

Journal of Multidisciplinary Education and Inquiry

ISSN 0000-0000

DAC Insight Publishers

<https://journals.dacinsightpublishers.com/JMEI>

THE PRECARIOUS LABOR VULNERABILITY INDEX (PLVI): A CONCEPTUAL FRAMEWORK FOR MEASURING WORKPLACE BULLYING RISK AMONG TEMPORARY WORKERS IN SUB-SAHARAN AFRICAN ORGANIZATIONAL CONTEXTS

Oluwatosin Faremi^{1*}

¹Community Living Association South Simcoe, Ontario, Canada

Corresponding Author*: tosinfaremi@outlook.com

ABSTRACT

Workplace bullying research has generated substantial evidence regarding prevalence, antecedents, and consequences in high-income organizational contexts, yet the measurement frameworks developed in these settings have limited transferability to Sub-Saharan African organizational environments characterized by labor market informality, high power-distance culture, weak institutional protection, and the specific vulnerabilities of temporary and contract workers. This paper develops the Precarious Labor Vulnerability Index (PLVI), a conceptual measurement framework for assessing vulnerability to workplace bullying among temporary and precarious workers in Sub-Saharan African organizational settings. The framework is grounded in the author's prior empirical research documenting workplace bullying patterns among temporary workers in Southwest Nigeria and synthesizes five theoretical traditions: organizational justice theory, precarious work theory, power-distance theory, intersectionality theory, and institutional theory. The PLVI proposes five composite dimensions: the Employment Security Index (ESI), the Organizational Power Asymmetry Score (OPAS), the Intersectional Vulnerability Coefficient (IVC), the Institutional Protection Deficit Measure (IPDM), and the Psychosocial Safety Climate Score (PSCS). For each dimension the paper specifies its theoretical basis, an illustrative item pool, a scoring procedure, and a weighting approach, together constituting a proposed measurement model. The paper is explicit that the PLVI is a conceptual framework advanced for empirical validation rather than a psychometrically validated instrument, and it sets out a staged validation program spanning content validity assessment, exploratory and confirmatory factor analysis, measurement invariance testing, and criterion validity study. The contribution is a theoretically coherent and contextually grounded measurement architecture, together with the operational specifications and validation agenda required to test it, intended to advance worker protection across the Sub-Saharan African labor landscape.

Keywords: workplace bullying, precarious employment, temporary workers, organizational vulnerability, Sub-Saharan Africa, Southwest Nigeria, labor rights, psychosocial safety

1. INTRODUCTION

Workplace bullying constitutes one of the most pervasive and consequential forms of organizational mistreatment, associated with severe individual psychological consequences including depression, anxiety, and posttraumatic stress, as well as significant organizational costs including absenteeism, turnover, and productivity loss (Einarsen *et al.*, 2011; Nielsen and Einarsen, 2012, 2018). Recent evidence continues to document both the scale of the problem and its consequences: a national probability survey in England found substantial prevalence of bullying and harassment and clear associations with mental health conditions (Bunce *et al.*, 2024), and longitudinal synthesis links precarious employment itself to adverse health outcomes (Pulford *et al.*, 2022). The documented consequences continue to widen in recent syntheses and longitudinal work, encompassing turnover intention (Sun *et al.*, 2025), presenteeism (Liu *et al.*, 2025), suicidal ideation and depression (Kim *et al.*, 2025), and even enduring change in victims' personality traits (Farley *et al.*, 2025). The body of measurement and intervention research developed over the past three decades has, however, been generated almost exclusively in high-income European and North American organizational contexts, producing frameworks that reflect assumptions about labor market formality, institutional protection, and organizational culture that do not transfer readily to Sub-Saharan African settings (Adewale and Arogundade, 2015; Oya, 2010).

This paper develops the PLVI to address this measurement gap. It builds directly on the author's prior empirical research documenting workplace bullying patterns among temporary workers across manufacturing, hospitality, and retail industries in Southwest Nigeria (Faremi, 2020a). That research established the specific configurations of vulnerability that characterize temporary work in this context: high employment insecurity, restricted access to grievance mechanisms, power-distance dynamics that suppress voice, and weak institutional protection in the form of limited labor law enforcement and restricted union access. The PLVI translates these configurations into a proposed composite index intended for use across organizational sectors and comparable Sub-Saharan African contexts.

The paper is explicit about the status of its contribution. The PLVI is presented as a conceptual measurement framework: a theoretically grounded specification of what should be measured, how it can be operationalized, and how the resulting instrument should be validated. It is not presented as a psychometrically validated instrument, and no claim of validation evidence is made in advance of the empirical program set out in Sections 10 and 11. The value of the framework lies in providing a coherent, context-appropriate measurement architecture together with the operational detail and validation agenda required to test it.

2. WORKPLACE BULLYING IN SUB-SAHARAN AFRICAN ORGANIZATIONS

Einarsen *et al.* (2011) defined workplace bullying as repeated negative acts directed toward employees by supervisors, colleagues, or subordinates, with the targeted individual unable to defend themselves against the actions. Lutgen-Sandvik *et al.* (2007) documented the emotional devastation of bullying in workplace contexts, while Namie and Lutgen-Sandvik (2010) characterized bullying as a communal phenomenon enabled by organizational culture rather than solely by individual perpetrators. Astrauskaite *et al.* (2011) examined the organizational antecedents of workplace mistreatment in non-Western European contexts.

The Sub-Saharan African organizational context introduces specific structural conditions that amplify bullying risk for temporary workers. Oya (2010) documented the centrality of informal,

contract, and temporary labor arrangements in West African labor markets, producing persistent worker vulnerability through employment insecurity, wage instability, and exclusion from formal grievance mechanisms. The International Labour Organization (2016) documented the global expansion of non-standard employment forms and their association with reduced worker power and protection. The author's fieldwork in Southwest Nigeria identified the intersection of temporary employment status, high power-distance organizational culture, restricted union access, and gender as producing compound vulnerability to bullying that standard Western measurement frameworks are not designed to capture (Faremi, 2020a). Recent Nigerian evidence is consistent with this account: in a study of university women in Enugu that used the Negative Acts Questionnaire-Revised, workplace bullying was highly prevalent and was most strongly associated with temporary and casual or contract employment status (Agbaje *et al.*, 2021).

3. THEORETICAL FOUNDATIONS OF THE PLVI

The PLVI synthesizes five theoretical traditions, each of which supplies the conceptual basis for one of its five dimensions. The subsections below set out these foundations.

3.1 Organizational Justice Theory

Greenberg (1987) introduced organizational justice as a framework for understanding employee perceptions of fairness in organizational decisions and procedures. Colquitt *et al.* (2001) conducted a meta-analytic review of 25 years of organizational justice research, establishing that distributive, procedural, interpersonal, and informational justice dimensions predict a range of outcomes including organizational commitment, trust, and counterproductive work behavior. Tepper (2000) demonstrated that abusive supervision is associated with perceptions of procedural injustice and produces significant consequences for employee wellbeing and organizational performance. Within the PLVI, organizational justice theory provides the conceptual basis for the OPAS dimension, which concerns the degree to which temporary workers have access to fair grievance procedures and procedurally just supervisory relationships.

