

Similarities and Differences in the Structure and Interpretation of Empowerment and Job Satisfaction between Minority and Majority Faculty Members

Jordan Lasker and Jon McNaughtan

Volume 18, Number 2, 2022

URI: <https://id.erudit.org/iderudit/1092414ar>
DOI: <https://doi.org/10.22230/ijep.2022v18n2a1249>

[See table of contents](#)

Publisher(s)

Simon Fraser University, University of Delaware, Phi Delta Kappa International

ISSN

1555-5062 (digital)

[Explore this journal](#)

Article abstract

Faculty empowerment is a more important topic today than ever before, as faculty roles have become increasingly complex. Moreover, an increase in minority faculty has presented universities with the need to understand the complex interactions between demographics and empowerment to better promote employees' well-being. Past research has found that racial majority and minority faculty perceive their experiences as faculty differently. In this study, we used an empowerment framework and structural equation modeling to investigate similarities and differences in workplace empowerment for a sample of 720 racial majority and minority faculty members. Empowerment was largely similar for majority and minority faculty members, but the construct of self-determination had different meanings for minority faculty members, and it was more strongly related to trust in their institutions and the personal consequences of their work. Moreover, minority faculty members' beliefs about their capabilities, the specialness of their work, and their ability to make decisions about their work were more important for efficacy, meaning, and self-determination than they were for majority faculty members.

Cite this article

Lasker, J. & McNaughtan, J. (2022). Similarities and Differences in the Structure and Interpretation of Empowerment and Job Satisfaction between Minority and Majority Faculty Members. *International Journal of Education Policy and Leadership*, 18(2), 20–35. <https://doi.org/10.22230/ijep.2022v18n2a1249>

Copyright © Jordan Lasker and Jon McNaughtan, 2022



This document is protected by copyright law. Use of the services of Érudit (including reproduction) is subject to its terms and conditions, which can be viewed online.

<https://apropos.erudit.org/en/users/policy-on-use/>

érudit

This article is disseminated and preserved by Érudit.

Érudit is a non-profit inter-university consortium of the Université de Montréal, Université Laval, and the Université du Québec à Montréal. Its mission is to promote and disseminate research.

<https://www.erudit.org/en/>

Similarities and Differences in the Structure and Interpretation of Empowerment and Job Satisfaction between Minority and Majority Faculty Members

Jordan Lasker & Jon McNaughtan, *Texas Tech University*

Abstract

Faculty empowerment is a more important topic today than ever before, as faculty roles have become increasingly complex. Moreover, an increase in minority faculty has presented universities with the need to understand the complex interactions between demographics and empowerment to better promote employees' well-being. Past research has found that racial majority and minority faculty perceive their experiences as faculty differently. In this study, we used an empowerment framework and structural equation modeling to investigate similarities and differences in workplace empowerment for a sample of 720 racial majority and minority faculty members. Empowerment was largely similar for majority and minority faculty members, but the construct of self-determination had different meanings for minority faculty members, and it was more strongly related to trust in their institutions and the personal consequences of their work. Moreover, minority faculty members' beliefs about their capabilities, the specialness of their work, and their ability to make decisions about their work were more important for efficacy, meaning, and self-determination than they were for majority faculty members.

Résumé

De nos jours, l'autonomisation du corps professoral est un sujet plus important que jamais, dans un contexte où les rôles qu'il est appelé à jouer deviennent de plus en plus complexes. D'autre part, vu le nombre croissant d'enseignants issus de minorités, l'université a besoin de mieux comprendre les rapports complexes entre démogra-

Jordan Lasker & Jon McNaughtan. (2022). Similarities and Differences in the Structure and Interpretation of Empowerment and Job Satisfaction between Minority and Majority Faculty Members. *International Journal of Education Policy & Leadership* 18(2). URL: <http://journals.sfu.ca/ijepl/index.php/ijepl/article/view/1249> doi:10.22230/ijepl.2022v18n2a1249

IJEPL is a joint publication of the Faculty of Education at **Simon Fraser University**, the **University of Delaware**, and **PDK International**. By virtue of their appearance in this open access journal, articles are free to use, with proper attribution in educational and other non-commercial settings 90 days after initial publication. Copyright for articles published in IJEPL is retained by the authors. More information is available on the IJEPL website: <http://www.ijepl.org>



phie et autonomisation afin de mieux assurer le bien-être de ses employés. Certaines études ont déjà observé que les majorités perçoivent leur vécu en milieu universitaire de manière différente que les minorités visibles. Dans l'étude actuelle, nous utilisons un cadre d'autonomisation et la modélisation d'équations structurelles afin d'enquêter sur les ressemblances et différences relatives à l'autonomisation au travail dans un échantillon de 720 universitaires de majorités et de minorités visibles. En gros, le niveau d'autonomisation est semblable pour les universitaires majoritaires et minoritaires, mais l'autodétermination a un sens différent pour les minoritaires, celle-ci étant étroitement liée à la confiance qu'ils ont dans leurs institutions et aux conséquences personnelles de leur travail. En outre, comparée à celle des majoritaires, l'attitude des universitaires minoritaires envers leurs propres capacités, le caractère unique de leur travail et leur liberté de prendre des décisions sur leur travail a un plus grand effet sur leur efficacité, le sens qu'ils prêtent à leur travail et leur autodétermination.

Keywords / Mots clés : academia, critical race theory, empowerment, faculty, structural equation modeling / milieu universitaire, théorie critique de la race, autonomisation, corps professoral, modélisation d'équations structurelles

Introduction

Unique compared to other roles in higher education, faculty have significant autonomy in both the work they choose to do and the ways they carry out their tasks (McNaughtan, Eicke, Thacker, & Freeman, 2021). Traditional faculty work includes teaching, research, and service that align with faculty disciplinary training or college needs (Lawrence, Ott, & Bell, 2012). In each of these roles, there is little oversight. Focusing on teaching, for example, faculty are part of the process to identify the courses they will instruct, and they typically have authority to create or adjust the content of courses to align with their view of the subject matter. For research, faculty direct their own agenda and can select the topics they choose to analyze. Finally, regarding service responsibilities, faculty can be assigned specific tasks, but in most cases, they can accept or reject those opportunities depending on their interests. Each of these examples highlights the autonomy faculty enjoy.

