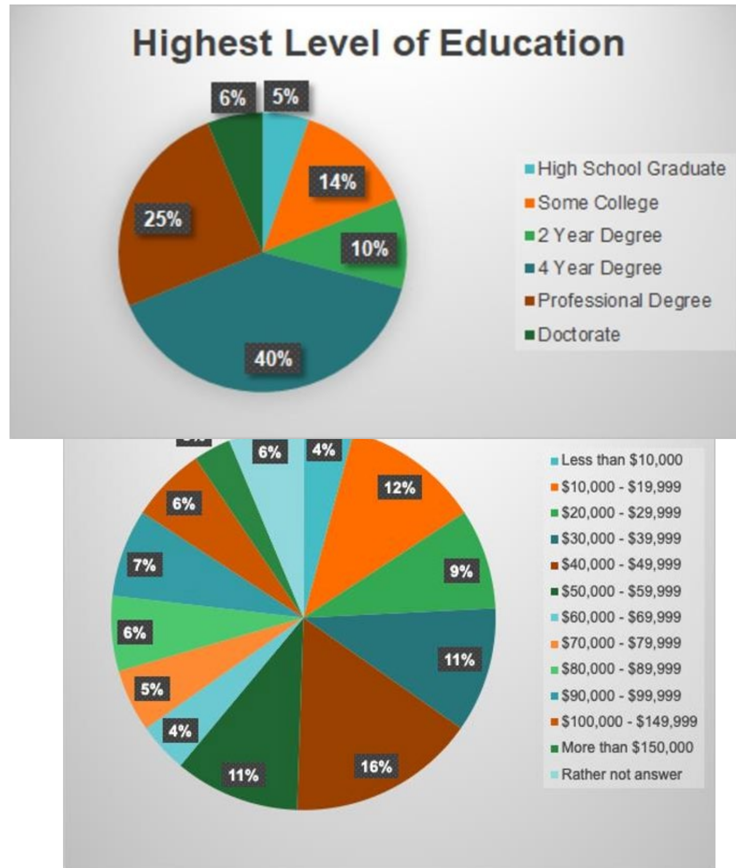

Figure 3.3. Patients' Highest Level of Education

When asked what barriers that they have been forced to face as a result of their rheumatic disease, patients responded with five main obstacles: fatigue (17 surveyed), pain (12), time (11), sitting (7), and "brain fog" (5). The rest of the participants answered with something different or chose not to respond. More than half of the patients (58 responses) replied that they (and other employees with physical disabilities) were not provided accommodations in their place of work. 7 responded with flexible scheduling or work hours,

8 with supportive chairs, and 4 with wheelchair accessibility. Similar to the employers' perspective survey, material accommodations are more commonly seen in the workplace overall. Finally, patients were asked what recommendations they had for employers that could improve workplace conditions for employees (such as themselves) who suffered from rheumatic disease. 15 answered improved accommodations, 10 answered with time adjustments, 7 with understanding, and 6 with flexibility.