3.2 Precarious Work Theory

Kalleberg (2009) characterized precarious work as work that is uncertain, unpredictable, and risky from the worker's point of view, documenting the broad shift toward precarious employment arrangements and its consequences for worker wellbeing and bargaining power. Standing (2011) introduced the concept of the precariat as a new social class defined by its relationship to precarious labor, characterized by the absence of occupational identity, work-based security, and access to employment-related rights. Vosko (2010) examined the gendered and racialized dimensions of precarious employment, demonstrating that women and racialized minorities are disproportionately concentrated in precarious work arrangements. Within the PLVI, precarious work theory provides the conceptual framework for the ESI dimension.

3.3 Power-Distance Theory

Hofstede (1980) introduced power distance as a cultural dimension measuring the extent to which less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. Hofstede *et al.* (2010) updated this framework in a comprehensive cross-cultural study, documenting that West African nations consistently score in the high power-distance range, with implications for organizational authority structures, communication norms, and the acceptability of subordinate voice. Lutgen-Sandvik and Tracy (2012) analyzed how organizational power dynamics shape both the perpetration of bullying and targets' capacity to

resist or report it. Within the PLVI, power-distance theory informs the OPAS dimension's treatment of supervisor authority concentration and structural barriers to voice.

3.4 Intersectionality Theory

Crenshaw (1989) introduced intersectionality as a framework for understanding how multiple social identities interact to produce forms of oppression and vulnerability that cannot be captured by analyzing any single identity dimension independently. Collins (2000) extended this framework to encompass interlocking systems of oppression operating at individual, organizational, and structural levels. The author's empirical research demonstrated that among temporary workers in Southwest Nigeria, the intersection of gender, employment status, ethnicity, and educational level produced compound vulnerability patterns, with female temporary workers in lower-skilled roles facing the highest rates of bullying exposure (Faremi, 2020a). Within the PLVI, intersectionality theory provides the conceptual basis for the IVC dimension.

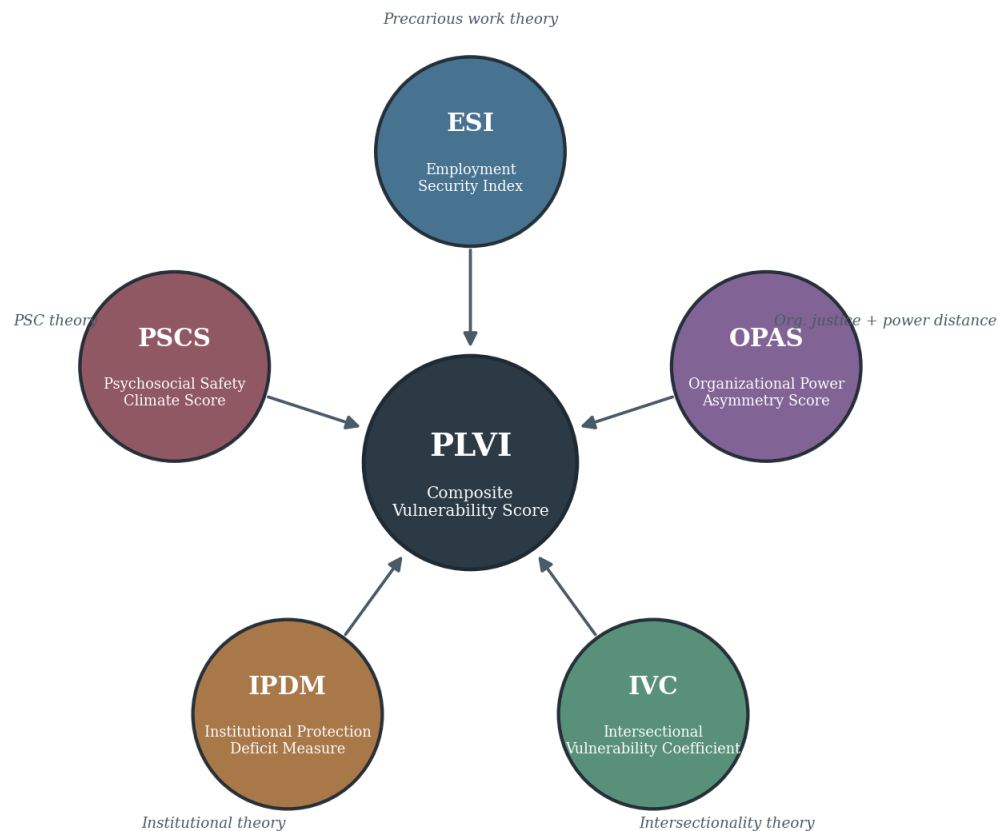
3.5 Institutional Theory

DiMaggio and Powell (1983) developed institutional theory as an account of how organizations respond to environmental pressures in ways that tend toward isomorphism. North (1990) characterized institutions as the rules of the game in a society, establishing the formal and informal constraints that shape organizational behavior and worker-employer relations. Scott (2014) operationalized institutional theory as a framework for analyzing how regulatory, normative, and cultural-cognitive pillars of institutional environments shape organizational practice. Within the PLVI, institutional theory provides the conceptual basis for the IPDM dimension, which concerns the degree to which the institutional environment provides effective protection against workplace bullying.

4. PLVI FRAMEWORK OVERVIEW

The PLVI is organized as a composite index comprising five dimensions, each measured through a structured set of indicators. The Employment Security Index (ESI) quantifies the degree of employment insecurity associated with a given temporary work arrangement. The Organizational Power Asymmetry Score (OPAS) concerns the concentration of supervisory authority and the availability of procedurally just grievance channels. The Intersectional Vulnerability Coefficient (IVC) captures the configuration of intersecting identity-based vulnerabilities. The Institutional Protection Deficit Measure (IPDM) assesses the gap between existing institutional protections and the protection levels required to adequately safeguard temporary workers. The Psychosocial Safety Climate Score (PSCS) concerns the degree to which the organizational climate communicates that the psychological health and safety of workers is a genuine organizational priority.

Sections 5 through 9 set out the conceptual content of each dimension. Section 10 then specifies a proposed operationalization, translating each dimension into an illustrative item pool, a scoring procedure, and a weighting and aggregation rule. Section 11 sets out the validation program required to evaluate the resulting measurement model.



Five theory-grounded dimensions, each scored 0-100, combine through weighted aggregation into the composite index.

Figure 1: The PLVI composite architecture. Five theory-grounded dimensions, each scored on a common 0-100 vulnerability metric, combine through weighted aggregation into a single composite index.

