A Bibliometric Analysis of Similarity Attraction Bias in Recruitment: Implications for Workplace Diversity and Inclusion

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Abstract

The effect of similarity attraction bias on hiring procedures and workplace diversity is examined in this paper. It looks at how cognitive biases, such favoring people who are similar to oneself, affect hiring practices and maintain inequalities in diversity in businesses. The study summarizes important ideas, such as gender, race, and organizational culture, by combining theoretical understandings and actual data from a thorough literature review. The research landscape is mapped using a bibliometric analysis with VOSviewer, which highlights important keywords and thematic clusters pertaining to diversity, bias, and recruiting.

The study highlights significant patterns and relationships in the literature, keeping the focus on the psychological, organizational, and demographic elements which affect diversity results. This paper emphasizes topics for further study and theoretical developments. Simultaneously, it offers useful insights based on both theoretical and data-driven viewpoints to organizations looking to improve their diversity and inclusion efforts.

1. Introduction and Conceptual Background

Organizations are finding it more and more difficult to sustain development and guarantee long-term survival in the quickly changing global economy of today. More is required than only good product sales or a strong reputation from the past due to the growing competition and rising customer expectations (Bach, 2005). Success today hinges on an organization's ability to adjust to a constantly shifting environment and, above all, its ability to draw in and hold on to top personnel that can handle these unforeseen obstacles (Bach, 2005). In light of this, an organization's future is greatly influenced by its hiring and selection procedure.

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The strategic process of drawing in a suitable pool of applicants by successfully interacting with the appropriate target audience in order to fill open positions is known as recruitment (Leopold, 2002). On the other hand, selection entails methodically assessing and picking the best applicants from the preexisting pool. One of the most important aspects of human resource management is attracting competent personnel (Koivunen *et al.,* 2019). As a result, recruitment has grown into a sizable industry that includes marketing, search firms, and occupational psychologists who all aid in the hiring process.

Historically, companies have given human resources employees the task of finding and interacting with possible applicants, and actively participating in the process of searching (Cruich, 2014). Because choosing the proper personnel is essential to success, the effectiveness of recruiting has a direct impact on an organization's performance (Butt and Zeb, 2016; Kulkarni and Nithyanand, 2013). Since many businesses claim that their employees are their most precious resource, they stress the significance of making objective and well-informed hiring decisions (Fulmer and Plyhart, 2014). Human judgment is still crucial to the hiring process even with the usage of assessment centers and dynamic recruitment campaigns, among other improvements in recruitment strategies (Bergström and Knights, 2016).

However, behavioral science has long recognized that human decision-making is inevitably biased and prone to mistakes (Johnson and Levin, 2009; Koivunen *et al.,* 2019). Hiring managers frequently deal with inadequate or missing information on applicants during the hiring process, and they may inadvertently fill in the blanks by attributing characteristics based on the most important elements (Bergström and Knights, 2016). The term "thin-slicing," created by Gladwell (2005), describes the propensity to make snap judgments based on limited information. These impulsive assessments are subject to bias and may inadvertently affect employment decisions, even though they are occasionally correct. Without the recruiter's knowledge, implicit biases influenced by unconscious beliefs and prior experiences may influence these choices (Gladwell, 2005).

These biases can result in expensive mistakes, such as choosing the wrong or, more specifically, unsuitable people, being unproductive, wasting training time, and possibly having to fire people (Bergström and Knights, 2016; Koivunen *et al.,* 2019). Personal preferences, prejudices, and unconscious and conscious biases can all have a big influence on hiring decisions (Gladwell, 2005). This difficulty is especially noticeable in hectic settings where employment decisions must be made quickly. In these circumstances, instinctive judgment frequently wins out, resulting in choices that are more impacted by prejudices and emotions than by impartial standards (Koivunen *et al.,* 2019).

Biases are automatic attitudes that influence people's judgments without their conscious knowledge, as per Greenwald and Krieger's claims from 2006. Recruiters must thus examine their unconscious prejudices and how they might affect their employment choices (Koivunen *et al.,* 2019). In order to make sure that hiring procedures are equitable, inclusive, and merit-based—thus benefiting the company and society at large—it is imperative to acknowledge and resolve these biases.

