

Predicting Workplace Conflicts through Intersectional Analysis of Social Identities of Employees: A Multilevel Statistical Modelling Approach

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Abstract

Workplace conflict remains a persistent challenge to organisational productivity and employee well-being. Traditional analyses often fail to account for the intersecting effects of multiple social identities in shaping conflict risk. This study applies the Intersectional Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (I-MAIHDA) framework to predict workplace conflict among employees. Survey data were collected from a diverse workforce, capturing demographic variables including gender, birth country, position level, and sexuality, alongside self-reports of workplace conflict within the past 12 months due to aspects of identity. Intersectional typologies were constructed from these variables, and Bayesian Ordinal multilevel models were employed to estimate conflict risk across groups. Posterior Predictive Checks (PPC) validated the models' predictive performance, demonstrating their ability to replicate observed patterns such as group means and variability. Findings reveal substantial heterogeneity in conflict risk between intersectional groups, underscoring disparities that are often hidden in conventional single-axis analyses. This study highlights the utility of the I-MAIHDA approach in uncovering structural inequalities and offers organisations a more nuanced and equitable framework for designing effective diversity and inclusion strategies.

Keywords

Workplace Conflict, Intersectionality, Social Identities, I-MAIHDA, Bayesian, Diversity and Inclusion, Organisational Inequality, Predictive Modelling

1. Introduction

Workplace conflict, ranging from everyday interpersonal disagreements to systemic discrimination, remains a pressing challenge for organisations worldwide. Its effects extend beyond individual stress, undermining organisational culture, employee morale, productivity, and retention. As workplaces become increasingly diverse, understanding the roots of conflict and identifying groups at greater risk has become a priority for both scholars and practitioners concerned with building equitable and inclusive environments. Defining and measuring this diversity is a fundamental challenge; recent frameworks highlight the need to move beyond simple demographic metrics toward multi-dimensional models that capture the complexity of human differences (Moieni & Mousaferiadis, 2022).

In this study, we conceptualise **Conflict Risk** as an ordinal measure capturing the degree of workplace conflict experienced in the past 12 months due to identity-related issues. This measure is derived from a four-category survey item and is analytically structured as follows: **Risk_0** (0: No conflicts at all); **Risk_1** (1: Yes, I rarely experience conflicts, e.g., a few times a year); **Risk_2** (2: Yes, I experience it sometimes, e.g., monthly); and **Risk_3** (3: Yes, I experience it on a regular basis, e.g., weekly). This explicit ordinal scale reflects increasing gradations of conflict severity and provides a structured way to quantify conflict vulnerability across intersectional groups.

For the purpose of this study, our focus is on **interpersonal workplace conflict**, which is broadly defined as any disagreement, tension, or active opposition between **individual employees** that stems from differences in needs, values, or personal and social identities (De Dreu & Gelfand, 2008). This conflict can manifest as task-based disagreements (e.g., over project goals) or, more relevantly, **relationship-based interpersonal friction** or identity-based tension (e.g., related to gender or background) (Jehn & Bendersky, 2003). It is crucial to differentiate general workplace conflict from legally and ethically defined harmful behaviours. While conflict is often a mutual disagreement that is resolvable, **discrimination** and **harassment** are acts of abuse of power (Sackett et al., 2017):

- **Discrimination** is the unfair treatment or denial of opportunities based on protected characteristics.
- **Harassment** involves unwelcome conduct that creates a hostile, intimidating, or offensive working environment.
- **Bullying** is a repeated, unreasonable behaviour directed toward a worker, or a group of workers, that creates a risk to health and safety (Einarsen et al., 2020). Crucially, **identity-based conflict** (the focus of this paper) exists at the intersection of these terms: it is an **interpersonal conflict** *caused* or *exacerbated* by the differing social identities of the employees. For instance, a disagreement over policy is a conflict; a disagreement that escalates because one party uses a racial stereotype is an identity-based conflict that edges into harassment or discrimination.