Some scholars have focused research on this autonomy, seeking to break it into separate concepts using the empowerment framework centered on the construct of satisfaction (McNaughtan, García, Garza & Harwood, 2019). Positive job satisfaction has been found to be associated with well-being (Böckerman, Bryson & Ilmakunnas, 2012), productivity (Fisher, 2003), and overall organizational performance (Griffin et al., 2007); in contrast, dissatisfaction results in absenteeism, negative engagement, burnout, and institutional ineffectiveness (Crosmer, 2009; Watts & Robertson, 2011). In research on higher education staff and faculty aimed at understanding constructs associated with empowerment, it has been found that, in the aggregate, empowerment is a better predictor of satisfaction than even work conditions (McNaughtan et al., 2019), and that select empowerment constructs have been found to be more strongly associated with satisfaction than others (Aithal, 2015; McNaughtan et al.,

2021; Taylor, Beck, Lahey, & Froyd, 2017), illustrating the need for additional research on the role of empowerment in higher education.

In this study, we further engaged with the empowerment framework and sought to advance that work by analyzing the relationships between concepts within it (Spreitzer, 1995; Whetten & Cameron, 2014) and faculty satisfaction, with specific interest on differences between racial majority and minoritized populations. Research in this space has not taken the needed critical lens to understand how empowerment may be experienced differently by members of different racial groups, and leaders within higher education should be more intentional in how they support and develop policy focused on faculty work. The sample for this study came from a unique dataset of 766 tenured faculty from 193 institutions across 20 randomly selected states, which allowed us to ensure a diverse array of experiences and a large enough sample to split the group into majority and minoritized populations for analysis. We employed a multigroup structural equation modeling (SEM) approach for this analysis to allow for comparisons between groups and identified key differences in how majority and minoritized faculty experience empowerment.

Background

Research on empowerment within the field of higher education has increased over the last decade (McNaughtan et al., 2021; Youn & Price, 2009). Results of this work have illustrated the power that empowerment can have in increasing employee satisfaction, retention, and engagement (Whetten & Cameron, 2014; Lawrence et al., 2012; McNaughtan, Thacker, Eicke, & Freeman, 2022). Despite this growing body of work, little has focused on the potentially different effects of empowerment constructs by sex, race, or age. Critical perspectives could provide administrators with a more nuanced understanding and better approaches to supporting, recruiting, and retaining employees from historically and presently marginalized backgrounds. To frame this study, we have provided a brief review of the research on faculty empowerment and faculty satisfaction, and have provided some context for how faculty experiences differ by race.

Faculty satisfaction

There is no shortage of research focused on the importance of job satisfaction in the workplace (for a review see, Aziri, 2011; Judge, Weiss, Kammeyer-Mueller & Hulin, 2017; Zhu, 2013). The impact of satisfaction for employees has been observed in their productivity (Fisher, 2003), organizational performance (Griffin et al., 2007), and general well-being (Zhu, 2013). In higher education specifically, faculty satisfaction has proved critical to reduce turnover, increase the quality of recruited students, and augment the general health of faculty (Aithal, 2015; Bozeman & Gaughan, 2011). As institutions seek to retain and recruit diverse faculty, while increasing the quality of students, identifying ways to increase satisfaction will be critical (Capelleras, 2005; Seifert & Umbach, 2008).

Research has uncovered several potential approaches to enhance faculty satisfaction (Bozeman & Gaughan, 2011; Machado-Taylor et al., 2016). Many scholars have argued that intrinsic factors are more critical to job satisfaction than extrinsic

ones (Bozeman & Gaughan, 2011; Holland, 2019; Neumann & Finaly-Neumann, 1991). For example, Neumann and Finaly-Neumann (1991) found that faculty-reported satisfaction tended to be more strongly related to personal achievement, recognition, and meaning than other external forces. McNaughtan et al. (2019) found that among academic staff, feelings of empowerment were more strongly associated with job satisfaction than were working conditions. Stated differently, faculty were motivated by intrinsic feelings more so than their working environment (Holland, 2019). In a review of the literature on faculty job satisfaction, Hagedorn (2000) found that focusing on motivation yielded the highest relative impact on satisfaction, followed by focusing on demographics, and finally, environmental factors.

In contrast, some work has found that external motivation is a stronger predictor of satisfaction (see Ali & Akhter, 2009). For example, one study found that employee benefits, awards, and engagement with external organizations had strong associations with faculty engagement. Though a popular opinion, there has been little work that has found that compensation is an overriding motivator; however, some research has found that perceptions of equity and requisite pay for performance are consequential drivers of employee satisfaction (Bozeman & Gaughan, 2011; Hagedorn, 1996). As discussed earlier, there is no shortage of work in this area which has resulted in contrasting results, demonstrating the complexity involved in understanding job satisfaction generally (Griffin et al., 2007) and faculty job satisfaction specifically (Hagedorn, 2000; McNaughtan et al., 2021).

Faculty satisfaction by race

In a review of faculty satisfaction by race, Seifert and Umbach (2008) presented work from several other researchers highlighting the varied relationships between satisfaction and race. For example, Ponjuan (2005) found that Hispanic faculty were less satisfied with faculty work than White faculty. Aguirre (2000) found that faculty of color were often asked to serve in dual appointments or teach service courses as opposed to higher-level major courses, which may have led to decreases in satisfaction. Seifert and Umbach (2008) used the National Study of Postsecondary Faculty to further highlight differences between races by various job-related variables. In their study, African American faculty valued the concept of convenience as a critical part of their satisfaction and views about equitable treatment (e.g., task assignment, salary, and autonomy) were perceived by marginalized faculty as likewise critical to satisfaction.