A number of theoretical frameworks are pertinent to comprehending how biases impact hiring, particularly those that address similarity attraction bias, which is the propensity to give preference to applicants who have comparable traits. The following frameworks were examined in this study:

Relational Demography Theory - According to this idea, people are more inclined to view someone favorably if they have similar demographic traits (Goldberg, Riordan and Zhang, 2008). This concept aids in the explanation of why recruiters may give preference to applicants who share characteristics with them, such as age, gender, race, or other demographics.

Social Identification Theory - According to Tajfel and Turner's (1979) social identity theory, people assign social groupings to both themselves and other people. In-group people frequently elicit positive emotional reactions, whereas out-group members could experience less favorable treatment. Hiring decisions may be greatly impacted by this cognitive process since recruiters may unintentionally give preference to applicants that fit within their perceived in-group (Ito and Bartholow, 2009; Van Bavel, Packer and Cunningham, 2008).

Attraction Paradigm - According to Byrne's (1971) attraction paradigm, people are drawn to persons who have comparable characteristics to their own, whether those similarities are in personality, looks, or attitudes. Due to this attraction, hiring decisions may be biased in favor of candidates that possess comparable qualities to the recruiter (Byrne and Nelson, 1965; Peters and Terborg, 1975).

Theories of Intergroup Conflict - Competition between social groups frequently leads to in-group favoritism and negative sentiments against out-groups, according to theories such the evolutionary models (Schaller *et al.,* 2003), realistic conflict theory (Sherif *et al.,* 1961), and the stereotype content model (Fiske *et al.,* 2002). These ideas can aid in the explanation of how biases resulting from social group dynamics impact hiring decisions.

To lessen the effects of similarity attraction bias in hiring, a variety of tactics can be used, many of which make use of digital tools. Significant advancements in recruiting have been made possible by digitalization, which has produced instruments that enable more data-driven and objective screening and selection procedures (Gilch and Sieweke, 2021; Pfieffelmann *et al.,* 2010). Computer-based interview evaluations and algorithmic pre-assessments, for instance, can assist standardize applicant assessments and lessen human bias (Raghavan *et al.,* 2019).

Another efficient tactic is anonymous hiring, which minimizes discrimination by eliminating personal information from applicant profiles, such as name, gender, and ethnicity. This approach encourages hiring managers to put more emphasis on a candidate's skills and credentials than on unintentional prejudices based on personal traits (Hausman, 2012). Reducing bias can also be achieved by encouraging recruiters to be more self-aware. More egalitarian decision-making can result from training programs that emphasize identifying and controlling biases (Liebermann *et al.,* 2015).

Organizations must adopt transparent, merit-based recruitment practices that prioritize diversity and inclusivity (Neamțu, 2013; Neamțu and Năfornița, 2022). By doing so, they can ensure that recruitment decisions are made fairly, leading to a stronger and more dynamic workforce. Addressing bias in hiring is not just a matter of

fairness but also a strategic advantage in creating a workforce that reflects diverse perspectives and skills.

In the end, companies need to implement open, merit-based hiring procedures that put an emphasis on inclusivity and diversity. By doing this, businesses can guarantee equitable hiring practices, which will result in a more robust and vibrant workforce. In addition to being fair, addressing bias in recruiting gives businesses a competitive edge in developing a staff with a variety of viewpoints, abilities, and experiences.

2. Bibliometric Analysis Approach

Building upon the previous discussions on bias in recruitment and its impact on diversity in the workplace, this section presents a bibliometric analysis conducted using VOSviewer. This tool provides a visual depiction of the main ideas and current research in the domains of workplace diversity, recruiting procedures, and similarity attraction bias. This method offers a thorough summary of the body of literature. At the same time, it emphasizes important trends and links between the key constructs of the study.

Two important academic databases, Web of Science and Scopus, were used to obtain research articles in order to guarantee a strong and complete dataset for analysis. Zotero was used to integrate these datasets, allowing for a more comprehensive review of the body of existing research. A more thorough grasp of the topic is made possible by the integration of these two sources. This guarantees that a large number of pertinent studies are included in the analysis. The scope of the discipline can be explored thanks to this bibliometric study, which also identifies important themes, new trends, and areas that need more research.

Keyword extraction and refinement were the next steps in the analytical process after the unified dataset was created. To guarantee the accuracy and completeness of the dataset, a deduplication procedure was incorporated.

3. Findings

The chosen keywords, their frequency of occurrence, and their overall link strength are listed in detail in the table below (Table 1), which gives information about the most often used terms in the literature on workplace diversity, hiring procedures, and similarity attraction bias.