Research on workplace conflict and diversity, however, has often focused on

single identity dimensions such as gender or race. While valuable, these single-axis approaches risk oversimplifying the complex realities employees face (Calderón-Orellana & Berríos, 2025). Even sophisticated frameworks designed for organisational application sometimes limit their scope to specific facets of difference, such as cultural diversity (Moieni & Mousaferiadis, 2022). Intersectionality theory emphasises that social identities are not merely additive but interact in unique and non-linear ways to shape individual experiences (Atewologun, Doldor, & Sealy, 2025). Employees situated at the intersection of multiple marginalised identities may encounter distinct forms of conflict that remain invisible when identities are studied in isolation. Despite this recognition in theory, there is a lack of robust quantitative approaches capable of capturing and predicting these intersectional dynamics in workplace settings (Bauer et al., 2021; Doldor et al., 2024).

Foundational research shows that single-axis analyses often obscure the complex realities faced by individuals situated at multiple sites of marginalisation (Bauer & Scheim, 2019; Crenshaw, 1989; Else-Quest & Hyde, 2016). Scholars emphasise that without explicitly modelling intersecting identities, quantitative analyses tend to underestimate inequality patterns and miss heterogeneity within groups (Bauer et al., 2021; Evans et al., 2018). This gap motivates the need for analytical tools that can capture non-additive, intersectional dynamics in workplace conflict.

This study addresses this gap by applying the Intersectional Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (**I-MAIHDA**) framework (Merlo et al., 2012) to the prediction of workplace conflict. We adopt this advanced sociological method because **traditional quantitative approaches are statistically and theoretically insufficient** for capturing intersectional complexity in organizational data. Methods relying on simple interaction terms quickly become statistically unworkable (due to small cell sizes and multicollinearity) when analysing three or more intersecting identities simultaneously. More fundamentally, they fail to capture the **specific, unique risk** experienced by **each distinct intersectional group (typology)**. **I-MAIHDA overcomes this single-axis limitation**. It models all possible intersectional groups as a single, higher-level unit, allowing us to accurately estimate the heterogeneity of conflict risk across the entire spectrum of intersectional identities—a level of granularity essential for grounding organizational scholarship in the true complexity of intersectionality theory. Using survey data collected from a diverse workforce, including measures of gender, birth country, position level, sexuality, and self-reports of conflict in the past 12 months due to aspects of identity, we construct intersectional typologies to model conflict risk. Bayesian ordinal multilevel models are employed to estimate group-specific risks, and Posterior Predictive Checks (PPC) are used to evaluate model performance. Through this approach, we aim to achieve two primary objectives: 1) to map the distribution of workplace conflict risk across intersectional groups, and 2) to assess the predictive accuracy of I-MAIHDA in replicating observed conflict patterns.

The significance of this work is twofold. Theoretically, it advances workplace conflict research by introducing an intersectional multilevel modelling approach that captures structural inequalities often hidden by single-axis analyses. Practically, it provides organisations with an evidence-based framework to identify employees most vulnerable to conflict, thereby informing more targeted diversity and inclusion strategies. By uncovering heterogeneity in conflict risk across intersectional groups, this study contributes both to academic debates on intersectionality and to practical efforts to foster equitable workplaces.

To achieve these critical theoretical and practical objectives, this study is guided by two central research questions and a core hypothesis. Our primary substantive goal is addressed by **RQ1: How do intersecting social identities (e.g., gender, birth country, position level, sexuality) shape employees' risk of experiencing workplace conflict?** Informed by intersectional theory, we hypothesize (H1) that **employees with multiple marginalized identities will report higher levels of workplace conflict compared to those with privileged identities.** Furthermore, to validate the utility of our advanced framework for organizational research, we pose a methodological question: **RQ2: Does the I-MAIHDA approach improve predictive accuracy compared to traditional single-axis analyses?**