In a national study focused on job satisfaction by race, Ali & Akhter (2009) found that among Asian faculty there are stronger relationships between achievement domains than for faculty of other races/ethnicities. Similar work has found additional differences in faculty satisfaction by race (see Casad et al., 2021; Griffin, 2019), but further work is needed in this area to connect its varied results theoretically, methodologically, and across samples and datasets.

Theoretical framing

For this study we employed the empowerment framework validated by Spreitzer (1995) that was further developed by Whetten and Cameron (2014). As discussed by McNaughtan et al. (2021), empowerment “is the process of assigning tasks to

employees that allows those employees to own the work they desire to complete” (p. 6). Whetten and Cameron (2014) discussed five core dimensions of empowerment, which we used in this study. When these dimensions have been present, research on employees in many diverse positions and organizations has found higher levels of creativity, motivation, productivity, responsibility, and sense of purpose among employees (Albrecht & Andretta, 2011; Quinn & Spreitzer, 1997; Whetten & Cameron, 2014; Zhang & Bartol, 2010).

Each dimension may be critical to achieve the positive outcomes of empowerment (McNaughtan et al., 2019). The first dimension of empowerment is self-efficacy, which refers to the internal belief that an individual can complete their assigned tasks. Trust is the second dimension and it encapsulates the relationship(s) between the person being asked to complete a task and the leader(s) asking. Third is meaning, which refers to individual's perceptions of the purpose and impact of tasks. The fourth dimension of empowerment is personal consequence, which refers to a person's perception of how their contribution to the task or project is needed. Finally, the last dimension of empowerment is self-determination, which is the freedom of choice an individual has when completing a task. Though conceptually different, there is connection between the dimensions of empowerment. For example, helping someone develop self-efficacy may require higher levels of trust between an employee and a leader.

In this study we applied the empowerment framework to better understand how faculty members' racial identities may have been associated with different dimensions of empowerment and how those relationships may have been connected to job satisfaction. To this end, our study was guided by two main research questions:

RQ1: Are there differences in the strength of relationships between observed perspectives, or the responses of participants, and dimensions of empowerment between majority and minoritized faculty?

RQ2: Are there differences between majority and minoritized faculty when considering the relationships between empowerment constructs and job satisfaction?

Data and methods

Data for this study were collected from a national sample of tenured faculty members (i.e., associate and full professors) from four-year institutions in the United States that were recipients of Title IV funding (i.e., federal financial aid). We focused on tenured faculty to ensure that there was a similar amount of shared experience in our sample to allow participants to reflect on their empowerment experiences. To identify faculty, we randomly selected 20 states in the United States and then used the Integrated Postsecondary Education Data System (IPEDS) to identify their universities. We then retrieved the contact information for faculty by manually scraping institutional faculty listings online. In some cases, we could pull full directories for the institution, but for some institutions we went to each college directory to identify faculty.

Starting in Spring 2018 and concluding in Fall 2019, we contacted faculty across a total of 193 institutions within the 20 states in our sample. After accounting for rejected emails and survey nonresponse, we arrived at a sample of 1,311 of which 913 surveys were completed. In addition, 142 survey respondents were either assistant

professors or adjunct faculty, leaving a total of 771 responses that fit our criteria for analysis (i.e., tenured associate or full professors).

The data described above have been used in a prior analysis (McNaughtan et al., 2021) and the data is publicly available at request from the Center for Research on Leadership and Education. The empowerment model used in prior work is like the one used in this study; however, in this model we used all the available variables intended to represent self-efficacy, personal consequence, self-determination, trust, meaning, and satisfaction. This meant that rather than three, three, three, three, three, and two indicators, we used four, four, four, four, four, and three, respectively. Our grouping variable was White (majority) or non-White (minority) race and individuals of “Missing” or “Prefer to not disclose” racial identification were omitted.

Analytical Sample

While the total number of respondents was 771, due to missing data, our analytic sample was 721. In addition, we first tried to divide our non-White group into different racial categories, but due to sample size limitations we were unable to conduct analyses on smaller groups.

Our total sample sizes for our multi-group confirmatory factor analysis (MGCFA) were 605 for the White group and 115 for the non-White group. Fifty percent of the White group was female, compared with 38% of the non-White group. This difference was conventionally significant ($p = 0.028$) but was not with our scaled p -value.¹ Moreover, there was measurement invariance with respect to sex and—as expected with that in mind—our results were robust correcting for it, as well as number of years as a professor and field of study. We did not collect age data.

Analytical Approach

We utilized MGCFA to assess the equivalence of a structural equation model (SEM) relating measures of employee empowerment to workplace satisfaction. Our modeling involved two steps, measurement and structural modeling. The measurement side of our analysis involved fitting a model in which we equated the meanings of a variety of empowerment measures, then equated the meanings of the *levels* of responses to those measures, followed by equating the residual variances. These are typically referred to as metric, scalar, and strict invariance when discussed in the context of MGCFA. The structural modeling (Beaujean, 2014) side of our analysis involved equating the breadths of the constructs we modeled, the relationships among our latent variables, the regressions of the latent variables on workplace satisfaction, and the levels of the constructs in our model. These constraints were placed, respectively, on the latent variances and covariances, regressions, and means.

MGCFA results are frequently understood dichotomously, as either showing evidence of a difference in the interpretation of a psychological instrument or evidence against that proposition. This interpretation, however, is incorrect, as these differences—typically dubbed “bias”—are a matter of magnitude. To this end, many MGCFA users utilize models in which the most biased parameters are left free to differ while unbiased parameters remain equated between groups (Putnick & Bornstein, 2016). Additionally, others go beyond even these so-called “partially in-

variant” models to estimate the effect biased parameters have on different aspects of the variables used for the model (Millsap, 2005; Gunn, Grimm, & Edwards, 2020). We aimed to do both by fitting MGCFA and freeing biased parameters before estimating the effects of differences in the interpretation of the variables in our model.