Setting up the analysis in VOSviewer: selected keywords, occurrences and total link strength

Table 1

Selected	Keyword	Occurrences	Total Link Strength
x	Human	52	387
x	Female	38	307
x	Humans	35	280
x	Male	35	279

Selected	Keyword	Occurrences	Total Link Strength
x	Adult	30	241
x	Article	31	230
✓	Gender	26	132
✓	Stereotyping	14	110
✓	Perception	10	94
✓	Stereotypy	10	94
✓	Human Experiment	13	89
✓	Psychology	10	76
✓	Personnel Selection	15	71
✓	Personnel Management	7	63
✓	Employment	11	58
✓	Social Behavior	7	57
✓	Decision Making	9	55
✓	Prejudice	10	55
x	Major Clinical Study	6	54
✓	Discrimination	23	53
✓	Sex Difference	6	51
✓	Leadership	12	50
✓	STEM	6	50
✓	Sexism	6	49
✓	Workplace	7	47
✓	Race	9	46
✓	Stereotypes	9	46
x	Meta Analysis	5	44
✓	Racism	5	44
✓	Self Concept	5	43
✓	Diversity	23	40
x	Questionnaire	5	40
✓	Social Dominance	5	39
✓	Social Perception	5	37
✓	Engineering	5	35
✓	Recruitment	18	35
✓	Technology	5	35

Selected	Keyword	Occurrences	Total Link Strength
✓	Theoretical Model	5	34
✓	Beauty	5	31
✓	Bias	8	31
✓	Ethnicity	8	28
✓	Demography	5	26
✓	Personality	7	26
✓	Hiring	7	25
✓	Culture	7	19
✓	Selection	6	14
✓	Stigma	5	13
✓	Gender Diversity	5	12
✓	Homophily	6	5
✓	Relational Demography	6	4
✓	Person-Organization Fit	7	2

There is a significant amount of research on the connection between hiring practices, workplace diversity, and similarity attraction bias, as evidenced by the overall link strength of 494. VOSviewer's visualization of this data shows a network that shows the relationships between the most important research ideas in the literature, offering important insights into the organization of this field of study. An overview of the connections between the different keywords found in the papers that were retrieved from Web of Science and Scopus is provided in Figure 1 below.
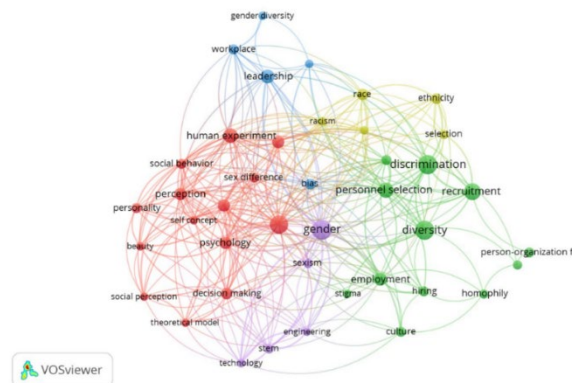

**Figure 1. Keywords' Co-occurrence Network of Web of Science
and Scopus Publications**
Source: Author's own research

This network analysis serves as an effective tool for identifying the primary research themes and patterns in the literature. VOSviewer facilitates a deeper comprehension of the theoretical and empirical trends in the field by highlighting the connections between important themes including bias, recruitment, gender diversity, and stereotypes through the mapping of keyword relationships. Furthermore, the concepts and ideas covered in the earlier sections of this study are closely aligned with the network visualization, highlighting the topics' continued relevance in contemporary academic discussions.

Furthermore, the clusters identified in the analysis provide additional insights into the thematic areas of focus within the literature. These clusters reflect the central research interests and serve as a guide to understanding the broader trends in the field. A number of five clusters have emerged from the VOSviewer analysis and they will be shown in the following rows. The primary research interests are reflected in these clusters, which also provide as a roadmap for comprehending the field's larger tendencies. The VOSviewer study revealed the below clusters (Table 2).

Clusters resulted from the analysis in VOSviewer

Table 2

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Beauty	Culture	Bias	Ethnicity	Engineering
Decision Making	Discrimination	Demography	Race	Gender
Human Experiment	Diversity	Gender Diversity	Racism	Sexism
Perception	Employment	Leadership	Selection	Stem
Personality	Hiring	Workplace	Social Dominance	Technology
Prejudice	Homophily			
Psychology	Person-Organization Fit			
Self Concept	Personnel Management			
Sex Difference	Personnel Selection			
Social Behavior	Recruitment			
Social Perception	Relational Demography			
Stereotype	Stigma			
Theoretical Model				

The first cluster covers concepts like perception, prejudice, and social behavior and focuses on the psychological components of bias and stereotypes. This cluster draws attention to the emotional and cognitive elements that influence biased hiring and selection decisions.