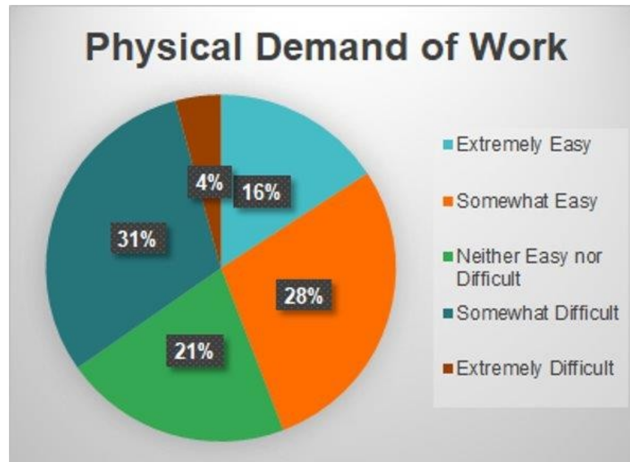

Figure 4.1. Patients' Perspective Physical Demand of Work

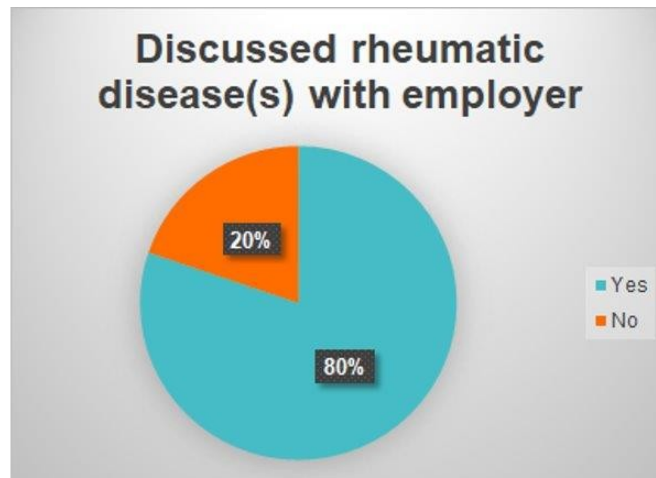

Figure 4.2 Whether Patient Discussed Rheumatic Disease(s) with Employer or Not

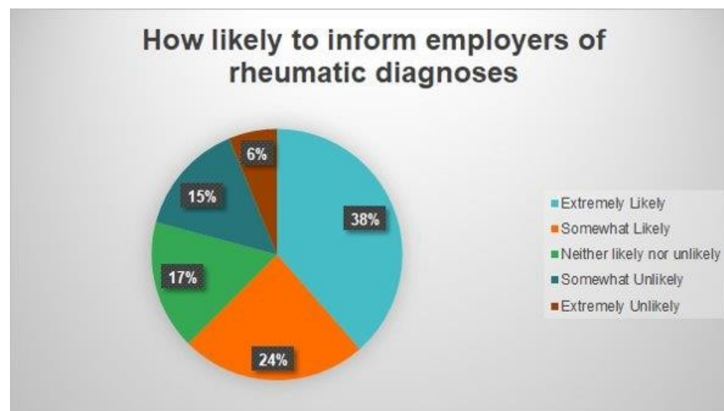

Figure 4.3. Likelihood of Patient Informing Employer of their Rheumatic Diagnoses

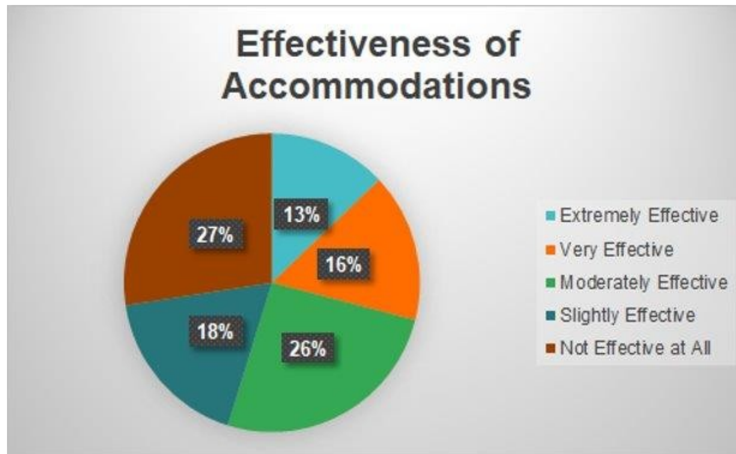

Figure 4.4. Patients' Perspective Effectiveness of Accommodations

Figure 4.5. Ranking of How Satisfied Patients Were with the Provided Accommodations

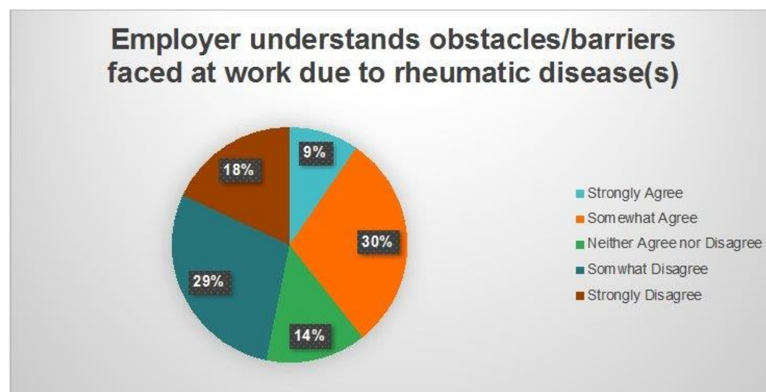

Figure 4.6. If Employer Understands the Workplace Barriers Resulting from Rheumatic Disease

