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Spirituality in the context of teams and organizations: An investigation of boundary conditions using *The Integration Profile* workplace spirituality measure

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In the past two decades, there has been growing interest in workplace spirituality, why it matters, and how it impacts organizational outcomes. We examined how workplace spirituality interacts with elements of workplace teams (i.e., leadership and the surrounding organizational context) to impact important individual- and team- level outcomes. Using a sample of 331 full-time employees plus an additional 293 team member peers, we used a newly developed workplace spirituality measure, *The Integration Profile* (Miller et al., 2019), to predict organizational commitment and collective efficacy, with ethical leadership and openness of faith environment as moderators. Findings demonstrated the importance of workplace spirituality for organizational commitment, along with significant moderators of ethical leadership and openness of faith environment. We also report exploratory analysis of the factor structure of the workplace spirituality measure, concluding that most of the construct is driven by a global factor as opposed to the theorized eight first-order dimensions.

Data, analysis code, supplementary material: https://osf.io/xgb7n

Keywords: workplace spirituality, quantitative research, leadership, faith at work, teams

As recently as 2017, Pew research surveys suggested that almost 90% of U.S. adults believe in God or some sort of spiritual higher power (Pew Research Center, 2018). For the vast majority of the population, faith or spirituality matters, and given that most individuals spend the majority of their time at work, it follows that the degree to which and nature of how individuals express religion and spirituality in their daily work lives is an important subject in research and applied settings. Since Krishnakumar and Neck's (2002) early influential review of "faith at work", numerous researchers contributed major advances in research on faith at work. These studies have deepened our understanding of employees' faith expressed in organization settings, by investigating the degree to which and nature of how individuals integrate their spiritual faith into their work and their impacts on individual and organizational outcomes (Buszka & Ewest, 2020; Houghton et al., 2016; Kolodinsky et al., 2008; Lynn et al., 2009; Miller, 2007; Rocha & Pinheiro, 2021).

Despite growing interest in workplace spirituality, there are still many questions left unanswered about what workplace spirituality entails, why it matters, and how it occurs. Karakas' (2010) heavily cited review of workplace spirituality defines *spirituality* as "the journey to find a sustainable, authentic, meaningful, holistic, and profound understanding of the existential self and its relationship/interconnectedness with the sacred and the transcendent", and *workplace spirituality* as "the applying, enabling, or incorporating [of] spirituality practices in organizations" (p. 91). Karakas (2010) continues to summarize the research and propose a model for how workplace spirituality should increase organizational performance through individual-level effects such as employee well-being, sense of meaning and purpose, and sense of community and interconnectedness.

More recently, Houghton and colleagues (2016) identified several potential outcomes of workplace spirituality that have yet to be studied, such as intuition, creativity, and other team-centric constructs. Moreover, they argue that even the outcomes that have been studied (e.g., commitment and satisfaction) have not considered potential moderators and mediators such as

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type of leadership in the workspace setting. Miller and Ewest (2015) suggested the importance of considering the nature of the institution; they argue that institutions differ in the degree to which they are open to and friendly towards faith expression in the workplace. Most recently, Buszka and Ewest's (2020) identified key research opportunities in understanding how the organization interacts with an individual's faith-at-work (e.g., person-organization fit) to predict various positive individual- and organization-level outcomes.

However, research in these areas have historically been hindered by the lack of reliable and valid empirical measures of workplace spirituality. For example, Miller and Ewest (2013a) reviewed dozens of scales and instruments for workplace spirituality and concluded that all suffered from issues of unreliability, failure to account for different faith traditions, or lack of consideration for the context in which an individual works. In response to these issues, they developed a new "The Integration Profile (TIP)" scale that captures workplace spirituality across 8 sub-dimensions: ethics-community (supporting company-level ethical behavior), ethics-self (engaging in individual-level ethical behavior), expression-verbal (verbally expressing faith at work), expression-nonverbal (nonverbally expressing faith at work), experience-outcomes (placing high value on work outcomes, such as benefiting others), experience-process (placing high value on the activity of working), enrichment-group (engaging with coworkers on spiritual topics), and enrichment-individual (engaging in private spiritual practices at work) (Miller et al., 2019).

The TIP new scale intentionally generalized the faith-related language to increase applicability to different faith traditions. For example, while prior faith at work scales used items such as "Witnesses for Christ in word and deed" (Lynn et al., 2009, p. 232), the TIP avoids reference to specific religious figures and instead uses generic phrases like "prayer/meditation" and "faith/religion/spirituality". Despite these efforts, it is worth noting that the TIP is still limited in its applicability to religious orientations that emphasize prayer/meditation and the impact of one's faith/religion/spirituality on everyday life. As an anonymous reviewer pointed out, such mentalities and even the broader assumption that integration is something to strive for are rooted in Protestant religious cultures (Miller & Ewest, 2013b). Moreover, following the wording of the TIP, we use the terms "faith", "religion", and "spirituality" interchangeably to reference the specific faith, religion, *or* spirituality as experienced by the individual participant. While these are certainly distinct constructs (see Newman, 2004; Paul Victor & Treschuk, 2020), the present study focuses on the impact of faith (or religion, or spirituality) at work on various outcomes, as opposed to disentangling the distinct contributions of each. We address this as a limitation later in the discussion.

Miller and colleagues' (2013) initial study developing the TIP provided some psychometric support including an EFA on a sample from a palliative care organization (n = 512) identifying eight factors explaining 57% of the total variance, and a subsequent CFA on a large sample from a food processing corporation (n = 5828) showing good fit (CFI = .94, RMSEA = .06). They also demonstrated convergent validity with measures such as intrinsic religious motivation and religious participation, discriminant validity against personal income and education, and predictive validity for deviant workplace behavior and work engagement. Nevertheless, the authors acknowledged that much more research is needed to further validate the TIP and use it to test the aforementioned research questions on the topic of workplace spirituality (Buszka & Ewest, 2020).

Our primary research purpose is to examine the effects of the surrounding organizational context (specifically, at the organization- and team- levels) on the relationship between individual workplace spirituality and outcomes such as organizational commitment and collective efficacy. The two contextual constructs we are interested in are (1) team leadership behaviors and (2) the degree to which the organization is open to or friendly towards the expression of workplace spirituality. Our first question asks if leadership affects the strength of the relationship between individual workplace spirituality and the outcome variables. This answers the key questions raised by Houghton et al. (2016) as to the effect of leadership on individual workplace spirituality, and potential moderators of the relationship between workplace spirituality and the outcome variables. Our second question asks if the degree to which the organization is open to or friendly towards the expression of workplace spirituality also moderates the aforementioned relationship. This also addresses the question of moderating variables, but more specifically, looks at it from a person-organization fit perspective. As Miller and Ewest (2015) proposed, some organizations are more conducive towards individual expression of workplace spirituality (or lack thereof) than other organizations. For example, in "faith-friendly" organizations that are theoretically open to all levels of expression of workplace spirituality, individuals may

have more ability to express faith at work and thus drive stronger relationships to commitment and collective efficacy. In addition, our study aims to provide empirical support of the TIP in model-based hypotheses tests of key constructs that should be related to workplace spirituality. Furthermore, we introduce an exploratory research question examining the unique effects of each subdimension of the TIP, thus offering insight into what *types* of faith-at-work expression are most predictive of commitment and collective efficacy. In the following sections, we present more detailed explanations of each of our research questions and present our hypotheses.