The second cluster investigates workplace culture and organizational dynamics, including conversations about hiring procedures, diversity, and discrimination. This cluster emphasizes the value of establishing welcoming workplaces and the part hiring plays in promoting diversity.

The third cluster examines how racial and ethnic backgrounds affect hiring procedures, focusing on how bias, race, and ethnicity interact. This cluster investigates the ways in which these demographic characteristics influence recruiting practices and fuel workplace inequality.

The fourth cluster investigates demographic traits and how they affect hiring, as well as how diversity and gender influence organizational results. This cluster highlights the opportunities and difficulties related to diversity-focused recruiting strategies.

The fifth cluster pays close attention to gender and sexism while concentrating on STEM (science, technology, engineering, and mathematics) disciplines. This cluster draws attention to the particular obstacles that women encounter in certain fields that are dominated by males, as well as the significance of resolving gender differences in STEM recruiting and leadership positions.

By charting these clusters, VOSviewer not only highlights the major ideas in the literature but also offers a helpful manual for comprehending the changing debates around discrimination, hiring, and diversity in the workplace. By providing a data-driven viewpoint on the connections between important concepts, the network analysis enhances the previous theoretical investigation.

To sum up, the current bibliometric study with VOSviewer provides a strong instrument for charting the complex landscape of research on workplace diversity, hiring procedures, and similarity attraction bias. As it provides a visual and analytical depiction of the literature, it enhances the theoretical arguments presented in previous parts. By highlighting potential future study avenues and the continuous need for more in-depth investigation into these crucial areas, the clusters and their corresponding keywords illuminated the current scholarly discourse.

4. Conclusions

This study shows how similarity attraction bias affects diversity and inclusion in businesses and emphasizes its important role in hiring. The investigation shows that recruiting decisions are influenced by prejudices, which are frequently unconscious and hinder workplace diversity by promoting homogeneity.

By highlighting important themes in the literature including prejudice, gender diversity, and demographic characteristics, the VOSviewer bibliometric analysis offers insights into areas that require more investigation. In order to promote inclusive hiring practices and guarantee more equitable selection procedures, organizations need to

address these biases. Methods to lessen similarity attraction bias, such as digital tools and awareness training for HR professionals, should be investigated in future studies.

References

1. Bach, S., 2005. *Managing Human Resources.* Blackwell Publishing.
2. Bergström, O. and Knights, D., 2016. *Organizational discourse and subjectivity: Subjectification during processes of recruitment.* Human Relations, 59(3), pp. 351-377. Available at: https://doi.org/10.1177/0018726706064179.
3. Butt, I.A. and Zeb, N., 2016. *Recruitment and Selection Decisions of SMEs*. International Journal of Management Sciences and Business Research, 5(3), pp. 41-52.
4. Byrne, D., 1971. *The Attraction Paradigm.* Academic Press.
5. Byrne, D. and Nelson, D., 1965. *Attraction as a linear function of proportion of positive reinforcements*. Journal of Personality and Social Psychology, 1(6), pp. 659-663. Available at: https://doi.org/10.1037/h0022073.
6. Cruich, A.F., 2014. *Recruitment Officer duties*. Career Trend [Online]. Available at: http://www.ehow.com/list_6600684_recruitment-officer-duties.html. [Accessed 10 October 2024].
7. Fiske, S.T., Cuddy, A.J., Glick, P. and Xu, J., 2002. *A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition.* Journal of Personality and Social Psychology, 82(6), pp. 878-902. Available at: https://doi.org/10.1037/0022-3514.82.6.878.
8. Fulmer, I.S. and Ployhart, R.E., 2014. *"Our Most Important Asset": A Multidisciplinary/Multilevel Review of Human Capital Valuation for Research and Practice.* Journal of Management, 40(1), pp. 161-192. Available at: https://doi.org/10.1177/0149206313511271.
9. Gilch, P.M. and Sieweke, J., 2021. *Recruiting digital talent: The strategic role of recruitment in organisations' digital transformation.* German Journal of Human Resource Management, 35(1), pp. 53-82. Available at: https://doi.org/10.1177/2397002220952734.
10. Gladwell, M., 2005. *Blink, the power of thinking without thinking*. Back Bay Books, Little Brown.
11. Goldberg, C., Riordan, C.M. and Zhang, L., 2008. *Employees' Perceptions of their Leaders: Is Being Similar Always Better?* Group & Organization Management, 33(3), pp. 330-355. Available at: https://doi.org/10.1177/1059601108318232.
12. Greenwald, A.G. and Krieger, L.H., 2006. *Implicit Bias: Scientific Foundations*. California Law Review, 94(4), pp. 945-967. Available at: https://doi.org/10.2307/20439056**.**
13. Hausman, D., 2012. *How Congress Could Reduce Job Discrimination by Promoting Anonymous Hiring*. Stanford Law Review, 64(5), pp. 1343-1369.
14. Ito, T.A. and Bartholow, B.D., 2009. *The neural correlates of race*. Trends in Cognitive Science, 13(12), pp. 524-531. Available at: https://doi.org/10.1016/j.tics.2009.10.002.
15. Johnson, D. and Levin, S., 2009. *The tragedy of cognition: psychological biases and environmental inaction*. Current Science, 97(11), pp. 1593-1603.
16. Koivunen, S., Olsson, T., Olshannikova, E. and Lindberg, A., 2019. *Understanding Decision-Making in Recruitment: Opportunities and Challenges for Information Technology*. Human-Computer Interaction, 3(242), pp. 1-15. Available at: https://doi.org/10.1145/3361123.