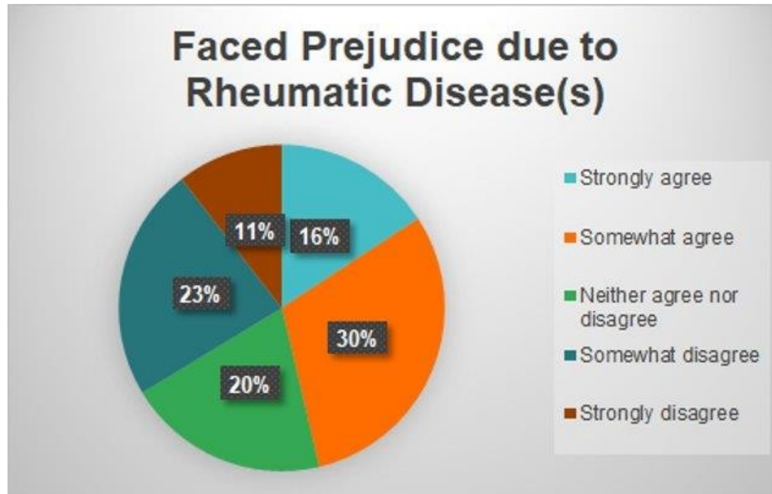

Figure 4.7. Patient Responses to if they Faced Prejudice due to their Rheumatic Disease

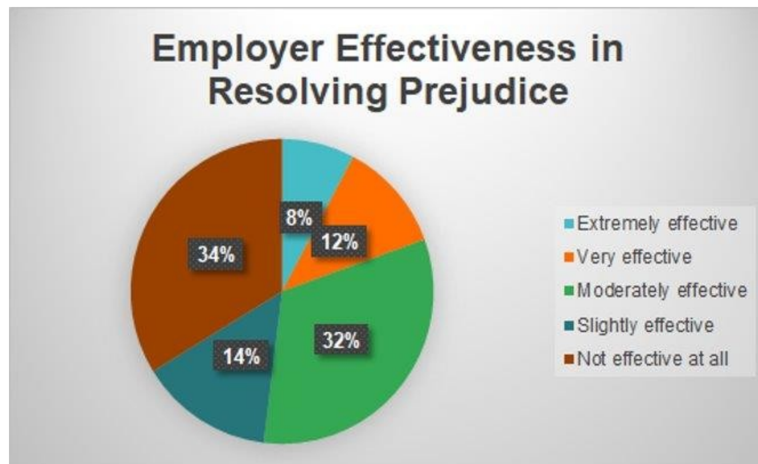

Figure 4.8. Patients' Perspective on Employer Effectiveness in Resolving Prejudice

Figure 4.9. Patients' Current Job Satisfaction

From the employers' survey, we found that half of the employers rated their workplace's accessibility a 2 out of 5 or less. 55% reported that they had no training regarding how to assist and accommodate their employees with disabilities, with 12% reporting that any training that exists was in need of improvement. Finally, 20% would feel uncomfortable hiring an individual with a rheumatic disease. From the patients' survey, 35% of patients reported the physical demand of their work to be somewhat or extremely difficult. 20% have not discussed their disease with their employer, with 21% being somewhat or extremely unlikely to inform them at all. When asked if they have faced prejudice as a result of their disease, 46% somewhat or strongly agreed. 48% reported that their employers were slightly or completely ineffective in acting against these prejudices. 45% reported the effectiveness of the accommodations provided to them to be slightly or completely ineffective, with 34% to be somewhat or extremely dissatisfied with such. When patients were asked if their employer was understanding of the obstacles they faced due to their disease, 47% somewhat or strongly disagreed.