5. DIMENSION 1: EMPLOYMENT SECURITY INDEX (ESI)

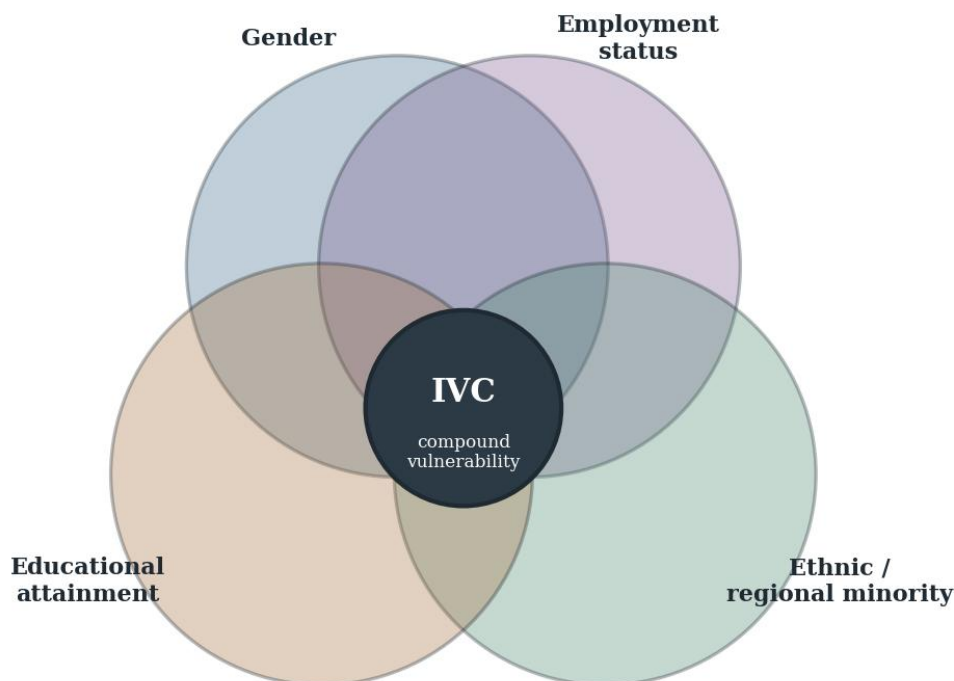
The ESI conceptualizes employment security as a multidimensional construct encompassing contract type and duration, tenure certainty, wage stability, and the procedural clarity of contract renewal. Kalleberg (2009) established that employment insecurity operates as a chronic stressor that undermines worker wellbeing and voice independently of whether job loss actually occurs. Standing (2011) characterized the absence of employment security as a defining feature of the precariat's structural vulnerability. Vosko (2010) demonstrated that employment insecurity is disproportionately concentrated among women and racialized minority workers. Contemporary systematic reviews reinforce that precarious employment is best operationalized as a multidimensional construct spanning employment insecurity, income inadequacy, and limited rights and protection, rather than by contract type alone, and that multidimensional measures better capture its health-relevant variation than single-indicator approaches (Kreshpaj *et al.*, 2020; Rodríguez Jaramillo *et al.*, 2022). The ESI is intended to draw on validated precarious-employment measurement traditions, including the Employment Precariousness Scale (Vives *et al.*, 2010), adapted for the contractual realities of Sub-Saharan African temporary work.

6. DIMENSION 2: ORGANIZATIONAL POWER ASYMMETRY SCORE (OPAS)

The OPAS concerns the degree to which organizational power is concentrated in supervisory relationships and inaccessible through formal grievance channels. Tepper (2000) established that abusive supervision is amplified by the absence of procedural justice mechanisms. Einarsen *et al.* (2011) documented that bullying is more prevalent in organizations characterized by authoritarian leadership, unclear role expectations, and absent grievance procedures. Salin (2003) situated such conditions within a model of enabling, motivating, and precipitating antecedents, in which a perceived power imbalance functions as a necessary enabling structure for bullying to occur. Salin and Hoel (2020) later synthesized the organizational risk factors of bullying into a multi-factorial model spanning work organization, leadership style, and organizational culture, each of which the OPAS is intended to reflect. Recent evidence continues to tie destructive leadership styles to bullying: narcissistic leadership, for example, has been shown to drive workplace bullying and, through it, heightened turnover intention among nurses (Faeq, 2025). Hofstede *et al.* (2010) demonstrated that high power-distance organizational cultures normalize the exercise of authority in ways that impede subordinate voice. The OPAS is intended to be measured through indicators covering the concentration of supervisory authority, grievance channel availability and perceived effectiveness, the perceived fairness of supervisory evaluation, and organizational communication norms, drawing on the organizational justice and power-distance traditions (Colquitt *et al.*, 2001; Power, 2000).

7. DIMENSION 3: INTERSECTIONAL VULNERABILITY COEFFICIENT (IVC)

The IVC captures the intersection of identity-based vulnerabilities as a composite coefficient that weights individual vulnerability factors and their interaction. Crenshaw (1989) and Collins (2000) established that intersecting identities produce vulnerability configurations that exceed the sum of their individual contributions. The author's empirical research in Southwest Nigeria identified gender, temporary employment status, ethnic minority status, and low educational attainment as the primary intersecting vulnerability dimensions in that context (Faremi, 2020a). The IVC is intended to assess each relevant identity dimension individually and to combine them through an interaction-sensitive procedure rather than simple addition, consistent with intersectionality-informed measurement approaches (Bowleg, 2008; Cole, 2009). Analyses of intersectional patterning in employment quality reinforce that disadvantage concentrates at the intersection of multiple social positions rather than along any single axis (Andrea *et al.*, 2021). This compounding is not only theoretical: Nigerian workplace evidence shows female workers on temporary and casual contracts facing markedly elevated bullying exposure relative to permanent staff, a pattern that single-axis measures do not capture (Agbaje *et al.*, 2021). Section 10.3 discusses the specific combination and weighting options, including person-centered latent class approaches.



Intersecting identities combine non-additively; the overlap is greater than the sum of single axes.

Figure 2: The Intersectional Vulnerability Coefficient. Identity dimensions overlap non-additively, so the compound vulnerability at their intersection exceeds the sum of the single-axis contributions.

8. DIMENSION 4: INSTITUTIONAL PROTECTION DEFICIT MEASURE (IPDM)

The IPDM assesses the gap between the institutional protections nominally available to temporary workers and the protections that are actually accessible and effective in practice. North (1990) characterized institutions as the rules of the game, and the IPDM concerns the degree to which the rules applicable to temporary workers are enforced, accessible, and adequate. The International Labour Organization (2016) documented the systematic exclusion of temporary and informal workers from labor protections in many Sub-Saharan African jurisdictions. Scott (2014) provided the institutional theory framework for analyzing how regulatory, normative, and cultural-cognitive dimensions of the institutional environment shape the effective protection available to workers. IPDM indicators are intended to cover labor law coverage and enforcement, union membership and density, the formalization of the human resources function, and the availability and effectiveness of formal bullying complaint mechanisms.

9. DIMENSION 5: PSYCHOSOCIAL SAFETY CLIMATE SCORE (PSCS)

The PSCS concerns organizational psychosocial safety climate (PSC), defined by Dollard and Bakker (2010) as shared perceptions of policies, practices, and procedures for the protection of

worker psychological health and safety. PSC has been shown to predict workplace bullying and harassment, with low PSC associated with elevated bullying prevalence and reduced worker wellbeing (Law *et al.*, 2011; Leka *et al.*, 2015; Nielsen and Einarsen, 2018). Agervold and Mikkelsen (2004) documented that a negative psychosocial work environment is associated with both exposure to bullying and elevated individual stress reactions. Nielsen *et al.* (2020) confirmed through meta-analysis that organizational climate dimensions are among the strongest predictors of bullying exposure across cultural contexts. Dollard *et al.* (2017) further demonstrated that both organizational psychosocial safety climate and its enacted form predict reductions in workplace bullying and associated psychological health problems. The PSCS is intended to adapt an established PSC measure, the PSC-12 (Hall, Dollard, and Coward, 2010), for the Sub-Saharan African organizational context, incorporating cultural modifications informed by the author's prior fieldwork (Faremi, 2020a). Because psychosocial safety climate is protective rather than harmful, the PSCS is scored as a deficit, so that lower climate quality contributes greater vulnerability to the composite index (see Section 10.2).