In terms of model fitting for our MGCFA, we utilized a hierarchy of model fit indices to assess whether we had detected bias. Typical indicators of a biased model are changes in the comparative fit index (CFI) of ≤ -0.01 (Cheung & Rensvold, 2002), a change in root mean square error of approximation (RMSEA) of ≤ -0.015 (Chen, 2007), or a p -value below 0.05. Unfortunately, model fit indices are sensitive to nonnormality, sample sizes, and unequal sample sizes, among other things (Hu & Bentler, 1999; Chen, 2007; Nye & Drasgow, 2011a; Ropovik, 2015; Putnick & Bornstein, 2016). As such, we utilized the aforementioned guidelines but weighted χ^2 as most important, since it is the most sensitive model fit index (Ropovik, 2015), then we judged our models based on CFI, and finally, RMSEA. To select a justifiable p -value cutoff below which we would consider models to significantly differ, we utilized the formula provided by Naaman (2016) to arrive at a sample size-adjusted p -value cutoff of 0.0001756887.

When selecting partially invariant models, we iteratively released parameters from most to least biased, as indicated by their effects on model fit. We did this until, for example, a partial metric model yielded an insignificant p -value and acceptable CFI and RMSEA when compared with the preceding configural model. After fitting partially invariant models, we computed effect sizes to estimate the degree differences in loadings and intercepts affected the means of the manifest variables in the model. The most common method for doing this in the literature is dMACS (Nye & Drasgow, 2011b; Nye, Bradburn, Olenick, Bialko, & Drasgow, 2019), but dMACS may have performance inferior to another measure, UDI_2 (Gunn et al., 2020). Because of this, we elected to use the latter measure. Problematically, UDI_2 is an unsigned measure, meaning that it describes the appropriate magnitude but not direction of measurement bias. The signed version, SDI_2 , provides the correct direction of the effect but not the proper magnitude. To circumvent the problems with each of these measures, we combined them into a new measure we dubbed “ $SUDI_2$ ” which is given as

$$(1) SUDI_2 = \begin{cases} UDI_2 & \text{if } SDI_2 \geq 0 \\ UDI_2 \times -1 & \text{if } SDI_2 < 0 \end{cases}$$

This quantity provides both the correct magnitude and direction of the effects of bias in the loadings and intercepts of a factor model on the means of the manifest variables. It is not explicitly necessary, as both SDI_2 and UDI_2 can be reported and our conclusions can be drawn from those independently, but this simplifies the presentation of results and as such we have relegated the separate reporting of SDI_2 and UDI_2 to our supplementary materials. For bias in the regressions of the constructs on satisfaction, we elected to simply compare the relative levels of the coefficients by group.

Measures

McNaughtan et al. (2021) describe the measures utilized in this study, but we have briefly summarized these in Table 1. For a fuller description of the variables we used,

Table 1. Survey questions

Factor/indicator	Responses	White Mean (SD)	Non-White Mean (SD)	Factor Loading*
Trust I trust my coworkers to be completely honest with me I trust my coworkers to share important information with me I trust my coworkers to keep the promises they make I believe that my coworkers care about my well-being	1 = Strongly disagree 2 = Disagree 3 = Somewhat disagree 4 = Neither agree nor disagree 5 = Somewhat agree 6 = Agree 7 = Strongly agree	4.58 (1.69) 4.76 (1.73) 4.73 (1.69) 4.97 (1.74)	4.50 (1.74) 4.77 (1.67) 4.71 (1.60) 4.96 (1.65)	.948 .893 .927 .925 .889
Self-determination I have significant autonomy in determining how I do my job I can decide how to go about doing my work I have opportunity for independence in how I do my work I have a chance to use personal initiative in carrying out my work		6.24 (1.00) 6.32 (0.90) 6.16 (1.10) 6.34 (0.90)	6.03 (1.22) 6.10 (1.24) 5.91 (1.28) 5.99 (1.20)	.886 .743 .753 (.883) .862 .787
Personal consequence I have significant impact on what happens in my work unit I have significant influence over what happens in my work unit My opinion counts in my work unit's decision making I have a great deal of control over what happens in my work unit		5.17 (1.65) 5.10 (1.66) 4.91 (1.72) 5.13 (1.75)	4.92 (1.63) 5.05 (1.60) 4.89 (1.71) 5.12 (1.80)	.906 .781 .855 .910 .800
Self-efficacy I am confident about my ability to do my work I am confident in my ability to successfully perform my work I have mastered the skills necessary to do my work I am confident in my capabilities to successfully perform my work		6.44 (0.78) 6.48 (0.77) 6.26 (0.86) 6.44 (0.79)	6.46 (0.92) 6.37 (1.04) 6.28 (0.85) 6.50 (0.96)	.831 .811 .771 .547 .771 (.924)
Meaning My work activities are personally meaningful to me I care about what I do in my work The work I do has special meaning and importance to me The work I do is very important to me		6.46 (0.77) 6.20 (0.99) 6.55 (0.74) 6.33 (0.92)	6.39 (1.02) 6.14 (1.08) 6.48 (0.90) 6.33 (1.09)	.874 .901 .768 .754 (.891) .717
Satisfaction Please rate your level of satisfaction with the people you work with Please rate your level of satisfaction with the organization you work for Please rate your level of satisfaction with your own work	1 = Extremely dissatisfied 2 = Somewhat satisfied 3 = Neither satisfied nor dissatisfied 4 = Somewhat satisfied 5 = Extremely satisfied	3.78 (1.15) 3.28 (1.24) 4.24 (0.92)	3.70 (1.09) 3.22 (1.25) 0.93)	.709 .835 .611 .553

Notes: * Indicates that loadings differed for White and Non-White faculty. White faculty loadings are on the left of the slash and non-White faculty loadings are on the right. Cronbach's is given next to factor names. All loadings given are standardized, but unstandardized loadings were provided in the supplementary materials.

please consult that paper. Complete summary statistics, in addition to full model outputs for each model we ran, are available in the supplementary materials. Factor analysis was deemed appropriate based on significant results with Bartlett’s test of sphericity. Each construct was indicated by multiple theoretically appropriate variables and the interpretations of those variables were supported by strong and relatively homogeneous factor loadings, local independence, and good model fit.