Literature Review and Hypotheses

Hypotheses About Individual-Level and Team-Level Outcomes

We began with assessing the relationship between workplace spirituality and "positive" organizational outcomes. First, we argue that workplace spirituality positively predicts individual organizational commitment. Numerous prior studies have suggested that workplace spirituality supports organizational commitment (Crawford et al., 2009; Desa & Koh, 2011; Houghton et al., 2016; Krishnakumar & Neck, 2002; Milliman et al., 2003). These studies have identified explanatory mechanisms for this relationship including a sense of meaningful work when one can express their faith in their work, increased sense of community, and positive affect. Although this is a well-supported relationship, we include it as a hypothesis for two reasons. First, following Houghton and colleagues' (2016) recommendation, we seek to examine possible moderating effects that impact this direct relationship, which are explained and proposed in hypotheses two and three. Second, no prior studies have used the multidimensional TIP. Given the proposed advantages of the TIP in capturing general workplace spirituality (as opposed to Judeo-Christian beliefs) and identifying multiple subdimensions (Miller et al., 2019), we seek to verify that the TIP would function similarly as prior studies of workplace spirituality using different measures to predict commitment.

H1a. Individual-level faith at work, as measured by the TIP, positively predicts individual-level organizational commitment.

Next, we predict that individual faith at work positively predicts team collective efficacy, defined as a shared team-level belief in the group's ability to perform (Watson et al., 2001). Collective efficacy is a new construct not yet studied in the context of workplace spirituality. However, recent scholars have called for new research on workplace spirituality in a multilevel perspective, examining how individual workplace spirituality can impact team-level constructs (Otaye-Ebede et al., 2020). One potential explanation for why this may occur is the spillover effect from an individual to the rest of the team. This has been primarily found in transfer-of-affect studies, where individual affect spills over and impacts other team members' affect (Ilies et al., 2007; Pirola-Merlo et al., 2002). Put differently, if there is one individual on a team with particularly strongly expressed workplace spirituality, the same mechanisms that drive individual positive benefits (e.g., sense of meaningful work, sense of community, and positive affect) could influence other members of the team, thus leading to team-level positive benefits. Based on the idea that workplace spirituality can drive a sense of community and teamwork, we argue that this spillover effect can improve sense of community and teamwork in other team members, thus leading to collective efficacy.

H1b. Individual-level faith at work, as measured by the TIP, positively predicts team-level collective efficacy.

Hypotheses About Moderating Effects

The first moderator variable we seek to examine is team ethical leadership. Recent reviews on faith at work literature have called to attention the lack of discussion on boundary conditions under which faith at work is most beneficial (Buszka & Ewest, 2020; Houghton et al., 2016). One particular area of interest is leadership. Team leaders may behave in ways that encourage or discourage an individual from expressing faith at work, thus enhancing or diminishing the impact faith at work has on organizational outcomes. In our study, we focus specifically on ethical leadership. Ethical leadership is generally defined as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement, and decision-making" (Brown & Trevino, 2006, p. 595-596). Importantly, the construct includes spiritual elements (e.g., concern for others, integrity) but is more all-encompassing as it also captures leader authenticity and transformational leadership. Moreover, ethical leadership is a highly popular construct in applied business training and development, especially in recent years due to rising concerns over ethical behavior in company leadership (e.g., Bazerman, 2020; Leigh, 2013; Seidman, 2010). Thus, we anticipate that ethical lead-

ership would be a significant moderator variable, interacting with individual workplace spirituality to impact commitment and collective efficacy.

We conceptualize these interactions as "restricted-variance effects" (RV; Cortina et al., 2015). Specifically, higher levels of ethical leadership would constrain the variance found in individual faith at work expression, because ethical leaders would set stronger examples of "normatively appropriate conduct." This consequently restricts the variance in faith at work expression on the individual level, thus *reducing* the size of the relationship between faith at work and the outcome variables when ethical leadership is high (for the mathematical explanation, see Cortina et al., 2015, 2019). Put differently, at lower levels of ethical leadership, there is "more opportunity for covariance" between faith at work and outcome variables (Cortina et al., 2015, p. 883). Thus, we expect a suppressing moderation effect:

H2a. Team ethical leadership moderates the relationship in *H1a*, such that faith at work is a weaker predictor of commitment in teams with higher ethical leadership ratings.

H2b. Team ethical leadership moderates the relationship in *H1b*, such that faith at work is a weaker predictor of collective efficacy in teams with higher ethical leadership ratings.

The second moderator variable we seek to examine is the organizational context and its openness to faith expression. Miller and Ewest (2015) proposed a classification system for institutions ranging from *faith-avoiding* (i.e., expression of faith is not allowed in the workplace setting) to *faith-based* (i.e., expression of faith is actively encouraged in the workplace setting). We operationalized this as a five-point scale in terms of increasing openness to faith in the workplace. At the bottom end, faith-avoiding organizations ("1") are completely closed-off to, or even hostile towards, faith expression in the workplace; at the top end, faith-required organizations ("5") require faith expression in the workplace. We expect to find an interaction effect such that individual workplace spirituality is either muted or enhanced by the standards of faith expression (or lack thereof) set in the workplace setting.

Increasing openness of the faith environment should *enhance* the variance in individual faith at work expression by nature of allowing for more of it and different types of faith expression. This would lead to more opportunity for covariance at higher levels of faith environment openness, thus enhancing the relationship between workplace spirituality and outcomes. Thus, we expect an enhancing moderation effect:

H3a. Faith environment moderates the relationship in *H1a*, such that faith at work is a stronger predictor of commitment in teams with more open faith environments.

H3b. Faith environment moderates the relationship in *H1b*, such that faith at work is a stronger predictor of collective efficacy in teams with more open faith environments.

Hypotheses 1, 2, and 3 are depicted in Figure 1 below.

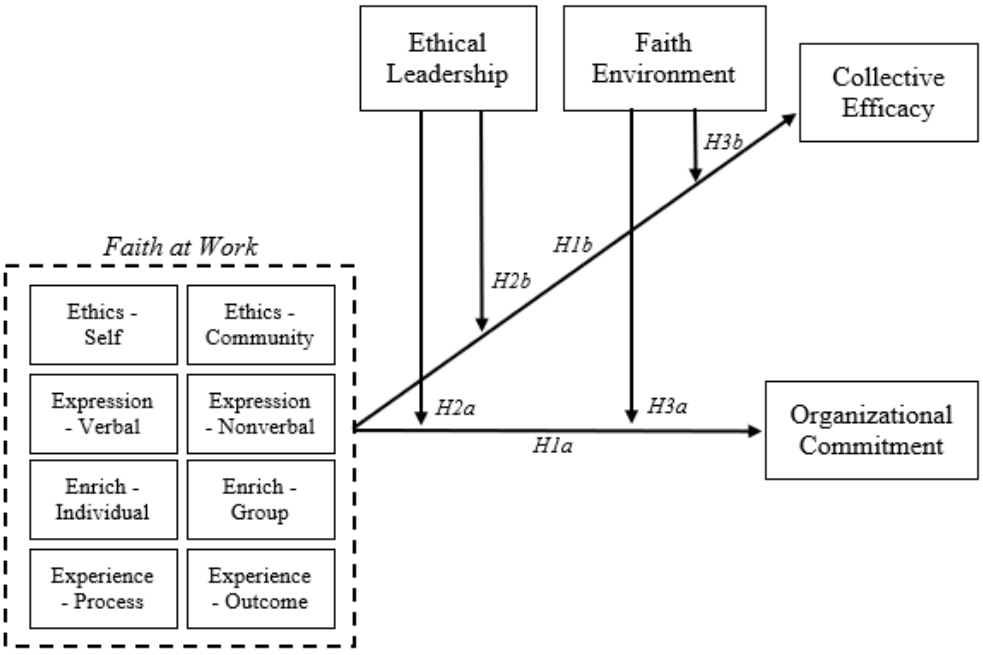

Figure 1. Hypothesized model of faith at work with predicted outcomes and moderators.