10. PROPOSED OPERATIONALIZATION OF THE PLVI

A conceptual measurement framework becomes usable only when its constructs are translated into observable indicators, a scoring procedure, and a rule for combining indicators into dimension and composite scores. This section specifies a proposed operationalization of the PLVI at each of these levels. The specifications are advanced as the measurement model to be evaluated in the validation program described in Section 11; item wording, response formats, and dimension weights are provisional and are expected to be refined through the psychometric work that follows. The purpose is to render the framework concrete enough to be tested, not to present a finalized instrument.

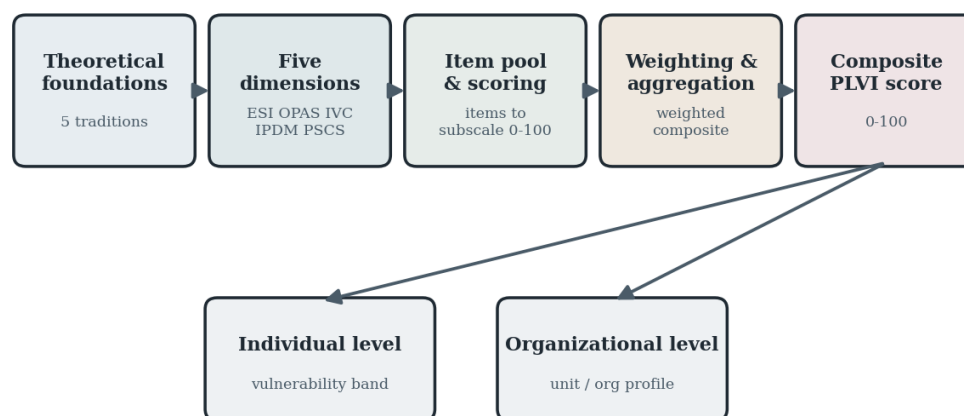


Figure 3: The PLVI measurement pipeline. Theoretical foundations define five dimensions; each dimension is operationalized through an item pool scored to a 0-100 subscale; dimensions are weighted and aggregated into a composite that supports interpretation at the individual and organizational levels.

10.1 Item Structure and Response Formats

The PLVI combines two indicator types. Objective, registry-type items capture verifiable facts about the employment arrangement and institutional environment, such as contract type, the existence of a written contract, and the presence of a functioning grievance mechanism. Perceptual items capture the worker's experience of security, fairness, voice, and safety, and are administered on a five-point agreement scale. Mixing objective and perceptual indicators reflects the framework's premise that vulnerability arises from both structural conditions and their subjective apprehension by workers.

The following illustrative items indicate the intended content of each subscale and are candidates for the item development and content validity work described in Section 11.1. For the ESI: the worker's contract type (permanent, fixed-term, casual or day-rate, or no written contract); agreement with the statement that continued employment beyond the next twelve months is expected; the predictability of monthly earnings; and access to notice and severance provisions. For the OPAS: whether a grievance channel exists and is perceived as effective; whether a worker can question a supervisor's decision without fear of retaliation; the concentration of decision authority in the immediate supervisor; and the perceived fairness of performance evaluation. For the IVC: self-reported identity markers relevant to the local context, including gender, age band, ethnic or regional minority status, migrant status, and educational attainment, recorded alongside employment status. For the IPDM: whether the worker's employment category is covered by applicable labor law; the presence of labor inspection or enforcement activity; union access and density; and the existence and use of a formal anti-bullying complaint mechanism. For the PSCS: management priority for psychological health relative to productivity; senior management commitment to preventing workplace harm; the openness of organizational communication about psychological safety; and the participation of workers in decisions affecting their wellbeing.

An item pool of roughly eight to twelve candidate items per dimension is recommended at the development stage, to allow weaker items to be discarded during content validity review and factor analysis while retaining sufficient coverage of each construct.

10.2 Scoring Within Dimensions

Perceptual items are scored on the five-point scale, with protective items reverse-coded so that higher values consistently indicate greater vulnerability. Objective items are mapped to ordinal risk scores using explicit rules: for example, contract type may be scored from permanent employment as the lowest risk to the absence of a written contract as the highest. Within each dimension, item scores are standardized and combined into a subscale score, which is then rescaled to a common zero-to-one-hundred metric on which higher values denote greater vulnerability.

The PSCS requires particular attention because psychosocial safety climate is a protective construct. Its subscale is therefore computed as a deficit: a strong safety climate yields a low PSCS vulnerability contribution, and a weak climate yields a high contribution. This orientation ensures that all five dimensions enter the composite in the same direction, with higher scores signifying greater vulnerability throughout.

10.3 Dimension Weighting and Composite Aggregation

The composite PLVI score is a weighted combination of the five zero-to-one-hundred-dimension scores. Weighting is the most consequential and the most contestable modeling decision in composite index construction, and the framework treats it accordingly. At the development stage, the paper proposes theory-informed provisional weights that can be set equal across dimensions

as a neutral starting point, or differentiated to reflect the relative predictive importance suggested by the prior literature and by the author's fieldwork. In either case, provisional weights are explicitly a hypothesis to be tested rather than a fixed property of the instrument.

The paper recommends that empirical weights be derived during validation from three converging sources: standardized factor loadings obtained in confirmatory factor analysis, expert judgment elicited through structured content review, and the observed criterion-predictive contribution of each dimension to documented bullying victimization. Where these sources disagree, the paper recommends reporting composite scores under alternative weighting schemes and examining the sensitivity of conclusions to the weighting choice, so that the subjectivity inherent in weighting is made transparent rather than concealed.

The IVC combination rule warrants separate treatment because intersectionality implies that vulnerability is not additive across identity dimensions. Two approaches are proposed for evaluation. The first applies an interaction coefficient to identity combinations that are documented in the target context as producing compounded vulnerability, adjusting the additive score upward for those combinations. The second uses a person-centered analytic strategy, such as latent class analysis, to identify empirically derived subgroups defined by patterns across multiple characteristics rather than by predefined categorical combinations (Bauer, 2014; Else-Quest and Hyde, 2016; Notelaers *et al.*, 2006). The choice between these approaches is an empirical question for the validation program.

10.4 Score Interpretation and Levels of Analysis

Composite and dimension scores are intended to support interpretation at two levels. At the individual level, scores locate a worker within a vulnerability range, from low through moderate and high to severe, using cut points to be established during validation against observed bullying outcomes rather than fixed a priori. At the organizational level, scores are aggregated across a workforce or workforce segment to characterize the vulnerability profile of an organization or unit, enabling comparison within an industry and monitoring over time. Organization-level use is central to the accountability applications discussed in Section 15, because it directs attention to the modifiable structural conditions, such as power asymmetry, institutional protection deficits, and psychosocial safety climate, that individual victimization surveys do not isolate.

11. PSYCHOMETRIC VALIDATION STRATEGY

The PLVI is a proposed measurement model and requires empirical validation before it can support the individual, organizational, or regulatory uses described in this paper. This section sets out the validation program. It is presented as a prospective agenda; no validation data are reported here, and the design choices below define the evidence that would be required to establish the instrument's reliability and validity. Constructing a composite vulnerability index that aggregates indicators from distinct theoretical traditions, including precarious employment sociology, occupational health psychology, and labor economics, makes careful attention to psychometric properties a foundational requirement rather than a concluding formality (DeVellis, 2016; Furr and Bacharach, 2014).