Missing Data

The MGCFA results presented below were based on unimputed data as there was very little missingness (30 in the White group, or 4.7%, and 6 in the non-White group, or 5.2%). Our results were robust to maximum likelihood imputation, iterative robust model-based imputation, and pairwise imputation. Since missing data were not a concern and the degree of missingness was too minute to meaningfully affect our power, we did not consider the topic concerning.

Limitations

The most major limitations of our data pertained to our sample size. This issue was particularly onerous in as much as it precluded analysis with respect to specific racial groups besides Whites. But beyond its effect on our ability to draw inferences or provide specific hypotheses, it also made our estimates variously inaccurate, and we could not plausibly omit the possibility that our observations of psychometric bias were a result of finite sample bias.

Results

The model fits for our MGCFA are presented in Table 2.² As can be seen in that table, partial models were only required for the metric stage of measurement and the latent variance and covariance stages of the structural modeling. All models and resulting parameter differences were significant at our prescribed alpha of 0.000176 and all model parameters are provided in the supplementary materials.

Table 2. Model fit indices

Model	p-value	CFI	RMSEA	Freed variable
Configural	-	0.993	0.025	
Metric	< Cutoff	0.989	0.032	
Partial metric	0.000385	0.992	0.028	Efficacy, meaning, and self-determination loadings†
Scalar	0.976171	0.992	0.026	
Strict	0.946266	0.993	0.025	
Latent variances	< Cutoff	0.992	0.027	
Partial latent variances	0.011928	0.992	0.026	Self-determination
Latent covariances	< Cutoff	0.988	0.032	
Partial latent covariances	0.001212	0.991	0.027	Trust and personal consequence to self-determination
Regressions	0.000315	0.990	0.029	
Means	0.002864	0.989	0.030	

Notes: Models are nested below the preceding one; Our p-value cutoff was 0.000176; † One each

To fit the partial metric model, the variables [Work Capability], [Work Special], and [Decide My Work] had to have their loadings freed. These freed loadings were uniformly higher in the non-White group, such that those variables were more strongly related to the constructs they were intended to measure. For example, [Work Capability] had a loading of 0.771 in the White group compared with 0.924 in the non-White group. Similarly, the White loading for [Work Special] was 0.754, compared with 0.891 in the non-White group, and for [Decide my Work], the White loading was 0.753 versus 0.883 in the non-White group. The differences were quite consistent, despite their targets being different factors. This suggested that each of these three variables was a far better indicator of their respective factors (efficacy, meaning, and self-determination) for non-White faculty.

The variance of the self-determination factor was considerably greater in the non-White group, indicating greater construct breadth in that group. In the White group, the variance was 0.543, compared with 0.877 for the non-White group. In other words, the non-White faculty group had 62% greater variance in what constituted self-determination. Where self-determination was defined relatively narrowly for White faculty, it would have had to take on a different set of meanings for non-White faculty members.

The factor covariances between self-determination and both the trust and personal consequence factors had to be freed for the partial latent covariances model. Trust was more related to both factors in the non-White group. The magnitude of this difference was substantial. For example, the relationship between trust and self-determination was 0.383 for the White group and 0.758 for the non-White group, indicating a 98% greater relationship between the two constructs for non-White faculty members; in other words, trust was nearly twice as important for self-determination for non-White faculty. Personal consequences were likewise, but less markedly, more important as predictors of self-determination for non-White faculty. The relationship was 0.560 for White faculty and 0.650 for non-White faculty, meaning that personal consequence may be a 16% more important determinant of self-determination for non-White members of faculty.

The levels of the freed parameters and the $SUDI_2$ effects are listed in Tables 3 and 4. Across the board, [Work Capability], [Work Special], and [Decide my Work] were greater for non-White members of faculty at the same levels of responding, as indicated by the positive values of $SUDI_2$. As such, if the average score for a sum of self-efficacy assessing items including [Work Capability] is 1 for White faculty and 1 for non-White faculty, the level of self-efficacy for non-White faculty will be over-

estimated and, as a result, surveyors will come to a faulty understanding of the sentiments expressed by non-White faculty members. This result occurs because the responses to the questions forming that score do not mean the same things to White and non-White faculty, and non-

Table 3. $SUDI_2$

Variable	Effect size
[Work Capability]	0.1594
[Work Special]	0.0414
[Decide my Work]	0.1222

Notes: Units are equivalent to Cohen's *d*. Positive values indicate that psychometric bias elevated the values of those variables in the non-White group.

White faculty members give slightly elevated responses at all levels of the underlying traits. Faculty members that do not acknowledge this may, as a result, fail to observe race-related empowerment issues.

Table 4. Freed parameter levels

Parameter	White	Non-White
Loadings		
[Work Capability] on efficacy	0.771 (0.855)	0.924 (1.711)
[Work Special] on meaning	0.754 (1.185)	0.891 (2.027)
[Decide my Work] on self-determination	0.753 (0.896)	0.883 (1.160)
Latent variances		
Self-determination	0.543	0.877
Factor Covariances		
Trust with self-determination	0.383 (0.426)	0.537 (0.758)
Personal consequence with self-determination	0.560 (0.524)	0.650 (0.774)

Notes: Loadings and factor covariances are standardized betas with unstandardized betas in parentheses.