2. Literature Review

Workplace conflict is a complex phenomenon shaped not only by individual behaviours and organisational structures but also by the interplay of intersecting social identities. Employees with multiple marginalised identities often face compounded discrimination and systemic barriers that influence their experiences of conflict, inclusion, and advancement. Such conflicts are not uniform; they vary depending on combinations of race, gender, sexual orientation, position level, and other social categories. For instance, Ng et al. (2025) found that LGBTQ+ employees in Singapore experienced different levels of discrimination depending on their racial background and gender, highlighting the need for an intersectional perspective to understand workplace inequalities. Recognising these complexities allows for more nuanced, evidence-based strategies to foster inclusive and equitable work environments.

2.1. Intersectionality and Workplace Conflict

Intersectionality, introduced by Crenshaw (1989), is a critical framework that examines how overlapping social identities interact to produce unique experiences of privilege and oppression. In the workplace, intersectionality reveals that employees' experiences of conflict cannot be fully understood when analysed through a single-axis lens, such as gender or race alone. By incorporating intersectionality, scholars can identify systemic inequalities that contribute to conflicts, highlighting disparities that may otherwise remain invisible (Valdes, 2023). Workplace conflicts themselves arise from misunderstandings, cultural differences, communication breakdowns, and perceived inequalities, and their impact is magnified

for individuals navigating multiple marginalised identities. Integrating intersectionality with conflict theory provides a comprehensive framework for understanding the multifaceted nature of these disputes and designing interventions that address structural inequities.

2.2. Empirical Evidence

Empirical studies illustrate the importance of intersectional analysis in understanding workplace conflict. [Xiao \(2022\)](#) demonstrated that Black women are less likely to face backlash for gender norm violations due to intersectional invisibility, whereas Black men experience penalties for behaviours perceived as aggressive, showing how intersecting race and gender identities shape conflict experiences. [Slemon et al. \(2025\)](#) found that nursing students reported discrimination across multiple dimensions, including racism, sexism, ableism, classism, and religious bias, emphasising the necessity of quantitative intersectional approaches. Similarly, [Moukheiber et al. \(2024\)](#) highlighted how social determinants intersect to affect fairness in healthcare outcomes, indicating the broader relevance of intersectional predictive modelling.

Furthermore, the analytical need for data-driven, comprehensive diversity assessment is underscored by studies introducing concepts like the **Mutuality Index**. This quantitative approach measures the degree to which an organization's internal diversity reflects the diversity of its external customer base, thus informing more effective, evidence-based diversity strategies ([Moieni et al., 2022](#)).

Collectively, these studies reinforce that single-axis analyses fail to capture the nuanced realities of workplace conflict across diverse social groups.

2.3. Techniques for Intersectionality and Predictive Modelling

Recent methodological advancements have enabled more rigorous intersectional analyses. Multilevel modelling, including I-MAIHDA frameworks, allows researchers to capture both individual-level variation and group-level heterogeneity. [Evans et al. \(2018\)](#) applied a Bayesian multilevel approach to estimate residual variance across intersectional strata, demonstrating how predictive modelling can quantify the unique contribution of intersecting identities. Other studies, such as [Tucker et al. \(2024\)](#) and [Else-Quest & Hyde \(2016\)](#), illustrate the use of regression, ANOVA, latent class analysis, and machine learning techniques to analyse interaction effects, assess main effects, and explore multiplicative impacts of intersecting social categories. The potential of these data-driven approaches is further demonstrated by research exploring how algorithms like ARIMA and Grey modelling can be adapted to predict diversity trends even with limited (small) historical data, providing a necessary consideration for applying predictive methods to complex social factors ([Moieni et al., 2023](#)). [Pedrós Barnils & Schüz \(2024\)](#) further demonstrate the potential of combining PROGRESS-Plus intersectional frameworks with ensemble machine learning algorithms to identify high-risk subgroups in a data-driven, interpretable manner.