Research Questions About the TIP Measure

To further explore the implications of the use of the newly developed TIP measure in our model, we also advance an exploratory research question. The recently developed TIP measure breaks down faith at work into eight subdimensions (Miller et al., 2019). There has yet to be any research examining if all eight subdimensions are equally predictive of outcomes such as commitment and collective efficacy, compared to overall faith at work. We suspect that there are such differences; for example, the community-oriented ethics subdimension is likely more predictive of team-level collective efficacy than the individual-oriented ethics subdimension. Moreover, we suspect the moderating effects will differ as well. Specifically, leadership and/or work environment is more likely to restrict the variance in the verbal expression subdimension, compared to the nonverbal expression subdimension. For example, in organizations with low openness-to-faith environment (i.e., "faith-avoiding"), workplace spirituality in terms of verbal faith expression is likely to be restricted, but nonverbal expression (e.g., putting an unobtrusive symbol subtlety on one's desk) would not be as restricted. However, due to the recency of the TIP and its subdimensions and the lack of empirical evidence thus far, we leave this as a research question.

***RQ1*:** Across the eight dimensions of faith at work, do they equally contribute to capturing overall workplace spirituality?

***RQ2*:** Which dimensions are the strongest predictors of organizational commitment and collective efficacy, and does this change across levels of ethical leadership and openness of the faith environment?

Methods

Participants

Participants were full-time employees located in organizations in the United States with an average age of 33.37 years (SD = 5.30; min = 23, max = 57), 61.93% male, and average tenure of 4.82 years (SD = 2.73, min = 1, max = 24). The organizations from which they were recruited ranged in size from less than 10 employees (n = 3 participants) to more than 1000 employees (n = 23 participants), with a mode of 51-100 employees (n = 140 participants). Participants were electronically awarded a $5.00 USD gift card as a thank-you for participating. In total, 331 participants were recruited via snowball sampling (Marcus et al., 2017). We posted recruitment messages to several online social media groups with a high proportion of members interested in faith-related subjects (e.g., alumni of a faith-based university, faith-based local sports networks); recruits were invited to pass the invitation along to others who might be interested in the study. This snowball sampling method ensured that we would recruit from a wide variety of different organizations rather than just a few, thus ensuring variance in our organization-level study variables. However, as we note later in the limitations, this meant that we did not have exact information on characteristics of the organizations represented in the study (e.g., industry). Importantly, participants varied widely in self-reported personal spirituality (M = 4.71, SD = 1.11, min = 2, max = 7), which was included as a control variable (see "Measures" section below for details). Additionally, our study included attention checks and identity checks (e.g., IP address matching), and gift cards were sent to valid e-mail addresses, thus alleviating some concerns with snowball sampling (Kung et al., 2018; Marcus et al., 2017).

To further alleviate concerns over common method bias (Podsakoff et al., 2003), participants were also asked to send a short follow-up survey to actual team members who belonged to their workplace team. These follow-up surveys included brief measures on the team-level constructs of interest, and they were linked to the focal surveys through a randomly generated URL tag via Qualtrics. Again, identity checks were employed to ensure participants were not the ones filling out the peer surveys. In total, 293 peer surveys were collected and included in the estimation of all team-level constructs (see "Analysis" section for details).

Measures

All measures were Likert-type scales from 1 ("Strongly disagree") to 7 ("Strongly agree").

Predictor: Faith at work. Faith at work was measured using the newly developed "The Integration Profile (TIP)" scale (Miller et al., 2019), which conceptualized faith at work as an eight-dimension construct consisting of self-oriented ethics (e.g., "I think it is wrong to call in sick from work when I am not sick."), community-oriented ethics (e.g., "I voice my concern when company activities conflict with my faith/religion/spirituality."), verbal expression (e.g., "I openly talk about my faith/religion/spirituality at work."), nonverbal expression (e.g., "I place items or symbols in my workspace that reflect my faith/religion/spirituality to others."), individual enrichment (e.g., "I benefit from praying or meditating privately at work."), group enrichment (e.g., "I value meeting with a faith/religious/spirituality group to help me address work-related issues."), process-oriented experience (e.g., "My faith/religion/spirituality helps me experience meaning and purpose in my daily work tasks."), and outcome-oriented experience (e.g., "The reason I do my work is

to help produce meaningful end products or services."). Miller and colleagues (2019) developed the TIP in response to concerns with extant faith at work scales being too simplistic and too focused on Judeo-Christian practices. They reported good model fit across factor analyses on multiple samples, overall scale reliability for faith-at-work of $\alpha = 0.97$, and recommended future research to provide an additional empirical investigation of the TIP.

Outcomes: Organizational commitment and collective efficacy. First, organizational commitment was measured at the individual level using Allen and Meyer's (1990) organizational commitment scale. To keep the overall survey short, we focused on the eight items belonging to the "affective commitment" factor. Sample items included "I would be very happy to spend the rest of my career with this organization." and "This organization has a great deal of personal meaning for me." Cronbach's alpha in the present study was 0.75. Second, collective efficacy was measured at the team-level using a referent-shift approach (Kozlowski et al., 2013) with Lent and colleagues' (2006) nine-item collective efficacy measure (e.g., "How confident are you that your team could develop a workable project design in a reasonable amount of time?" or "How confident are you that your team could adapt to changes in group tasks or goals?"). Importantly, to protect against common method bias and provide a more accurate estimate of team-level constructs, we utilized a multi-rater approach. Specifically, participants were asked to invite fellow team members to respond to the same collective efficacy measure, and these scores were used to estimate true team-level collective efficacy in a multi-rater confirmatory model (e.g., Bauer et al., 2013; for details, see Analysis section). Cronbach's alpha for focal participant data in the present study was 0.89.

Moderators: Ethical leadership and faith environment. First, ethical leadership was measured at the team-level using a referent-shift approach with Yukl and colleagues' (2013) six-item ethical leadership measure (e.g., "My manager shows a strong concern for ethical and moral values." and "My manager sets an example of ethical behavior in their decisions and actions."). Again, peer data was captured and used to estimate true team-level ethical leadership. Cronbach's alpha for focal participant data in the present study was 0.83. Second, faith environment (i.e., the degree to which the organizational context is open to faith expression) was captured using a single-item question with five category options: faith-avoiding, faith-safe, faith-friendly, faith-based, and faith-required (Miller & Ewest, 2015).

Control variables. Multiple control variables were incorporated. Personal spirituality was captured with a single-item question, "How strongly do you hold or abide by your personal spiritual traditions, doctrines, and practices?" on a 1 to 7 scale (Buszka & Ewest, 2020, p. 68). Organization size was captured with a single-item question, "To the best of your knowledge, how big is your organization?" using the categories "Less than 10", "10 to 50", "51 to 100", "101 to 500", "501 to 1000", and "More than 1000". Finally, participants were asked to report how long they have worked for the organization (in years) and how long they have worked on their specific team/department (in months).

Analysis

All analyses were conducted using Mplus 8.0 (Muthens & Muthens, 1998-2017). The hypothesized model was tested by first fitting measurement models on each of the focal constructs. For this purpose, three separate measurement models were fitted: one eight-factor CFA for faith at work, one three-factor (i.e., focal participant plus two peer reports) CFA for collective efficacy, and one three-factor (i.e., focal participant plus two peer reports) CFA for ethical leadership. Then, factor scores on each of the focal constructs (faith at work, collective efficacy, and ethical leadership) were exported using Mplus and used for the final path analysis model (see Figure 1).