DISCUSSION

The purpose of this research study was to examine the perceptions of rheumatic diseases in the workplace through the perspectives of employers in management positions and individuals with rheumatic diseases who are currently employed or have been in the past in order to answer the research question of “How do the perceptions of rheumatic diseases in the workplace differ according to patient versus employer status, and how do these perceptions come into play in characterizing the workplace dynamic?” Based on the rich quantitative and qualitative data collected and thoroughly analyzed, the results showed, in

main, the root causes of workplace barriers and obstacles as well as the main recommendations employers and individuals with rheumatic diseases have for making their workplaces more accessible and comfortable for current and future employees with rheumatic diseases.

To summarize, it was found that the main causes of workplace barriers for individuals with rheumatic diseases are rooted in the absence of employer and employee training regarding working alongside individuals with disabilities; the physical and often strenuous demands of work, which often require sitting or standing for long periods of time, lifting heavy items, operating heavy machinery, etc.; the discomfort, unawareness, prejudice, stereotypes, and stigma surrounding rheumatic diseases and physical disabilities in general; and a lack of understanding, empathy, and compassion from employers, which often leads to a lack of openness and miscommunication between employers and employees with rheumatic diseases. These findings are supported by a similar study conducted at the University of Michigan, in which empirical research regarding the treatment of individuals with disabilities in the workplace was analyzed, and it was found that the main issues that arose were neglect of employees with disabilities, and underlying stigma processes (Beatty et. al., 2018).

In regard to these obstacles and barriers, a question was asked, and an extra space was reserved on the surveys for employers and individuals with rheumatic diseases to provide recommendations and opinions on bettering their workplaces for current and future employees with rheumatic diseases. The main recommendation to combat these barriers, after conducting extensive data analysis, to find patterns are more flexibility from the workplace and employers regarding work hours and time off and more empathy and

understanding from employers, both of which can be achieved through increased sensitivity training for employers to supplement awareness and foster a more comfortable environment for employees with rheumatic diseases.

Implications to Practice

Sensitivity training, by definition, is "training intended to sensitize people to their attitudes and behaviors that may unwittingly cause offense to others, especially members of various minorities" (Sensitivity training, 2019). Simply put, it helps one become more self-aware of their own prejudices and perspectives, which helps them to accept and build lasting and beneficial relationships with the people around them who may come from very different backgrounds. Such differences include race, religion, gender, and abilities. It is the majority consensus that the founder of this specific type of emotional training is Kurt Lewin, a German American psychologist who developed a series of workshops focusing on this idea for the Connecticut State Interracial Commission in 1946.

Sensitivity training is developed to maximize interactions between all group members involved. A free and open-minded atmosphere is highly encouraged so that participants feel comfortable enough to express themselves and communicate their needs and perspectives without judgement. If successful, the group will develop mutual trust with one and other and interpersonal bonds will strengthen. Such relationships between coworkers are considered ideal for a working environment.

There are a number of workshops, resource guides, and websites that outline the best ways to interact with one's coworkers with disabilities. One of the first steps always highlighted is to uncover one's own stereotypes and biases regarding individuals with

disabilities based on any past experiences. When interacting with such a coworker or employee, one should always presume complete competence and capability in the same manner that would be applied to able individuals. There should be a clear distinction made between pity and compassion, where pity should be lessened as much as possible. Additionally, it is highly recommended to be aware of the correct terminology and diction when referencing others. For example, it is not acceptable to label someone by their disability as it takes the focus away from the individual as a person and their abilities and puts the spotlight on something that may limit them. Instead, refer to that person by their name or by an unrelated feature like the color of their shirt. In situations where it is necessary, one must opt to use phrases like "my coworker with a disability" instead of "my disabled coworker."