11.1 Item Development and Content Validity

The first stage develops the item pool specified in Section 10.1 and evaluates its content validity. Candidate items are reviewed by a panel of subject-matter experts in workplace bullying, precarious employment, and Sub-Saharan African labor relations, and are refined through

cognitive interviewing with temporary workers to confirm that items are understood as intended across educational and linguistic backgrounds. This stage is decisive for an instrument intended for cross-national use, because item comprehension and cultural appropriateness cannot be assumed from measures developed in European or North American contexts.

11.2 Dimensional Structure: Exploratory and Confirmatory Factor Analysis

The hypothesized five-dimension structure is then tested. Exploratory factor analysis on an initial sample examines whether items cluster as theorized and identifies items that cross-load or fail to load, which are candidates for revision or removal. Confirmatory factor analysis on an independent sample test the five-factor model directly, with comparative fit indices, the root mean square error of approximation, and standardized factor loadings reported to permit replication and cross-study comparison. Construct validity is assessed by demonstrating that the PLVI measures precarious labor vulnerability as distinct from related but non-equivalent constructs such as generic job insecurity, income poverty, and subjective wellbeing. Factor analysis of this kind requires substantial samples; guidance on sample size in factor analysis indicates that the adequacy of a given sample depends on communality and overdetermination as well as raw size, so sample planning should be model-specific rather than rule-of-thumb (MacCallum *et al.*, 1999).

11.3 Measurement Invariance Across Groups

Because the PLVI is intended for comparison across gender, age, employment contract type, and national context, measurement invariance across these groups must be established before scores are compared. Invariance testing proceeds sequentially through configural, metric, scalar, and strict levels, each imposing stronger constraints and supporting stronger comparisons (Vandenberg and Lance, 2000; Byrne *et al.*, 1989). Full scalar invariance is the minimum requirement for meaningful comparison of mean scores across groups; metric invariance without scalar invariance supports comparison of relationships but not of means. Partial invariance, in which most but not all items meet equivalence criteria, is a common outcome in cross-national applications and can support meaningful comparison when the non-invariant items are identified and their interpretive implications are clearly reported (Millsap, 2011; Brown, 2006). The validation program should plan for partial invariance as a plausible result and specify in advance how it will be handled and communicated to practitioner audiences. The need for such work is underscored by non-Western validation studies showing that even well-established instruments such as the NAQ-R require local psychometric re-examination, including re-derived cut-off scores, before use in a new cultural context (Gupta, Bakhshi, and Einarsen, 2017).

11.4 Criterion Validity and Differential Item Functioning

Criterion validity is assessed by testing whether PLVI scores predict outcomes theoretically associated with precarious labor vulnerability, including documented bullying victimization measured against established behavioral instruments such as the Negative Acts Questionnaire-Revised (Einarsen, Hoel, and Notelaers, 2009), adverse mental and physical health indicators, and turnover. Structural equation modeling permits simultaneous estimation of the measurement model and the structural relationships between PLVI dimensions and these outcomes. Longitudinal designs that track PLVI scores alongside outcomes over time would provide the strongest evidence of predictive validity and would distinguish the utility of the composite from that of its component indicators. Differential item functioning analysis should accompany this work to determine whether individual items perform equivalently across gender, age, education level, and national context; items exhibiting significant differential functioning may reflect cultural specificity in construct interpretation and warrant revision or context-specific scoring.

11.5 Sample Requirements

The validation program is demanding in scale. Reliable estimation of the measurement and structural models, together with multi-group invariance testing, implies subgroup samples large enough to support stable parameter estimates and adequate statistical power (Wolf *et al.*, 2013). In practice this points toward multi-sector studies with organizational samples in the order of one thousand or more participants, distributed to yield adequate cell sizes for each subgroup of comparative interest. Sample requirements should be derived from the specific models to be estimated, including the number of indicators, the anticipated size of structural effects, and the invariance constraints to be tested, rather than from generic minimums.

12. CROSS-NATIONAL APPLICABILITY AND COMPARATIVE USE

The PLVI is designed with cross-national applicability as a core principle, recognizing that the structural features of workplace bullying and labor precarity vary across national institutional contexts (Kalleberg, 2018; Standing, 2011; Vosko, 2010). Comparative research has documented that the protective function of employment security legislation, collective bargaining density, and labor market regulation differs substantially between liberal market economies, coordinated market economies, and post-colonial developmental states (Esping-Andersen, 1990; Hall and Soskice, 2001). The PLVI's five-dimension architecture is intended to capture precarity-relevant variation across these contexts without requiring a distinct instrument for each application setting, subject to the measurement invariance evidence described in Section 11.3.

The framework anticipates that different dimensions will carry different discriminatory weight across settings. In highly regulated labor markets, the ESI and IPDM may show compressed variance under strong formal protections, so that the PSCS and OPAS carry greater weight in distinguishing higher from lower vulnerability within formally protected segments (Benach *et al.*, 2014; Quinlan *et al.*, 2001). In Sub-Saharan African labor markets, where informal employment predominates and enforcement capacity is limited, the ESI and IPDM are expected to show wider variance and greater predictive relevance for bullying outcomes (Adewale and Arogundade, 2015; Arogundade and Arogundade, 2013). These are hypotheses for the comparative validation work rather than established findings. The prospect of detecting context-specific vulnerability profiles without wholesale instrument modification is a central design aspiration of the PLVI, and one that the validation program is intended to test.

13. EXTENDING THE PLVI TO GIG AND PLATFORM WORK

The rapid expansion of platform-mediated gig work in Sub-Saharan African urban economies represents a significant new frontier for precarious labor research and a natural extension of the PLVI. Platform workers, including ride-hailing drivers, delivery riders, freelance digital service providers, and domestic task workers, occupy a distinctive position that combines features of self-employment with high dependence on algorithmic management controlled by platform companies (International Labour Organization, 2019, 2022). The ESI requires adaptation for this population, because traditional contract categories do not capture the specific vulnerability of workers who depend on a single platform for most of their income and are subject to opaque rating systems that control access to work, yet lack both employer-provided protections and the autonomy of genuine self-employment (Kalleberg, 2018; Standing, 2011). Emerging evidence links platform work to heightened economic dependency and hardship and to poorer mental health, underscoring the need to extend vulnerability measurement to this population (Glavin and Schieman, 2022).

The IPDM is particularly acute in this context, where regulatory frameworks for platform work remain nascent and enforcement capacity is limited. Most jurisdictions have not resolved whether platform workers qualify for employee protections, and the resulting absence of collective bargaining rights, occupational health protection, and social insurance creates a protection deficit that the IPDM is well suited to document and compare. The PSCS presents novel measurement challenges, since traditional climate items presuppose a shared workplace and visible supervisory relationships that are largely absent in platform work; for this population, psychosocial safety climate may need to be operationalized at the platform level, assessing whether platform design, rating systems, and communication protocols create or undermine conditions of psychological safety and fair treatment. Adapting the PLVI to platform work is a priority extension for future development.

14. PROTECTIVE FACTORS AND RESILIENCE

An exclusively deficit-focused account of precarious work risks underestimating the agency and collective resources that workers mobilize to protect their wellbeing and contest exploitative conditions. A complete account of bullying vulnerability must attend not only to the structural conditions that create vulnerability but also to the individual, relational, and collective resources that mitigate its consequences. The PLVI addresses this partially through the IVC, which requires attention to the social networks and community resources that intersecting identities can provide as well as the vulnerabilities they create, but the framework could be strengthened through explicit assessment of protective factors alongside the vulnerability dimensions.