Results

Measurement Models

First, response data measuring faith at work was fitted to a higher-order CFA model with eight subfactors (Miller et al., 2019) loading onto a second-order "global faith at work" factor. We used the WLSMV estimator throughout, which is preferable for ordinal data (Li, 2016). Model fit was acceptable: $\chi^2(519) = 1909.44$, $p < 0.001$, CFI = 0.92, TLI = 0.91, WRMR = 1.65, RMSEA = 0.09. We then extracted the factor score for each individual on the higher-order global factor.

Second, the two team-level constructs (collective efficacy and ethical leadership) were fitted to correlated CFAs with three factors (i.e., three informants): focal participant, peer review #1, and peer review #2. Model fit for collective efficacy was good: $\chi^2(321) = 691.14$, $p < 0.001$, CFI = 0.95, TLI = 0.95, WRMR = 1.11, RMSEA = 0.06. Similarly, model fit for ethical leadership was excellent: $\chi^2(132) = 220.98$, $p < 0.001$, CFI = 0.98, TLI = 0.98, WRMR = 0.77, RMSEA = 0.05. For both, we extracted the factor score for each individual on collective efficacy and ethical leadership respectively.

The final correlation matrix for all study variables, including the three latent variables (i.e., faith at work, collective efficacy, and ethical leadership) can be found in Table 1. Full model fit statistics for these measurement models, and visual depictions of the measurement models, can be found in Appendix A.

Table 1
Correlation Matrix of Study Variables

	1	2	3	4	5	6	7	8	9	10
1. age										
2. gender	0.154**									
3. org size	0.111*	0.064								
4. org_ten	0.621***	0.032	0.286***							
5. team_ten	0.378***	0.113*	0.161**	0.374***						
6. faithenv	0.099	-0.032	0.038	0.022	0.046					
7. pspirit	0.003	-0.005	0.106	0.040	0.032	0.114*				
8. faw	-0.087	-0.114*	-0.041	-0.085	0.043	0.239***	0.521***			
9. ce	-0.072	-0.008	0.086	-0.063	0.123*	0.146**	0.460***	0.710***		
10. ethic	-0.104	-0.025	0.141**	-0.095	0.111*	0.173**	0.485***	0.767***	0.867***	
11. commit	0.020	-0.121*	-0.081	-0.049	-0.135*	0.141**	0.409***	0.718***	0.536***	0.571***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: org_ten = tenure at organization (in years), team_ten = tenure on team (in months), faithenv = faith environment, pspirit = personal spirituality, faw = faith at work overall, ce = collective efficacy, commit = organizational commitment, and ethic = ethical leadership.

Hypothesis Testing

The final path model as depicted in Figure 1 was then tested. We note that control variables (i.e., age, gender, personal spirituality, organization size, organization tenure, and team tenure) were not shown in the model for the sake of simplicity. Full model results can be found in Table 2.

H1 stated that individual faith at work positively predicts organizational commitment (*H1a*) and collective efficacy (*H1b*). The standardized path coefficient for faith at work to organizational commitment, after controls, was significant, $\beta = 0.87$ ($SE = 0.13$), $p < 0.01$. However, the standardized path coefficient for faith at work to collective efficacy was not significant, $\beta = -0.07$ ($SE = 0.10$), $p = 0.51$. Thus, *H1a* was supported, but *H1b* was not.

H2 stated that ethical leadership moderated the relationships in *H1*, such that the relationships would be weaker when ethical leadership is stronger. The standardized path coefficient for the interaction term between faith at work and ethical leadership, predicting organizational commitment, was significant and negative, $\beta = -0.18$ ($SE = 0.05$), $p < 0.01$. Similarly, the standardized path coefficient for the interaction term between faith at work and ethical leadership, predicting collective efficacy, was also significant and negative, $\beta = -0.10$ ($SE = 0.04$), $p < 0.01$. Thus, increasing levels of ethical leadership weakened the relationship between faith at work and outcomes, thus supporting hypotheses *H2a* and *H2b*. To test our theory that this is due to a restricted variance interaction effect, we used the Breusch-Pagan test (Breusch & Pagan, 1979) to see if the variance in faith at work differs substantially across levels of ethical leadership. The Breusch-Pagan test obtains the residuals from regressing the outcome onto the moderator, and then regresses then again back onto the moderator; significant results suggest that the variance in the outcome variable differs at different levels of the moderator (Cortina et al., 2019). Following the instructions found in Cortina and colleagues' (2019) Appendix B to estimate the residual variance of the predictor (faith at work) and regress it onto the squared residuals of the moderator (ethical leadership), the Breusch-Pagan test in Mplus produced a significant result (Est. = 0.18, $p < 0.01$). This supports our theory that the significant interaction effect is driven by significant differences in the variance of faith at work across levels of ethical leadership. Finally, we noted a significant path estimate that was not hypothesized; the direct relationship from ethical leadership to collective efficacy was significant, $\beta = 0.75$ ($SE = 0.05$), $p < 0.01$.

Lastly, *H3* stated that the faith environment (i.e., the degree to which the organizational context is open to faith expression) moderated the relationships in *H2*, such that in more faith-open environments, the relationships would be stronger. The standardized path coefficient for the interaction term between faith at work and

faith environment, predicting organizational commitment, was not significant, β = -0.21 (*SE* = 0.13), p = 0.10. However, the standardized path coefficient for the interaction term between faith at work and faith environment, predicting collective efficacy, was significant and in the predicted direction, β = 0.22 (*SE* = 0.08), p = 0.01. Thus, *H3a* was not supported, but *H3b* was. Again, we followed the instructions found in Cortina and colleagues' (2019) Appendix B to estimate the residual variance of the predictor (faith at work) and regress it onto the squared residuals of the moderator (openness of faith environment). The Breusch-Pagan test in Mplus was not significant this time (Est. = 0.02, p = 0.17). This demonstrates that there were not significant differences in the variance of faith at work across levels of the faith environment, which potentially explains why the interaction effect onto commitment was not significant. Additionally, there were no significant direct effects of faith environment onto outcomes.

Table 2
Path Analysis Results for Hypothesis Tests

Path	Standardized Estimate	SE	p-value
commitment ON			
faith at work	0.865	0.130	< 0.001***
personal spirituality	0.047	0.046	0.311
age	0.174	0.055	0.001**
gender	-0.048	0.039	0.223
org size	-0.078	0.039	0.047*
org tenure	0.002	0.043	0.963
team tenure	-0.186	0.054	0.001**
ethical leadership	0.091	0.068	0.180
faith environment	-0.049	0.038	0.196
faith at work * ethical leadership	-0.176	0.051	0.001**
faith at work * faith environment	-0.211	0.127	0.097
collective efficacy ON			
faith at work	-0.065	0.098	0.506
personal spirituality	0.032	0.034	0.346
age	-0.024	0.041	0.552
gender	0.016	0.027	0.550
org size	-0.038	0.034	0.266
org tenure	0.035	0.054	0.511
team tenure	0.026	0.049	0.598
ethical leadership	0.750	0.054	< 0.001***
faith environment	-0.024	0.030	0.430
faith at work * ethical leadership	-0.098	0.035	0.005**
faith at work * faith environment	0.218	0.083	0.009**
commitment WITH			
collective efficacy	0.017	0.085	0.844
collective efficacy			
intercept	0.111	0.279	0.691
residual variance	0.229	0.039	< 0.001***
r-square	0.771	0.039	< 0.001***
commitment			
intercept	4.800	0.452	< 0.001***
residual variance	0.377	0.041	< 0.001***
r-square	0.623	0.041	< 0.001***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Research Questions