Discussion

Our results were methodologically novel and important for the empowerment literature. To our knowledge, differences in how empowerment questionnaires were interpreted by different groups have not been investigated, much less with respect to race. As a result, from a purely methodological standpoint, our results merit discussion. From a theoretical point of view, they may also find considerable utility in this literature.

Firstly, we discovered evidence of measurement bias when comparing empowerment responses given by White and non-White members of faculty. Specifically, we found that three of the variables used to index Efficacy, Meaning, and Self-Determination were biased. These variables were, in each case, much more strongly related to their respective constructs among Non-White faculty. In no particular order, the [Work Capability] variable asked participants about their confidence in their own ability to perform their work; [Work Special] asked participants whether they believe the work they do has a special meaning and importance to them, and; [Decide my Work] asked participants if they believe they can decide how to go about doing their work. Because each question was tied more strongly to Efficacy, Meaning, and Self-Determination in the non-White faculty group, they were also more strongly related to beliefs about personal autonomy, independence in work, confidence in their ability to do their work, their mastery of their own skills, the degree to which they considered their work meaningful, and, not to be minimized, the degree to which they care about what they did in their work.

One potential perceived implication of these findings could be that there is a need to better align the experiences of White and non-White faculty around workplace-relevant areas related to empowerment constructs. However, we urge caution as only one dimension was significantly different on all levels: Self-Determination. In addition to biased interpretations for those three variables, the latent variance for Self-Determination was biased, such that it was larger among non-White faculty. This suggests that the construct is broader, that there were additional influences on it in that

group that were missing among White faculty. If we are to intervene on areas where workplace experience might differ, we need to do so with respect to Self-Determination, but as to Efficacy and Meaning, differences with respect to those variables lie in their shared antecedents and those of [Work Capability] and [Work Special].

The effect of differences in interpretations for the variables [Work Capability], [Decide my Work], and [Work Special] was not expected. White and non-White faculty with the same levels of Self-Determination, Efficacy, and Meaning provided different responses for those indicators, such that non-White faculty consistently reported apparently greater confidence in their ability to perform their work, a greater belief in the special meaning and importance of their work, and a greater belief in their freedom to decide their work. This illustrated a potential opportunity for higher education leaders to ensure that all faculty receive the same messaging and support to develop their confidence and meaning in their work.

Two final sources of bias were observed, and these were in the factor covariances. In the non-White group, Trust and Personal Consequence were more strongly related to Self-Determination. The Trust construct primarily involved trust in others—coworkers, the information they provide, that they care for the surveyed person, etc.—and the Personal Consequence construct involved beliefs about one's impacts on their work unit and how much their opinion counted within that unit. For non-Whites, these may matter more for Self-Determination because of differences in a wide array of antecedents to Trust and Personal Consequence, like a person's share of influence in their work group. If those antecedents are lacking, they may not feel self-determined for the simple reason that self-determination does not matter for them as much as it does for White members of faculty.

Our results provide additional insight into the complexity of developing faculty satisfaction by racial groups and in general. Focusing first on race, the empowerment model shows the importance of trust for faculty of color. This dimension of empowerment requires an external partner to develop that relationship with and provides evidence for the work of Ali & Akhter (2009) and Seifert & Umbach (2008). However, the second most significant relationship found in this analysis was between the dimension of self-determination and satisfaction, which could be more internally driven. In short, the empowerment framework provides a strong model for use that can encapsulate both the internal and external relationships discussed here.

Implications for Practice

Three main implications for higher education leaders resulted from this study. First, leaders need to use a critical lens when seeking to empower employees. Unlike previous work engaging with the empowerment framework in higher education (McNaughtan et al., 2021), this study illustrated how at the item level, constructs like “meaning” and “self-determination” are perceived differently by faculty from different racial and ethnic backgrounds. Higher education leaders should look for potential inequities and strive to build empowerment into faculty work utilizing the methodological knowledge employed in this study.

Second, a central component of empowerment regardless of race/ethnicity was trust. Leaders need to critically reflect on their efforts to develop trust with their fa-

culty because what they see from survey results may be wrong in the absence of measurement information like what we have provided. This can be done through engagement with faculty, but most importantly through the expression of authenticity and integrity. Leaders should strive for transparency and look for opportunities to share information with their faculty to ensure that faculty have a clear view of the decisions being made by leadership to strive towards higher levels of trust. This may be especially important for fostering a diverse faculty, as trust was a more important predictor of self-determination for non-White faculty members.

Finally, leaders need to recognize the connection between self-determination and trust, and utilize it. Faculty generally relish their autonomy (Lawrence et al., 2012, McNaughtan et al., 2021), but marginalized faculty were found to be especially in need of additional opportunities to guide their work, as making the belief in their ability to make decisions about their work was far more related to self-determination than it was among White faculty. In addition to enhancing feelings of meaning among faculty, it has also been associated with increased trust. Thus, while empowerment may be experienced differently by faculty members' race/ethnicity, the constructs are still interconnected and should be utilized together to enhance empowerment in general.

Directions for Future Research

This study provided additional insight into the importance of critical quantitative work (Garcia, López, & Vélez, 2018; Stage & Wells, 2014). With that framing, we offer four potential directions for future inquiry. First, this study focused on tenured faculty; future work should also engage with pretenure and contingent faculty to identify potentially different associations with empowerment and faculty satisfaction. This is especially important given the increase in contingent faculty appointments that are disproportionately held by faculty of color (McNaughtan, García, & Nehls, 2017). A critical analysis of the experiences of non-tenure track appointments would be insightful and timely for leaders in higher education.