A protective factor module could operationalize social support, collective organization, and extra-organizational community resources as moderators of the relationship between PLVI scores and bullying outcomes (Nyambegera, 2002). Such a module could enter the scoring system as a mitigating adjustment that raises or lowers vulnerability predictions according to the strength of available protective resources, producing a more actionable profile than a vulnerability-only measure allows and enabling interventions that build protective resources as well as addressing structural conditions. Recent evidence supports treating resilience as a moderator rather than a fixed trait: among nurses, resilience buffered the relationship between workplace bullying and job performance, with the strength of the buffering effect varying by type of bullying (Chang *et al.*, 2025). Incorporating protective factors would also align the PLVI with resilience-oriented approaches that have gained prominence in occupational health research.

15. IMPLICATIONS FOR POLICY AND ORGANIZATIONAL PRACTICE

The PLVI has implications for labor policy, organizational practice, and regulatory oversight in Sub-Saharan African employment contexts. At the policy level, the framework directs attention to specific regulatory and enforcement gaps, particularly through the IPDM, that labor ministries and regulatory bodies can prioritize for action. Systematic PLVI-based assessment across sectors and organizational types can generate the granular, organization-level evidence that labor policy reform often lacks, complementing the household survey data that cannot capture the organizational dynamics mediating between macro-level labor market conditions and individual worker outcomes (Benach *et al.*, 2014; Kalleberg, 2009; Standing, 2011).

At the organizational level, the PSCS dimension is especially relevant to human resource practice. Evidence from the psychosocial safety climate literature indicates that leaders' genuine

prioritization of psychological safety, as distinct from procedural compliance, is among the strongest organizational predictors of low bullying rates (Dollard and Bakker, 2010; Law *et al.*, 2011). Organizations whose senior leaders visibly model respectful behavior, sanction status-based abuse, and create genuine voice mechanisms for lower-status workers would be expected to present lower PLVI profiles than organizations in which anti-bullying policy is performative. Organization-level scoring enables benchmarking within industries and over time, creating accountability mechanisms that individual victimization surveys cannot provide. Recent syntheses from African occupational-health research reinforce that strengthening psychosocial safety climate is a practical organizational lever for reducing workplace mistreatment (Amoadu, Ansah, and Sarfo, 2023). The healthcare sector, where much recent bullying research is concentrated, illustrates the dynamics the PLVI is designed to capture: reviews document pervasive horizontal violence among intensive care nurses (Zhang *et al.*, 2025), and moderation-mediation studies trace the paths from bullying exposure to nurses' turnover intentions (Atingabili *et al.*, 2025). The intersectional dimensions have specific equity implications: organizations that disaggregate PLVI scores by gender, age, ethnicity, and contract type can identify which groups bear the greatest vulnerability burden and design targeted interventions, avoiding the false reassurance that blanket policies can produce when the highest-vulnerability workers remain unprotected.

Practical utility is enhanced through sector-specific adaptation. In agriculture, which employs the largest share of the Sub-Saharan African workforce through informal seasonal arrangements, the employment security and institutional protection dimensions carry particular weight, and seasonal workers face compounded vulnerability from income volatility and the absence of formal grievance channels. In domestic and household labor, where workers are frequently excluded from labor law coverage and isolated from co-worker networks, the institutional protection and power asymmetry dimensions assume heightened salience. Regulatory bodies and labor inspectorates could incorporate PLVI-based assessment into inspection frameworks, using scores as indicators that trigger closer scrutiny of high-vulnerability sectors, provided that instruments and scoring protocols are standardized, publicly available, and accompanied by interpretation guidance for non-specialist users. The development of sector-specific norms, based on large-sample assessments in banking, manufacturing, healthcare, education, and public administration, would supply the comparative benchmarks such regulatory use requires.

16. LIMITATIONS AND FUTURE RESEARCH AGENDA

The principal limitation of this paper is that the PLVI has not been empirically validated. No psychometric evidence, factor structure, reliability estimate, or criterion relationship is reported here, and the framework's claims to measure vulnerability accurately therefore remain to be tested through the program set out in Section 11. Until that program is completed, the PLVI should be regarded as a conceptual measurement framework and a testable hypothesis about the structure of precarious labor vulnerability, not as a validated instrument.

Several further limitations follow from the framework's design. Dimension weighting is inherently subjective, and different defensible weighting schemes can produce different composite scores; Section 10.3 addresses this through transparent, empirically informed weighting and sensitivity analysis, but the underlying indeterminacy cannot be eliminated. The framework's normative assumptions are context-specific and calibrated to Sub-Saharan African, and particularly West African, labor markets, which both grounds its relevance and constrains its direct transfer to other settings. Self-report measurement of power asymmetry and institutional protection may be subject

to response bias in high power-distance environments, where workers may be reluctant to report negatively on supervisors or employers even under conditions of anonymity, and the validation program will need to assess and, where possible, correct for this bias.

The future research agenda proceeds from these limitations. The immediate priority is the validation program itself, beginning with content validity and factor structure and progressing to measurement invariance and criterion validity. Longitudinal and cross-lagged designs are needed to establish the predictive validity of the instrument and to examine bidirectional relationships between organizational conditions and individual vulnerability (Hauge *et al.*, 2007; Mikkelsen and Einarsen, 2002). Intervention studies, ideally cluster randomized, are needed to test whether PLVI-informed measurement and feedback reduce bullying incidence, a mechanism that has shown promise in analogous settings, including a recent cluster randomized trial of a group-based psychological safety intervention that reduced bullying while sustaining work engagement (Kobayashi, Itoh, and Kaneko, 2025), but that has not been tested for bullying prevention in lower-income country organizations (Fixsen *et al.*, 2005; Salin, 2008). Mixed-methods research combining PLVI assessment with qualitative investigation is needed to illuminate the intersubjective processes through which hierarchical power is exercised, contested, and legitimated in African organizational settings that combine bureaucratic legacies with communal ethics, since the PLVI captures structural conditions but cannot on its own explain these relational dynamics (Acker, 2006; Collins, 2000; Hodson, 2001; Tilly, 1998). Recent reviews similarly call for research on how gender, disability, and precarious employment interact with organizational power to shape bullying vulnerability and help-seeking (Walker, 2025), an agenda the intersectional design of the PLVI is well positioned to support.

17. CONCLUSION

The PLVI is a theoretically grounded and contextually specific response to a measurement gap in workplace bullying research as it applies to Sub-Saharan African temporary work. By synthesizing organizational justice, precarious work, power-distance, intersectionality, and institutional theories into five composite dimensions, and by specifying an operational measurement model and the validation program required to test it, the paper offers researchers, practitioners, and policy analysts a coherent starting point for assessing bullying vulnerability in organizational environments that existing frameworks are poorly positioned to address. The framework is offered as a conceptual contribution and a testable model rather than a completed instrument. Empirical validation, beginning with content validity and factor structure and extending to measurement invariance, criterion validity, and longitudinal study, is the necessary and immediate next step toward realizing its practical value.