To answer our research questions, we fitted the response data measuring faith at work to a bifactor CFA model, which disentangles the unique contributions of each of the eight subfactors after removing the variance explained by the global faith at work factor (Reise, 2012). For identification purposes, we constrained latent factor variances at 1 and factor correlations at 0, then freely estimated all loadings (see Appendix A). The results showed adequate fit: CFI = 0.92, TLI = 0.91, RMSEA = 0.09 [90% CI = 0.09, 0.10], and WRMR = 1.59. We note that one item (individual-oriented enrichment item 2) had to be dropped from the analysis due to convergence issues. To answer *RQ1* and *RQ2*, we evaluated omega-global (ω_H) and omega-specific (ω_s) on the basis of the bifactor CFA model (see Reise, 2012). This allows us to evaluate i) the contribution of global faith at work after controlling for the eight subfactors and ii) the unique contributions of each of the eight subfactors after controlling for the global factor (i.e., overall faith at work).

For *RQ1*, Table 3 displays the omega coefficients for overall faith at work (ω_H) and each of the eight subfactors (ω_s). Results show that ω_H was 0.94, which indicates that approximately 94% of the variance in faith at work was accounted for by the global faith at work factor, after controlling for the first-order subfactors. We note that this is similar to the scale-level reliability alpha (0.97) originally reported by Miller and colleagues (2019). Moreover, after controlling for the effect of the overall faith at work factor, the remaining omega coefficients for all first-order subfactors ranged from $\omega_{\text{nonverbal\_expression}} = 0.49$ to $\omega_{\text{experience\_process}} = 0.76$. This indicates that the first-order subfactors only account for between 49% to 76% of the overall variance after controlling for the effect of the global factor. Thus, some of these subfactors [e.g., nonverbal expression (48.5%), self-oriented ethics (49.8%), and individual-oriented enrichment (55.8%)] contribute less to explaining overall variance, while some of the subfactors [e.g., process-oriented experience (76.2%) and verbal expression (75.8%)] contribute substantially more. This suggests the eight dimensions of faith at work do not equally contribute to capturing overall workplace spirituality, and all items of the *TIP* measure are mainly explained by global factor (e.g., factor loadings range from 0.367 to 0.819 with an average loading of 0.645) rather than specific eight subfactors (e.g., factor loadings range from 0.088 to 0.641 with an average loading of 0.337).

Table 3
Omega Coefficients Using the Bifactor CFA Model

Factor	Variable	Omega Coefficient
Fg	Faith at Work (ω_H)	0.935
F1	self-oriented ethics (ω_{F1})	0.498
F2	community-oriented ethics (ω_{F2})	0.675
F3	verbal expression (ω_{F3})	0.758
F4	nonverbal expression (ω_{F4})	0.485
F5	individual-oriented enrichment (ω_{F5})	0.558
F6	group-oriented enrichment (ω_{F6})	0.722
F7	process-oriented experience (ω_{F7})	0.762
F8	outcome-oriented experience (ω_{F8})	0.710

Table 4
Path Analysis Results for Exploratory Research Question

Subdimension	Outcome Variable	Path	Std. Estimate	SE	p-value
self-oriented ethics	commitment	direct effect	-0.061	0.103	0.555
		interaction w/ ethic_lead	-0.250	0.073	0.001***
		interaction w/ faith_envir	-0.026	0.103	0.897
	collective efficacy	direct effect	0.129	0.088	0.143
		interaction w/ ethic_lead	-0.028	0.043	0.523
		interaction w/ faith_envir	-0.056	0.090	0.535
community-oriented ethics	commitment	direct effect	-0.066	0.176	0.709
		interaction w/ ethic_lead	0.025	0.057	0.667
		interaction w/ faith_envir	0.035	0.173	0.839

	collective efficacy	direct effect	-0.091	0.104	0.381
		interaction w/ ethic_lead	0.110	0.042	0.009**
		interaction w/ faith_envir	0.036	0.114	0.753
verbal expression	commitment	direct effect	0.100	0.142	0.482
		interaction w/ ethic_lead	-0.043	0.052	0.404
		interaction w/ faith_envir	-0.137	0.150	0.364
	collective efficacy	direct effect	0.023	0.095	0.811
		interaction w/ ethic_lead	0.082	0.026	0.023*
		interaction w/ faith_envir	0.029	0.106	0.785
nonverbal expression	commitment	direct effect	0.140	0.108	0.194
		interaction w/ ethic_lead	0.199	0.057	0.001***
		interaction w/ faith_envir	-0.081	0.113	0.473
	collective efficacy	direct effect	0.063	0.099	0.523
		interaction w/ ethic_lead	0.057	0.040	0.153
		interaction w/ faith_envir	-0.175	0.100	0.079
individual enrichment	commitment	direct effect	-0.047	0.139	0.734
		interaction w/ ethic_lead	-0.036	0.064	0.575
		interaction w/ faith_envir	0.042	0.145	0.771
	collective efficacy	direct effect	0.142	0.091	0.119
		interaction w/ ethic_lead	-0.029	0.032	0.362
		interaction w/ faith_envir	-0.096	0.096	0.319
group enrichment	commitment	direct effect	0.069	0.168	0.680
		interaction w/ ethic_lead	0.041	0.062	0.504
		interaction w/ faith_envir	0.049	0.182	0.790
	collective efficacy	direct effect	-0.177	0.092	0.055
		interaction w/ ethic_lead	-0.037	0.032	0.238
		interaction w/ faith_envir	0.178	0.094	0.057
process-oriented experience	commitment	direct effect	0.291	0.185	0.116
		interaction w/ ethic_lead	-0.109	0.062	0.079
		interaction w/ faith_envir	-0.210	0.179	0.241
	collective efficacy	direct effect	-0.089	0.099	0.371
		interaction w/ ethic_lead	-0.044	0.031	0.160
		interaction w/ faith_envir	0.113	0.096	0.242
outcome-oriented experience	commitment	direct effect	0.215	0.149	0.149
		interaction w/ ethic_lead	-0.162	0.058	0.005**
		interaction w/ faith_envir	-0.145	0.147	0.324
	collective efficacy	direct effect	-0.057	0.093	0.541
		interaction w/ ethic_lead	-0.087	0.037	0.020*
		interaction w/ faith_envir	0.115	0.098	0.243

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes: Estimates used the factor scores for each of the eight faith-at-work subdimensions based on the bifactor measurement model (see Appendix A). Ethic_lead = ethical leadership, faith_envir = faith environment.

To answer *RQ2*, we tested eight separate path analysis models. For each, we used the factor scores of one of the eight subdimensions of faith at work as the predictor. We note that these factor scores indicate unique contribution of each subfactor because the global factor (i.e., global faith at work) was controlled. All other model parameters were identical to the earlier hypothesis tests. Table 4 displays the interesting results. First and foremost, none of the direct effects of the eight subdimensions predicting commitment or collective efficacy were significant. Out of all eight dimensions, only group-oriented enrichment was nearing significance, but as a negative predictor of collective efficacy (β = -0.18, p = 0.06). This demonstrates that the predictive value of faith at work appears to be concentrated in the overall global faith at work factor, not in the first-order subdimensions. This interpretation is also supported by the large omega-global (0.94) compared to all of the other subfactors found in *RQ1*.