Acknowledging the existence of invisible or hidden disabilities and their necessary accommodations is also an integral part of successful sensitivity. This study's main focus was rheumatic conditions, which qualifies as an invisible disability. The resulting symptoms caused by the conditions are not usually observable to the casual passerby, which results in a form of stigmatization. People with invisible disabilities may be viewed as simply being lazy or unmotivated and not needing certain accommodations for proper functionality. However, in the case of this study's tested conditions, rheumatic diseases have the ability to inflict debilitating pain and fatigue to the patient, inhibiting them in the same ways that an observable disability would. It is crucial to know and be aware of this point, so that communication between employer, employee, and coworkers can be honest and open. When provided with a sensitive and supporting environment, an individual will be significantly more inclined to request their required accommodations so that they can display their best work.

Implications to Theory

The social model of disability outlines that the true barriers are not the physical or cognitive differences in an individual; rather, they are the systematic societal limitations, attitudes, and exclusive behaviors that prevent them from reaching their potentials. As many define success in terms of employment, these worldviews can be found concentrated in the workplace. Results of these views can be manifested physically (as shown in a lack of physical accommodations such as wheelchair ramps, specialized chairs, accessible toilets, etc) or in other individuals' behaviors (assuming too quickly, judging based on stereotypes, not understanding the implications of a certain disability). Our study made sure to encompass both these possible barriers and asked both employers and patients what accommodations are already available in their workplace, along with the recommendations they believe will improve the workplace conditions for employees with rheumatic diseases. It is to be noted that there were many repeats of the phrase "understanding" in regards to what the patients' wished for in their workplace.

There is a distinct lack of exposure and sensitivity training among employers, which leads them to be unable to properly comprehend the needs of their workers with physical disabilities. The social model suggests that changing the attitudes of people (starting with employers and coworkers) will offer individuals with disabilities a greater sense of control and independence, weakening the barriers blocking the road to eventual understanding and equity.

Limitations

While this research study was conducted with as much precision as possible, there was

still room for error caused by limitations. Primarily, one limitation, which is commonly seen across many studies involving surveys, is the researchers' lack of control over verifying the reliability and validity of the responses. For starters, both the employers and patients with rheumatic diseases who responded to the respective surveys may not have provided entirely honest answers to the questions asked. In other words, social desirability bias might have played a role in the responses, which details individuals' need to appear favorably in front of others.

Therefore, respondents might have greatly detailed positive answers, while omitting or even lying about negative answers. For example, a respondent for the employer survey may have falsely reported having accommodations in their workplace for individuals with rheumatic diseases, when, in reality, none are available.

Correlating with the social desirability bias, it is additionally expected that respondent bias may have played a role in a handful of responses. This bias states that participants may inaccurately or falsely respond to questions based on their personal beliefs and opinions. For example, a participant with rheumatic disease who reported having an extremely low job satisfaction level may have falsely reported that no accommodations are available in their workplace for employees with rheumatic diseases, when the case is that some accommodations are available, however, the respondent is not satisfied with the provided accommodations. In order to avoid respondent bias as much as possible, the survey questions were crafted to be objective with no leading questions or opinionated words and phrases.

Another limitation of the study details the optional manner of the surveys provided to

employers in management positions and patients with rheumatic diseases. Due to the 100% optional nature of all the questions asked in the surveys, in some instances, it was observed that questions were ignored and left unanswered by both employers and patients with rheumatic diseases. Therefore, while the data collected was rich and revealed the complexities of each respondent's answers, it is difficult to assume full credibility and validity of the final conclusion.

The final limitation of the study is the effect of external factors on the respondents' answers to the survey questions. The research was conducted, focusing specifically on the effects of having rheumatic diseases while being employed from a patient and employer perspective.

However, feelings regarding job satisfaction, instances of prejudice in the workplace, etc. may have been affected by confounding variables such as race, sex, age, etc. which are out of the researchers' control and not the focus of this study.

Future Research Studies

For the purpose of the study, questions were asked regarding the recommendations both employers and patients with rheumatic diseases have in regard to making their workplaces more accessible and comfortable for employees with rheumatic diseases. They included more time off for employees with rheumatic disabilities, a mandatory sensitivity training requirement for all employees and employers in the workplace, compassionate attitudes from employers and co-workers, and physical accommodations such as wheelchair accessibility, chairs, keyboards, and mouses designed for individuals with specific rheumatic

diseases, etc. Further research studies could be conducted in order to investigate the effects of utilizing these recommendations in workplaces, specifically workplaces like a handful of those in this study, who reported having no accommodations available currently for individuals with rheumatic diseases. Data to be collected quantitatively as well as qualitatively could focus on factors such as level of job performance, specifically whether there was an increase or decrease after the availability of suggested accommodations; co-worker attitudes in response to the available accommodations; workplace environment; and overall job satisfaction, for both the employers in management positions and the employees with rheumatic diseases.