Second, some past work related to this topic has used more complex measures and theoretical constructs of satisfaction; additional work that continues to explore different aspects and conceptualizations of satisfaction could be helpful. This is especially important given the limitations of existing measures of satisfaction, including their generally low reliability, validity, and limited known utility (van Saane, Sluiter, Verbeek, & Frings-Dresen, 2003). Third, replications are needed. To better understand the complexities of how minoritized faculty understand empowerment compared with White members of faculty, the reliability of the results, in terms of finding bias of this sort and in its specific appearance, needs to be assured.

Finally, qualitative work in this space is necessary to understand more about the lived experiences of faculty around empowerment constructs. Interviews with faculty based on the findings elaborated here that connect their identities and their experiences with leaders regarding trust, self-efficacy, and meaning, for example, could help leaders engage the increasingly diverse faculty ranks. In essence, this is a mixed-methodological enterprise due to the need to garner a greater understanding of the constructs at play and their relationships. When it comes to matters of interpretation, asking people about their interpretations is a clearly useful option.

Conclusion

We compared White and non-White faculty's empowerment experiences in a structural equation model and aimed to assess if that model produced the same meanings for members of either group. That model confirmed that the meaning of several aspects of empowerment differed for minoritized groups when compared with the White majority group. The ways these differences manifested were unexpected and highlight the complexities undergirding faculty experience and the difficulty inherent in intervening to improve experiences, especially for members of faculty who belong to historically disadvantaged groups.

Notes

- i See our online supplement for further details.
- ii The code for our analyses is available at <https://rpubs.com/JLLJ/EPS>.

References

- Aguirre, A. (2000). Women and minority faculty in the academic workplace: Recruitment, retention, and academic culture. *ASHE-ERIC Higher Education Report*, 2(6). URL: <https://eric.ed.gov/?id=ED447752>.
- Aithal, P.S. (2015). Faculty empowerment strategies in higher education institutions. *International Journal of Management, IT and Engineering*, 5(7), 108–115.
- Albrecht, S. L., & Andreetta, M. (2011). The influence of empowering leadership, empowerment and engagement on affective commitment and turnover intentions in community health service workers: Test of a model. *Leadership in Health Services*, 24(3), 228–237. doi:10.1108/17511871111151126
- Ali, T., & Akhter, I. (2009). Job Satisfaction of faculty members in private universities — in context of Bangladesh. *International Business Research* 2, 167–175.
- Aziri, B. (2011). Job satisfaction: A literature review. *Management Research & Practice*, 3(4), pp. 77–86.
- Beaujean, A.A. (2014). *Latent variable modeling using R* (1st ed.). New York, NY: Routledge.
- Bozeman, B., & Gaughan, M. (2011). Job satisfaction among university faculty: Individual, work, and institutional determinants. *The Journal of Higher Education*, 82(2), 154–186. doi:10.1080/00221546.2011.11779090
- Böckerman, P., Bryson, A., & Ilmakunnas, P. (2012). Does high involvement management improve worker wellbeing? *Journal of Economic Behavior & Organization*, 84(2), 660–680. doi:10.1016/j.jebo.2012.09.005
- Capelleras, J. (2005). Attitudes of academic staff towards their job and organisation: An empirical assessment. *Tertiary Education and Management*, 11(2), 147–166. doi:10.1080/13583883.2005.9967144
- Casad, B.J., Franks, J.E., Garasky, C.E., Kittleman, M.M., Roesler, A.C., Hall, D.Y., & Petzel, Z.W. (2021). Gender inequality in academia: Problems and solutions for women faculty in STEM. *Journal of Neuroscience Research*, 99(1), 13–23. doi:10.1002/jnr.24631
- Chen, F.F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 14(3), 464–504. doi:10.1080/10705510701301834
- Cheung, G.W., & Rensvold, R.B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 9(2), 233–255. doi:10.1207/S15328007SEM0902_5
- Crosmer, J.L. (2009). Professional burnout among U.S. full-time university faculty: Implications for worksite health promotion (doctoral dissertation). Denton, TX: Texas Woman's University.