For the moderating effects, there were a few significant outcomes, all concentrated in the ethical leadership variable. Three results supported the suppressing effect found in *H2*: as ethical leadership increased, there were decreases in the effects of self-oriented ethics (β = -0.25, $p < 0.01$ predicting commitment) and

outcome-oriented experience (β = -0.16, p = 0.01 predicting commitment; β = -0.09, p = 0.02 predicting collective efficacy). However, there were also three effects in the opposite direction: as ethical leadership increased, there were *increases* in the effects of nonverbal expression (β = 0.20, p < 0.01 predicting commitment), community-oriented ethics (β = 0.11, p = 0.01 predicting collective efficacy), and verbal expression (β = 0.08, p = 0.02 predicting collective efficacy). There were no significant moderating effects for openness of faith environment. Moreover, due to the lack of significant direct effects, we caution against focusing too much on interpretation of significant moderation effects. In conclusion, these exploratory analyses revealed that substantial variance within the faith at work construct is captured by the global factor, and this global factor is the primary driver behind predicting positive organizational outcomes.

Discussion

We examined the effects of individual workplace spirituality on individual organizational commitment and team-level collective efficacy, finding a significant positive relationship for the former, which is consistent with prior studies (Houghton et al., 2016), but no support for the latter. We then examined environmental moderators of team ethical leadership and organizational faith environment openness; ethical leadership negatively moderated both direct effects, while faith environment positively moderated the direct effect to collective efficacy. Finally, we explored differences in each of the eight subfactors of the TIP. Overall, the omega coefficients revealed that the global faith-at-work factor is most important to explaining the faith at work construct, and each of the eight subfactors of the TIP not only contributed little to explaining variance but also generally showed no significant results in subsequent path analyses.

Theoretical Implications

While our study supported extant research linking workplace spirituality to individual organizational outcomes such as commitment, we did not find evidence of a spillover effect such that individual workplace spirituality improved team-level outcomes such as collective efficacy. This is notable given rising interest in the function of workplace spirituality on teams (Miller & Ewest, 2015; Buszka & Ewest, 2020). Given that faith and spirituality is often a deeply rooted and meaningful subject in individuals' lives, it is not difficult to imagine that faith expression at work, while potentially positively impacting individual outcomes, could clash with other team members' faith expression (or lack thereof), thus having negative or no impact on team-level outcomes. Our current study seems to support this theory, that individual faith at work expression is helpful for individuals but not as helpful for the overall team.

Overall, there was strong evidence of boundary conditions on the importance of workplace spirituality. Out of four total hypothesized moderator effects, three were significant and in the hypothesized direction. In line with Miller and Ewest's (2015) suggestions, our study found evidence that leadership and the faith environment can enhance or restrict the value of workplace spirituality. Specifically, workplace spirituality appears to be more important under conditions of lower levels of ethical leadership and more open faith environments. This preliminary evidence points towards the need to better understand when and why workplace spirituality is helpful, and when and why it is not helpful, especially in the context of teams and organizations in a multilevel perspective. This also suggests the importance of person-organization fit when it comes to assessing the benefits (or detriments) of encouraging workplace spirituality. If the organization or team leader creates an environment that is not conducive for individuals expressing high or low levels of workplace spirituality, it would potentially negate the positive benefits of workplace spirituality. Further research using more sophisticated measures for person-organization fit (e.g., polynomial regression and response surfaces, Edwards, 2007) is necessary to better understand how individual workplace spirituality interacts with the team or organizational environment.

Finally, our exploratory analyses found notable differences between the subdimensions of the TIP compared to overall faith at work. Miller and colleagues (2019) conceptualized of workplace spirituality as a multidimensional construct; in their view, workplace spirituality is expressed in one of eight different ways. Our study found that these eight subdimensions contributed less to explaining the variance in faith at work; rather, the global faith at work factor, as modeled in a bifactor analysis, was the most important in understanding the construct. Not only was the omega-global the highest (0.94) relative to the omega-specific subfactors, but the subsequent path analyses also using the subfactors revealed little to no significant effects. Meaning, while overall faith at work positive predicts commitment and is moderated at least in part by ethical leadership and openness of the faith environment, when each of the specific subfactors (after removing the variance explained by overall faith at work) is used in the

model, these significant effects disappear. These findings somewhat dissuade the multidimensional approach to understanding workplace spirituality. Taken together, the findings from the two research questions largely imply that workplace spirituality is best understood based on the overall global factor rather than specific subfactors. Given that the TIP measure has only recently been developed and published, these research questions have never been examined before. Our findings provide insight for researchers and practitioners who use the TIP measure to incorporate into their future research on workplace spirituality. It is worth noting that the outcome variables we tested were primarily cognitive-affective (commitment and perceived efficacy). Thus, if the outcomes in question were more behavioral (e.g., performance), then the more behavioral components of workplace spirituality (e.g., verbal faith expression, group enrichment) may be stronger predictors than in the present study. Should this be the case, then workplace spirituality may indeed be multidimensional, if it is conceived of as a complex construct consisting of cognitive, affective, and behavioral components. Thus, it is necessary for future research to tease apart these components and establish clear theory as to which components matter most for organizational outcomes, and when or under what conditions.

Practical Implications

Our study adds further evidence that managers should in fact pay attention to workplace spirituality as an important driver of individual outcomes such as commitment. Moreover, we reveal two boundary conditions that may make workplace spirituality even more important: lower levels of ethical leadership, and an organizational context that is more open to faith expression. We recommend that organizations pay close attention to environmental variables such as leadership and their policies or culture regarding faith expression in the workplace. Rather than a complete and unequivocal embrace of workplace spirituality, organizations would do well to examine the interaction with the environment, to determine if their organization or team is well-suited for the advantages of promoting workplace spirituality. Specifically with regard to ethical leadership, the apparent buffering effect suggests that, if organizations invest in developing ethical leadership behaviors in their managers, then individual workplace spirituality may become less important. Especially in contexts where faith expression is not an option for legal reasons, or is potentially disruptive to other team members, focusing on developing ethical leadership behaviors among team managers might be a reasonable alternative.

Moreover, it is possible that the non-significant direct effect of workplace spirituality and team-level collective efficacy is driven by differences between individual team members' workplace spirituality. Although our study did not capture other team members' workplace spirituality, we were able to use multi-rater data to suggest that workplace spirituality may have negative or no impact at the team-level. Based on this, we recommend that organizations hesitate when promoting workplace spirituality in a team context, as it is possible that differences in team member workplace spirituality, or other unexplored mechanisms, would mute the positive effects of workplace spirituality at the team-level. Given the increasing diversity and complexity of workplace teams (e.g., virtual teams, geographically dispersed teams), it is not uncommon to have teams comprised of individuals with very different faith backgrounds, including none at all. Thus, encouraging and embracing workplace spirituality may be difficult or even controversial on such diverse teams. Further research is necessary to identify the mechanisms driving this non-significant effect at the team level, to allow organizations to better understand when and why workplace spirituality would be helpful for teams, and when and why it would not.

Limitations and Directions for Future Research

Our findings, though interesting, have some limitations that lay the foundation for future research. First, as with most cross-sectional studies, we acknowledge that data collected from a single time point preclude any causality inferences. However, we somewhat mitigated this limitation by including multiple-rater data sources for team-level constructs (Podsakoff et al., 2003). Future research would ideally collect true nested data in a multilevel setting and use a longitudinal design to be able to assess for causality. True nested data (e.g., a large sample of teams of three to nine employees) would also be crucial to better understanding the compilational-compositional effects of individual workplace spirituality aggregated to the team-level. For example, does a team with individuals all showing high levels of workplace spirituality function similarly to a team with individuals with all low levels of workplace spirituality? Or does a team with a few individuals showing high levels of workplace spirituality, and the rest showing lower levels, function better or worse? In other words, future research should answer the key question of *when* and *why* individual workplace spirituality does not appear to impact team-level outcomes such as collective efficacy.