Furthermore, the findings of this study could be extended through the development of subsections within the suggested future research study in order to test and quantify the effectiveness of each form of accommodation made available to conclude which one yields the best overall satisfaction for both the employers in management positions and the employees with rheumatic diseases. The results of this subject of study could prove to be helpful in the long run for individuals with rheumatic diseases who are looking for employment, already employed but are low in job satisfaction, in addition to the profits of the workplaces and companies where these individuals with rheumatic diseases are employed.

References

Allaire, S. H., Li, W., & LaValley, M. P. (2003). Work Barriers Experienced and Job Accommodations Used by Persons with Arthritis and Other Rheumatic Diseases. Rehabilitation Counseling Bulletin, 46(3), 147–156. **https://doi.org/10.1177/00343552030460030301**

Americans With Disabilities Act of 1990, Pub. L. No. 101-336, 104 Stat. 328 (1990).

Beatty, J. E., Baldridge, D. C., Boehm, S. A., Kulkarni, M., & Colella, A. J. (2018). On the treatment of persons with disabilities in organizations: A review and research agenda. *Human Resource Management*, *58*(2), 119–137. **https://doi.org/10.1002/hrm.21940**

Connolly, D., Fitzpatrick, C., O'Toole, L., Doran, M., & O'Shea, F. (2015). Impact of Fatigue in Rheumatic Diseases in the Work Environment: A Qualitative Study. International journal of environmental research and public health, 12(11), 13807–13822. **https://doi.org/10.3390/ijerph121113807**

Feldthusen, C., Björk, M., Forsblad-d’Elia, H. et al. (2013). Perception, consequences, communication, and strategies for handling fatigue in persons with rheumatoid arthritis of working age—a focus group study. Clin Rheumatol 32, 557–566 **https://doi.org/10.1007/s10067-012-2133-y**

Fielden S.L., Moore M.E., Bend G.L. (2020) Introduction. In: Fielden S.L., Moore M.E., Bend G.L. (eds) The Palgrave Handbook of Disability at Work. Palgrave Macmillan, Cham. **https://doi.org/10.1007/978-3-030-42966-9_1**

Hardin JG. Rheumatic Pain. In: Walker HK, Hall WD, Hurst JW, editors. Clinical Methods: The

History, Physical, and Laboratory Examinations. 3rd edition. Boston: Butterworths; 1990. Chapter 159. Available from: **https://www.ncbi.nlm.nih.gov/books/NBK267/**

International classification of impairments, disabilities, and handicaps : A Manual of classification relating to the consequences of DISEASE, published in accordance with resolution wha29.35 of THE Twenty-ninth World Health Assembly, May 1976. (1980, January 01). Retrieved April 30, 2021, from **https://apps.who.int/iris/handle/10665/41003**

Lwin, M.N., Serhal, L., Holroyd, C. et al. Rheumatoid Arthritis: The Impact of Mental Health on Disease: A Narrative Review. Rheumatol Ther 7, 457–471 (2020). **https://doi.org/10.1007/s40744-020-00217-4**

Rheumatic Diseases. (n.d.). Retrieved March 27, 2021, from **https://www.mayoclinichealthsystem.org/locations/mankato/services-and-treatments/rheumatology/rheumatic-diseases**

Sensitivity Training. (2019). In *Oxford Online Dictionary*. Retrieved from **https://en.oxforddictionaries.com/definition/sensitivitytraining**

The UN Convention on Rights of Persons with Disabilities. (August 2012). International Paralympic Committee. **https://www.paralympic.org/sites/default/files/document/120818093927291_2012_08+The+UN+Convention+on+Rights+of+Persons+with+Disabilities_ENG.pdf**