- Fisher, C. D. (2003). Why do lay people believe that satisfaction and performance are correlated? Possible sources of a commonsense theory. *Journal of Organizational Behavior*, 24(6), 753–777. doi:10.1002/job.219
- Garcia, N.M., López, N., & Vélez, V.N. (2018). QuantCrit: Rectifying quantitative methods through critical race theory. *Race Ethnicity and Education*, 21(2), 149–157. doi:10.1080/13613324.2017.1377675
- Griffin, K.A. (2019). Institutional barriers, strategies, and benefits to increasing the representation of women and men of color in the professoriate: Looking beyond the pipeline. *Higher Education: Handbook of Theory and Research*, 35, 1–73.
- Griffin, M.A., Neal, A., & Parker, S.K. (2007). A new model of work role performance: Positive behavior in uncertain and interdependent contexts. *Academy of Management Journal*, 50(2), 327–347. doi:10.5465/amj.2007.24634438
- Gunn, H.J., Grimm, K.J., & Edwards, M.C. (2020). Evaluation of six effect size measures of measurement non-invariance for continuous outcomes. *Structural Equation Modeling: A Multidisciplinary Journal*, 27(4), 503–514. doi:10.1080/10705511.2019.1689507
- Hagedorn, L.S. (2000). Conceptualizing faculty job satisfaction: Components, theories, and outcomes. *New Directions for Institutional Research*, 2000(105), 5–20. doi:10.1002/ir.10501
- Holland, B.A. (1999). Factors and Strategies that Influence Faculty Involvement in Public Service. *Journal of Higher Education Outreach and Engagement*, 4(1), 37–43.
- Hu, L., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. doi:10.1080/10705519909540118
- Judge, T.A., Weiss, H.M., Kammeyer-Mueller, J.D., & Hulin, C.L. (2017). Job attitudes, job satisfaction, and job affect: A century of continuity and of change. *Journal of Applied Psychology*, 102(3), 356–374. doi:10.1037/apl0000181
- Lawrence, J., Ott, M., & Bell, A. (2012). Faculty organizational commitment and citizenship. *Research in Higher Education*, 53(3), 325–352.
- de Lourdes Machado-Taylor, M., Meira Soares, V., Brites, R., Brites Ferreira, J., Farhangmehr, M., Gouveia, O.M.R., & Peterson, M. (2016). Academic job satisfaction and motivation: Findings from a nationwide study in Portuguese higher education. *Studies in Higher Education*, 41(3), 541–559. doi:10.1080/03075079.2014.942265
- McNaughtan, J., Eicke, D., Thacker, R., & Freeman, S. (2021). Trust or self-determination: Understanding the role of tenured faculty empowerment and job satisfaction. *Journal of Higher Education*, 93(1), 137–161. doi:10.1080/00221546.2021.1935601
- McNaughtan, J., García, H. A., Garza, T., & Harwood, Y.R. (2019). Empowering satisfaction: Analyzing the relationship between empowerment, work conditions, and job satisfaction for international center managers. *Tertiary Education and Management*, 25(1), 83–99. doi:10.1007/s11233-018-09016-7
- McNaughtan, J., García, H.A., & Nehls, K. (2017). Understanding the growth of contingent faculty. *New Directions for Institutional Research*, 2017(176), 9–26. doi:10.1002/ir.20241
- McNaughtan, J., Thacker, R., Eicke, D., & Freeman, S. (2022). Committed to their craft: Understanding the relationship between job crafting and work commitment among faculty in the United States. *Higher Education Quarterly*, 76(2), 367–384.
- Millsap, R.E. (2005). Four unresolved problems in studies of factorial invariance. In A. Maydeu-Olivares & J.J. McArdle (Eds.), *Contemporary psychometrics: A festschrift for Roderick P. McDonald* (pp. 153–171). Hillsdale, NJ: Lawrence Erlbaum Associates Publishers.
- Naaman, M. (2016). Almost sure hypothesis testing and a resolution of the Jeffreys-Lindley paradox. *Electronic Journal of Statistics*, 10(1), 1526–1550. doi:10.1214/16-EJS1146
- Neumann, Y., & Finaly-Neumann, E. (1991). Determinants and Correlates of Faculty Burnout in US Research Universities. *Journal of Educational Administration*, 29(3). doi:10.1108/09578239110136645

- Nye, C.D., Bradburn, J., Olenick, J., Bialko, C., & Drasgow, F. (2019). How big are my effects? Examining the magnitude of effect sizes in studies of measurement equivalence. *Organizational Research Methods*, 22(3), 678–709. doi:10.1177/1094428118761122
- Nye, C.D., & Drasgow, F. (2011a). Assessing goodness of fit: Simple rules of thumb simply do not work. *Organizational Research Methods*, 14(3), 548–570. doi:10.1177/1094428110368562
- Nye, C.D., & Drasgow, F. (2011b). Effect size indices for analyses of measurement equivalence: Understanding the practical importance of differences between groups. *Journal of Applied Psychology*, 96(5), 966–980. doi:10.1037/a0022955
- Ponjuan, L. (2005). *Understanding the work lives of faculty of color: Job satisfaction, perception of climate, and intention to leave* [Ph.D., University of Michigan]. <https://www.proquest.com/docview/305456564/abstract/9752AD576CEC45ECPQ/1>
- Putnick, D.L., & Bornstein, M.H. (2016). Measurement invariance conventions and reporting: The state of the art and future directions for psychological research. *Developmental Review* : DR, 41, 71. doi:10.1016/j.dr.2016.06.004
- Quinn, R.E., & Spreitzer, G.M. (1997). The road to empowerment: Seven questions every leader should consider. *Organizational Dynamics*, 26(2), 37–49. doi:10.1016/S0090-2616(97)90004-8
- Ropovik, I. (2015). A cautionary note on testing latent variable models. *Frontiers in Psychology*, 6. doi:10.3389/fpsyg.2015.01715
- Seifert, T.A., & Umbach, P.D. (2008). The effects of faculty demographic characteristics and disciplinary context on dimensions of job satisfaction. *Research in Higher Education*, 49(4), 357–381. doi:10.1007/s11162-007-9084-1
- Spreitzer, G.M. (1995). Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Academy of Management Journal*, 38(5), 1442–1465. doi:10.5465/256865
- Stage, F.K., & Wells, R.S. (2014). Critical quantitative inquiry in context. *New Directions for Institutional Research*, 2013(158), 1–7. doi:10.1002/ir.20041
- Taylor, L.L., Beck, M.I., Lahey, J.N., & Froyd, J.E. (2017). Reducing inequality in higher education: The link between faculty empowerment and climate and retention. *Innovative Higher Education*, 42(5), 391–405.
- van Saane, N., Sluiter, J.K., Verbeek, J.H.A.M., & Frings-Dresen, M.H.W. (2003). Reliability and validity of instruments measuring job satisfaction—A systematic review. *Occupational Medicine*, 53(3), 191–200. doi:10.1093/occmed/kqg038
- Watts, J., & Robertson, N. (2011). Burnout in university teaching staff: A systematic literature review. *Educational Research*, 53(1), 33–50.
- Whetten, D., & Cameron, K. (2014). *Developing management skills: Global edition*. Upper Saddle River, New Jersey: Pearson Higher Ed.
- Youn, T.I.K., & Price, T.M. (2009). Learning from the experience of others: The evolution of faculty tenure and promotion rules in comprehensive institutions. *The Journal of Higher Education*, 80(2), 204–237. doi:10.1353/jhe.0.0041
- Zhang, X., & Bartol, K.M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal*, 53(1), 107–128. doi:10.5465/amj.2010.48037118
- Zhu, Y. (2012). A review of job satisfaction. *Asian Social Science*, 9(1), p. 293. doi:10.5539/ass.v9n1p293