REFERENCES

1. Acker, J. (2006). Inequality regimes: Gender, class, and race in organizations. *Gender and Society*, 20(4), 441-464.
2. Adewale, O. O., and Arogundade, O. T. (2015). The impact of human resource management practice on organizational performance: A study of selected organizations in Nigeria. *International Journal of Human Resource Studies*, 5(2), 45-67.
3. Agbaje, O. S., Arua, C. K., Umeifekwem, J. E., Umoke, P. C. I., Igbokwe, C. C., Iwuagwu, T. E., Iweama, C. N., Ozoemena, E. L., and Obande-Ogbuinya, E. N. (2021). Workplace gender-based violence and associated factors among university women in Enugu, South-East Nigeria: An institutional-based cross-sectional study. *BMC Women's Health*, 21, 124.

4. Agervold, M., and Mikkelsen, E. G. (2004). Relationships between bullying, psychosocial work environment and individual stress reactions. *Work and Stress*, 18(4), 336-351.
5. Amoadu, M., Ansah, E. W., and Sarfo, J. O. (2023). Influence of psychosocial safety climate on occupational health and safety: A scoping review. *BMC Public Health*, 23(1), 1344.
6. Andrea, S. B., Eisenberg-Guyot, J., Peckham, T., Oddo, V. M., and Hajat, A. (2021). Intersectional trends in employment quality in older adults in the United States. *SSM Population Health*, 15, 100868.
7. Arogundade, O. T., and Arogundade, A. B. (2013). Psychological empowerment in the workplace. *Journal of Emerging Trends in Educational Research and Policy Studies*, 4(5), 744-750.
8. Astrauskaite, M., Vaitkevicius, R., and Perminas, A. (2011). Job satisfaction survey: A confirmatory factor analysis based on secondary school teachers' sample. *International Journal of Business and Management*, 6(5), 41-50.
9. Atingabili, S., Chen, H., Arboh, F., Mensah, I. A., Kewou, N. Y. N., and Maalisuo, B. S. (2025). Exposure to workplace bullying and nurses' turnover intentions nexus: A moderation-mediation analysis. *BMC Psychology*, 13(1), 671.
10. Bauer, G. R. (2014). Incorporating intersectionality theory into population health research methodology: Challenges and the potential to advance health equity. *Social Science and Medicine*, 110, 10-17.
11. Benach, J., Vives, A., Amable, M., Vanroelen, C., Tarafa, G., and Muntaner, C. (2014). Precarious employment: Understanding an emerging social determinant of health. *Annual Review of Public Health*, 35, 229-253.
12. Bowleg, L. (2008). When Black + lesbian + woman does not equal Black lesbian woman. *Sex Roles*, 59(5-6), 312-325.
13. Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. Guilford Press.
14. Bunce, A., Hashemi, L., Clark, C., Stansfeld, S., Myers, C.-A., and McManus, S. (2024). Prevalence and nature of workplace bullying and harassment and associations with mental health conditions in England: A cross-sectional probability sample survey. *BMC Public Health*, 24, 1147.
15. Byrne, B. M., Shavelson, R. J., and Muthen, B. (1989). Testing for the equivalence of factor covariance and mean structures: The issue of partial measurement invariance. *Psychological Bulletin*, 105(3), 456-466.
16. Chang, Y.-C., Huang, S.-T., Wang, C.-C., and Yang, C.-C. (2025). Resilience as a moderator of the effects of types of workplace bullying and job performance. *BMC Nursing*, 24(1), 254.
17. Cole, E. R. (2009). Intersectionality and research in psychology. *American Psychologist*, 64(3), 170-180.
18. Collins, P. H. (2000). *Black feminist thought* (2nd ed.). Routledge.
19. Colquitt, J. A., Conlon, D. E., Wesson, M. J., Porter, C. O. L. H., and Ng, K. Y. (2001). Justice at the millennium: A meta-analytic review of 25 years of organizational justice research. *Journal of Applied Psychology*, 86(3), 425-445.
20. Crenshaw, K. (1989). Demarginalizing the intersection of race and sex. *University of Chicago Legal Forum*, 1989(1), 139-167.
21. DeVellis, R. F. (2016). *Scale development: Theory and applications* (4th ed.). SAGE.
22. DiMaggio, P. J., and Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147-160.
23. Dollard, M. F., and Bakker, A. B. (2010). Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. *Journal of Occupational and Organizational Psychology*, 83(3), 579-599.
24. Dollard, M. F., Dormann, C., Tuckey, M. R., and Escartín, J. (2017). Psychosocial safety climate (PSC) and enacted PSC for workplace bullying and psychological health problem reduction. *European Journal of Work and Organizational Psychology*, 26(6), 844-857.
25. Einarsen, S., Hoel, H., and Notelaers, G. (2009). Measuring exposure to bullying and harassment at work: Validity, factor structure and psychometric properties of the Negative Acts Questionnaire-Revised. *Work and Stress*, 23(1), 24-44.
26. Einarsen, S., Hoel, H., Zapf, D., and Cooper, C. L. (Eds.). (2011). *Bullying and harassment in the workplace* (2nd ed.). CRC Press.
27. Else-Quest, N. M., and Hyde, J. S. (2016). Intersectionality in quantitative psychological research: I. Theoretical and epistemological issues. *Psychology of Women Quarterly*, 40(2), 155-170.
28. Esping-Andersen, G. (1990). *The three worlds of welfare capitalism*. Princeton University Press.
29. Faeq, D. K. (2025). Narcissistic leadership, workplace bullying, turnover intention, and creative performance: A study of nurses. *BMC Nursing*, 24(1), 898.