Second, our sample was taken through a snowball approach from a variety of organizations with employees primarily located in the Washington, D.C. area. Specific characteristics of the location could be confounding the results, and the lack of data on characteristics of the organization (e.g., industry) could likewise limit the generalizability of the results. At the same time, we believe it was advantageous to sample from multiple organizations so as to capture variability in organizational context variables. That being said, future research studies should intentionally sample a specific set of organizations that vary in their degree of openness to faith expression (e.g., a faith-based organization compared to an organization that prohibits any faith expression), thus allowing one to control for other characteristics of the organization. Similarly, we did not capture individual faith traditions in our survey. As discussed previously, while the TIP is an improvement to prior faith at work scales in that it generalizes its items to broader faith/spirituality/religion terms, it still could be more applicable and relevant to Protestant and other Judeo-Christian faith traditions. Moreover, as an anonymous reviewer pointed out, the words "faith", "spirituality", and "religion" have somewhat different meanings (Newman, 2004; Paul Victor & Treschuk, 2020), and thus the present measure may be confounding the three definitions. Future research should incorporate individuals' faith traditions as a potential confounding variable.

Third, our measure of the degree to which the organizational context is open to faith expression was limited by the categorical nature of the construct and single-rater self-report data. The present study focused on workplace spirituality and its dimensionality, and the smaller sample size precluded a deeper psychometric investigation of the concept of faith environment in the organization. Future research should focus on this construct, clearly laying out the definition and nature of the construct and offering a psychometrically validated scale to assess for faith environment. Moreover, true nested data would again be critical here to obtaining more accurate estimates of the degree of openness in the faith environment. Combined with the previous limitation, this suggests that future research will need to incorporate nested data on multiple levels (individuals nested in teams, nested in organizations).

Finally, future research should consider many other variables that are likely to be relevant to the study of workplace spirituality. Houghton and colleagues (2016) already proposed several potentially relevant outcome variables, such as turnover, well-being, objective performance, and career progression. As described earlier, it would be important to compare cognitive-affective outcomes (e.g., subjective well-being) with behavioral outcomes (e.g., performance). Other potential moderators include other forms of leadership, industry, gender, and type of faith or spirituality (e.g., different organized religions). In order to truly understand workplace spirituality and its importance to organizational outcomes, future research must continue adding empirical evidence revealing the nomological network of the construct. Additionally, future research should continue investigating the dimensionality of workplace spirituality and how it impacts organizational outcomes. While we agree with Miller and colleagues' (2019) that workplace spirituality can be expressed in different ways, hence the eight subdimensions of the TIP, the present evidence suggests that the TIP measure as it is currently is best understood based on the global faith at work factor as opposed to the subfactors.

Conclusion

In light of the many recent ethical failures in businesses, it would be prudent for businesses to pay more attention to understanding and investing individual motivations, values, and ethics among individual employees (De Colle & Freeman, 2020). One important driver is workplace spirituality, and the past two decades have seen an accumulation of evidence that workplace spirituality is in fact important to organizational outcomes. Our study adds to this evidence and offers the unique perspective of environmental moderators and an investigation into the dimensionality of workplace spirituality. Our findings suggest that, while workplace spirituality is important, there are boundary conditions especially at the team- and organization-level that may mute the positive benefits of workplace spirituality. We hope that our study and our suggested future research directions lay a foundation for organizations to think critically about how they encourage workplace spirituality in teams, and for scholars to better understand the nature of workplace spirituality and when and why it matters for organizational outcomes.

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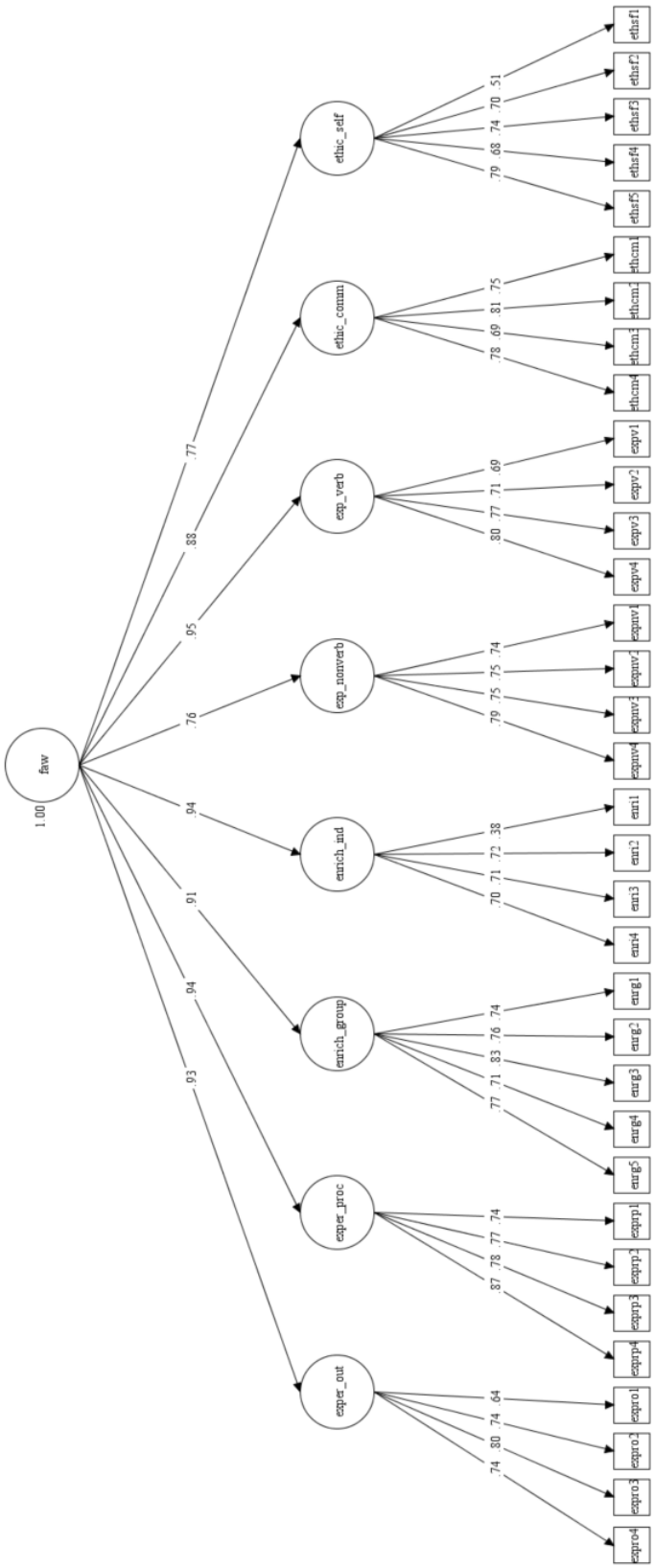
Appendix A
Measurement Model Fit Statistics and Visualizations