17. Kulkarni, M. and Nithyanand, S., 2013. *Social influence and job choice Decisions*. Employee Relations, 35(2), pp. 139-156. Available at: https://doi.org/10.1108/01425451311287844.

18. Leopold, J., 2002. *Human Resources in Organizations*. Pearson Education Limited.

19. Lieberman, M.D., Rock, D., Halvorson, H.G. and Cox, C., 2015. *Breaking Bias Updated: The SEEDS Model*. NeuroLeadership Journal, 6(1), pp. 1-19.

20. Neamțu, F. (2013). Impact Factors in Assimilation and Operationalization of the Concept of E-Government. *Public Administration & Regional Studies,* 2(12). www.pars.fsjsp.ugal.ro/pdf/2-2013/2(12)2013-5.pdf

21. Neamțu, F. and Naforniță, R. (2022), "Some Reflections Concerning the Digitalization of Public Administration in Romania", *Economy Transdisciplinarity Cognition,* 25(1), pp.26-29.
https://www.proquest.com/docview/2765926633?sourcetype=Scholarly%20Journals

22. Peters, L.H. and Terborg, J.R., 1975. *The effects of temporal placement of unfavorable information and of attitude similarity on personnel selection decisions*. Organizational Behavior and Human Performance, 13(2), pp. 279-293. Available at: https://doi.org/10.1016/0030-5073(75)90050-1.

23. Pfieffelmann, B., Wagner, S.H. and Libkuman, T., 2010. *Recruiting on Corporate Web Sites: Perceptions of fit and attraction*. International Journal of Selection and Assessment, 18(1), pp. 40-47. Available at: https://doi.org/10.1111/j.1468-2389.2010.00487.x.

24. Raghavan, M., Barocas, S., Kleinberg, J.M. and Levy, K., 2019. *Mitigating Bias in Algorithmic Hiring: Evaluating Claims and Practices.* Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency, 52, pp. 469-481. Available at: https://doi.org/10.48550/arXiv.1906.09208**.**

25. Schaller, M., Park, J.H. and Mueller, A., 2003. *Fear of the dark: Interactive effects of beliefs about danger and ambient darkness on ethnic stereotypes*. Personality and Social Psychology Bulletin, 29(5), pp. 637-649. Available at: https://doi.org/10.1177/0146167203029005008**.**

26. Sherif, M., Harvey, O., White, B.J., Hood, W.R. and Sherif, C.W., 1961. *Intergroup cooperation and competition: The Robbers Cave experiment.* University Book Exchange.

27. Van Bavel, J.J., Packer, D.J. and Cunningham, W.A., 2008. *The neural substrates of in-group bias: A functional magnetic resonance imaging investigation*. Psychological Science, 19(11), pp. 1131-1139. Available at: https://doi.org/10.1111/j.1467-9280.2008.02214.x.