30. Faremi, O. (2020a). The phenomenon of workplace bullying: A focus on temporary workers from selected industries in Southwest Nigeria. *American Journal of Humanities and Social Sciences Research*, 4(6), 233-242.
31. Farley, S., Niven, K., Hughes, D. J., and Booth, T. (2025). Workplace bullying and personality change: Evidence from a 4-year Swiss panel study. *Work and Stress*, 40(1), 54-77.
32. Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., and Wallace, F. (2005). *Implementation research: A synthesis of the literature*. University of South Florida, Louis de la Parte Florida Mental Health Institute.
33. Furr, R. M., and Bacharach, V. R. (2014). *Psychometrics: An introduction* (2nd ed.). SAGE.
34. Glavin, P., and Schieman, S. (2022). Dependency and hardship in the gig economy: The mental health consequences of platform work. *Socius*, 8, 1-18.
35. Greenberg, J. (1987). A taxonomy of organizational justice theories. *Academy of Management Review*, 12(1), 9-22.
36. Gupta, R., Bakhshi, A., and Einarsen, S. (2017). Investigating workplace bullying in India: Psychometric properties, validity, and cutoff scores of the Negative Acts Questionnaire-Revised. *SAGE Open*, 7(2), 1-12.
37. Hall, P. A., and Soskice, D. (Eds.). (2001). *Varieties of capitalism: The institutional foundations of comparative advantage*. Oxford University Press.
38. Hall, G. B., Dollard, M. F., and Coward, J. (2010). Psychosocial safety climate: Development of the PSC-12. *International Journal of Stress Management*, 17(4), 353-383.
39. Hauge, L. J., Skogstad, A., and Einarsen, S. (2007). Relationships between stressful work environments and bullying. *Work and Stress*, 21(3), 220-242.
40. Hodson, R. (2001). *Dignity at work*. Cambridge University Press.
41. Hofstede, G. (1980). *Culture's consequences: International differences in work-related values*. SAGE.
42. Hofstede, G., Hofstede, G. J., and Minkov, M. (2010). *Cultures and organizations: Software of the mind* (3rd ed.). McGraw-Hill.
43. International Labour Organization. (2016). *Non-standard forms of employment: Understanding challenges, shaping prospects*. ILO.
44. International Labour Organization. (2019). *Work for a brighter future*. ILO.
45. International Labour Organization. (2022). *World employment and social outlook: Trends 2022*. ILO.
46. Kalleberg, A. L. (2009). Precarious work, insecure workers: Employment relations in transition. *American Sociological Review*, 74(1), 1-22.
47. Kalleberg, A. L. (2018). *Precarious lives: Job insecurity and well-being in rich democracies*. Polity Press.
48. Kim, E. S., Oh, D. J., Kim, J., Oh, K.-S., Shin, Y. C., Shin, D., Cho, S. J., and Jeon, S.-W. (2025). Revealing the confluences of workplace bullying, suicidality, and their association with depression. *Scientific Reports*, 15(1), 6920.
49. Kobayashi, M., Itoh, H., and Kaneko, E. (2025). Effectiveness of a group-based psychological safety intervention to prevent workplace bullying and sustain work engagement: A cluster randomized controlled trial. *Behavioral Sciences*, 15(10), 1302.
50. Kreshpaj, B., Orellana, C., Burström, B., Davis, L., Hemmingsson, T., Johansson, G., Kjellberg, K., Jonsson, J., Wegman, D. H., and Bodin, T. (2020). What is precarious employment? A systematic review of definitions and operationalizations from quantitative and qualitative studies. *Scandinavian Journal of Work, Environment and Health*, 46(3), 235-247.
51. Law, R., Dollard, M. F., Tuckey, M. R., and Dormann, C. (2011). Psychosocial safety climate as a lead indicator of workplace bullying and harassment, job resources, psychological health and employee engagement. *Accident Analysis and Prevention*, 43(5), 1782-1793.
52. Leka, S., Jain, A., Iavicoli, S., and Di Tecco, C. (2015). An evaluation of the policy context on psychosocial risks and mental health in the workplace in the European Union. *BioMed Research International*, 2015, 213089.
53. Liu, M., Cheng, L., Wang, Y., Zeng, Q., and Zeng, Y. (2025). The bidirectional relationship between workplace bullying and presenteeism: A systematic review and meta-analysis. *Workplace Health and Safety*. Advance online publication.
54. Lutgen-Sandvik, P., Tracy, S. J., and Alberts, J. K. (2007). Burned by bullying in the American workplace. *Journal of Management Studies*, 44(6), 837-862.
55. Lutgen-Sandvik, P., and Tracy, S. J. (2012). Answering five key questions about workplace bullying. *Management Communication Quarterly*, 26(1), 3-47.

56. MacCallum, R. C., Widaman, K. F., Zhang, S., and Hong, S. (1999). Sample size in factor analysis. *Psychological Methods*, 4(1), 84-99.
57. Mikkelsen, E. G., and Einarsen, S. (2002). Relationships between exposure to interorganizational conflict and individual outcomes. *Violence and Victims*, 17(2), 203-219.
58. Millsap, R. E. (2011). *Statistical approaches to measurement invariance*. Routledge.
59. Namie, G., and Lutgen-Sandvik, P. E. (2010). Active and passive accomplices: The communal character of workplace bullying. *International Journal of Communication*, 4, 343-373.
60. Nielsen, M. B., and Einarsen, S. (2012). Outcomes of exposure to workplace bullying: A meta-analytic review. *Work and Stress*, 26(4), 309-332.
61. Nielsen, M. B., and Einarsen, S. V. (2018). What we know, what we do not know, and what we should and could have known about workplace bullying. *Aggression and Violent Behavior*, 42, 71-83.
62. Nielsen, M. B., Glasø, L., and Einarsen, S. (2020). Exposure to workplace harassment and the five factor model of personality: A meta-analysis. *Personality and Individual Differences*, 161, 110006.
63. North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press.
64. Notelaers, G., Einarsen, S., De Witte, H., and Vermunt, J. K. (2006). Measuring exposure to bullying at work: The validity and advantages of the latent class cluster approach. *Work and Stress*, 20(4), 288-301.
65. Nyambegera, S. M. (2002). Ethnicity and human resource management practice in sub-Saharan Africa. *International Journal of Human Resource Management*, 13(7), 1077-1090.
66. Oya, C. (2010). Rural labour markets in Africa: The unreported source of inequality. *Development*, 53(4), 529-536.
67. Power, J. L. (2000). *Organizational culture and communication climate*. Hampton Press.
68. Pulford, A., Thapa, A., Thomson, R. M., Guilding, A., Green, M. J., Leyland, A., Popham, F., and Katikireddi, S. V. (2022). Does persistent precarious employment affect health outcomes among working age adults? A systematic review and meta-analysis. *Journal of Epidemiology and Community Health*, 76(11), 909-917.
69. Quinlan, M., Mayhew, C., and Bohle, P. (2001). The global expansion of precarious employment, work disorganization, and consequences for occupational health. *International Journal of Health Services*, 31(2), 335-414.
70. Rodríguez Jaramillo, N., Trillos, C. E., and Julià, M. (2022). The measure of precarious employment and its impact on the mental health of workers: A systematic review 2007-2020. *Work*, 73(2), 639-650.
71. Salin, D. (2003). Ways of explaining workplace bullying: A review of enabling, motivating and precipitating structures and processes in the work environment. *Human Relations*, 56(10), 1213-1232.
72. Salin, D. (2008). The prevention of workplace bullying as a question of human resource management. *Scandinavian Journal of Management*, 24(3), 221-232.
73. Salin, D., and Hoel, H. (2020). Organisational risk factors of workplace bullying: A review and development of a multi-factorial approach. *Human Resource Management Review*, 30(1), 100690.
74. Scott, W. R. (2014). *Institutions and organizations: Ideas, interests and identities* (4th ed.). SAGE.
75. Standing, G. (2011). *The precariat: The new dangerous class*. Bloomsbury Academic.
76. Sun, S., Chen, H., He, Y., Yu, F., Yang, Y., Chen, H., and Tung, T.-H. (2025). Workplace bullying and turnover intentions among workers: A systematic review and meta-analysis. *BMC Public Health*, 25, 2394.
77. Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, 43(2), 178-190.
78. Tilly, C. (1998). *Durable inequality*. University of California Press.
79. Vandenberg, R. J., and Lance, C. E. (2000). A review and synthesis of the measurement invariance literature: Suggestions, practices, and recommendations for organizational research. *Organizational Research Methods*, 3(1), 4-70.
80. Vives, A., Amable, M., Ferrer, M., Moncada, S., Llorens, C., Muntaner, C., Benavides, F. G., and Benach, J. (2010). The Employment Precariousness Scale (EPRES). *Occupational and Environmental Medicine*, 67(8), 548-555.
81. Vosko, L. F. (2010). *Managing the margins: Gender, citizenship, and the international regulation of precarious employment*. Oxford University Press.
82. Walker, J. (2025). Trauma, power, and psychological safety: Understanding the mental health impact of workplace bullying. *Healthcare*, 13(23), 3084.

83. Wolf, E. J., Harrington, K. M., Clark, S. L., and Miller, M. W. (2013). Sample size requirements for structural equation models. *Educational and Psychological Measurement*, 73(6), 913-934.
84. Zhang, G., Zou, T., and Zhang, M. (2025). Horizontal violence or workplace bullying among intensive care unit nurses: A mixed systematic review. *Journal of Advanced Nursing*. Advance online publication.