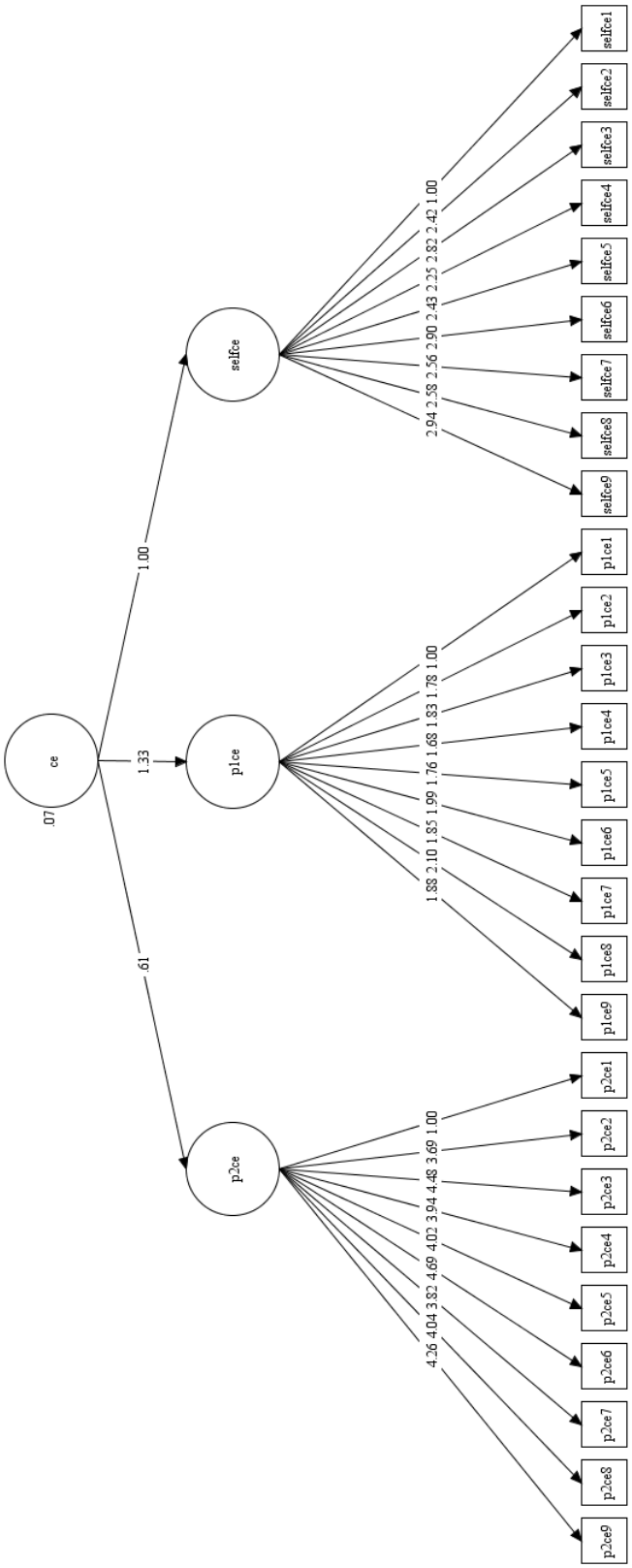
Model Fit Statistics

Model	χ^2	*df*	*p*-value	RMSEA [90% CI]	CFI	TLI	WRMR
Faith at Work	1909.444	519	< 0.001	0.090 [0.086, 0.094]	0.920	0.913	1.654
Collective Efficacy	691.135	321	< 0.001	0.059 [0.053, 0.065]	0.954	0.949	1.108
Ethical Leadership	220.981	132	< 0.001	0.045 [0.034, 0.055]	0.980	0.977	0.767

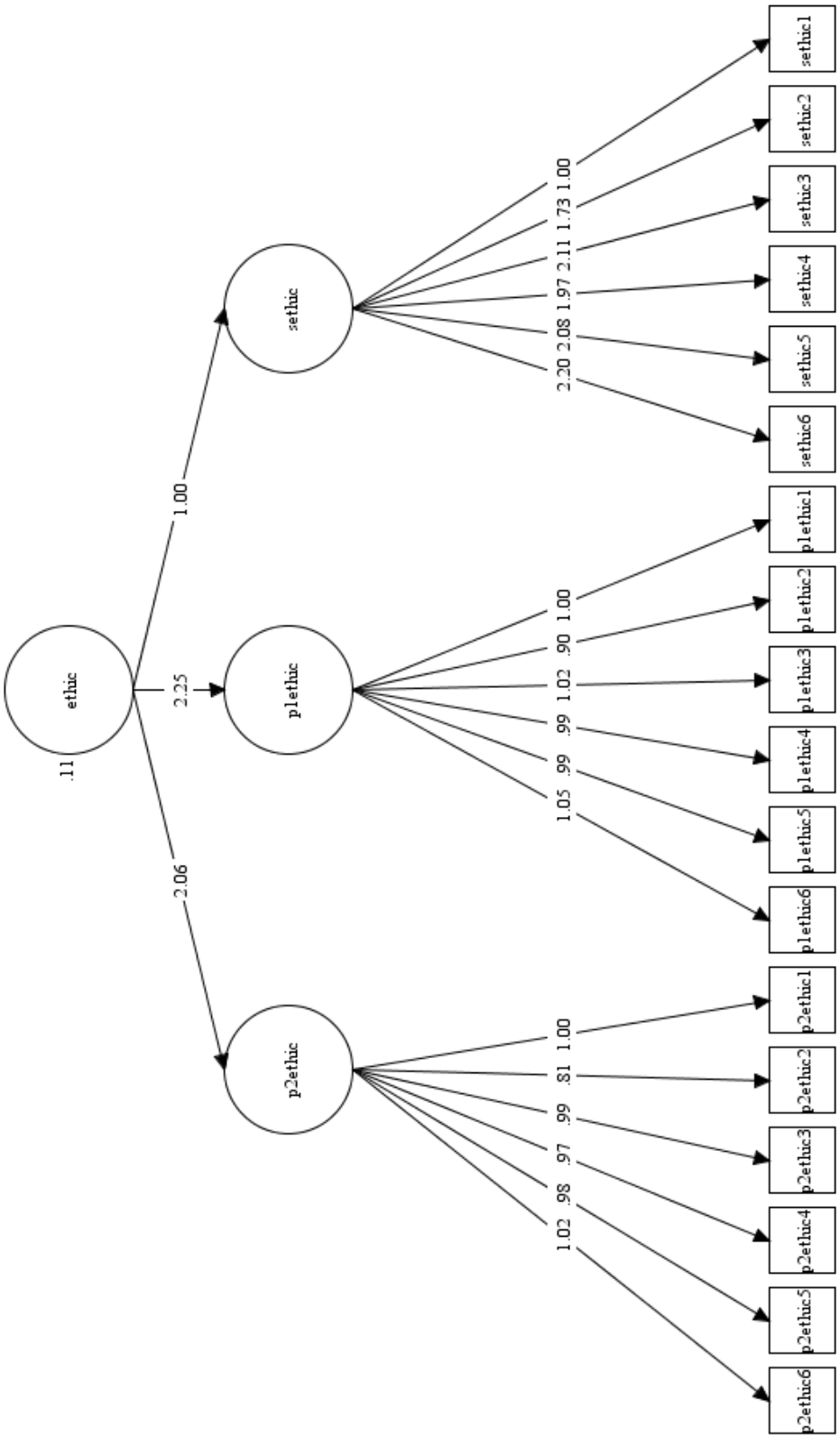
Measurement Model for Faith at Work



Measurement Model for Collective Efficacy



Measurement Model for Ethical Leadership



Measurement Model for Bifactor CFA on Faith at Work