2.4. Gaps and Future Directions

Despite these advances, significant gaps remain. Many studies continue to rely on single-axis analyses or cross-sectional designs, limiting the ability to identify high-risk groups or predict conflict outcomes. [Bauer & Scheim \(2019\)](#) and [Bauer et al. \(2021\)](#) highlight challenges such as superficial theoretical engagement, measurement issues, and inadequate integration of structural factors, advocating for multilevel and intra-categorical approaches. [Kelly et al. \(2021\)](#) emphasise the need for interdisciplinary research, meaningful inclusion of marginalised communities, and stronger integration of social theory into quantitative methods. Addressing these gaps can enhance predictive accuracy, inform organisational policy, and contribute to more equitable workplace practices.

2.5. Link to Current Study

Building on this foundation, the current study applies I-MAIHDA to survey data collected from a diverse workforce, measuring gender, birth country, position level, sexuality, and self-reported experiences of conflict in the past 12 months. By constructing intersectional typologies and applying Bayesian ordinal multilevel models with Posterior Predictive Checks (PPC), this study addresses existing gaps by:

- 1) Capturing heterogeneity in conflict risk across intersectional groups.
- 2) Demonstrating the predictive utility of intersectional multilevel modelling.
- 3) Informing evidence-based organisational interventions to mitigate workplace conflict and promote equity.

3. Methodology

3.1. Data and Variables

The dataset, consisting of total responses of 258 for this study, was collected via a survey distributed to employees across multiple industries. It includes both quantitative and qualitative measures. The primary outcome variable, **Conflict Risk**, is self-reported on an ordinal scale ranging from 0 (No Conflict) to 3 (High Conflict). Additional demographic variables were used to create intersectional strata, including:

- **Gender:** Man, Woman
- **Birth.Country:** American, Non-American
- **Position.Level:** Junior/Mid Staff, Management Staff
- **Sexuality:** Heterosexual/Straight, **Minority/LGBTQ+**
- **Disability Status:** Yes, No

For the purposes of modelling, specific three-way intersectional combinations were constructed to examine how multiple dimensions of identity jointly shape perceived conflict risk. The combinations used in this study were:

- **Gender × Birth.Country × Position.Level**
- **Gender × Birth.Country × Sexuality**
- **Gender × Birth.Country × Disability**
- **Gender × Position.Level × Sexuality**

- **Gender × Position.Level × Disability**

Qualitative responses provided insight into perceived causes of workplace conflict. Commonly reported conflict drivers included sexuality, country of birth, gender, and culture.

Before modelling, all categorical variables were explicitly coded as factors with defined levels, and any remaining missing values were removed. This ensured that each intersectional stratum had a consistent set of observations for the I-MAIHDA analysis.

These demographic dimensions were selected because prior research identifies them as key drivers of workplace inequity and sources of identity-based conflict. Gender and sexuality are commonly associated with bias and microaggressions (Ng et al., 2025). Birth country captures cultural background and experiences of nationalism/xenophobia, which often shape interpersonal tensions in diverse teams. The selection of Birth Country as a distinct identity axis aligns with approaches in the diversity literature that seek to disaggregate factors of cultural identity (Moieni & Mousaferiadis, 2022). Position level reflects power relations that influence conflict dynamics (Jehn & Bendersky, 2003). Disability status is included due to well-documented workplace accessibility barriers and stigma (Slemon et al., 2025). Together, these variables represent major social identity axes relevant to organisational inequality.

3.2. Study Design and Analytical Framework

To quantify the influence of intersectional identities on perceived conflict risk, this study employed an **Intersectional Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy (I-MAIHDA)**. The I-MAIHDA framework allows for:

- 1) Estimation of **between-stratum variance** (variance attributable to intersectional group membership).
- 2) Assessment of **additive vs. non-additive intersectional effects**, by comparing null, additive, and interaction models.
- 3) Quantification of individual-level predictions, including **posterior predictive checks (PPCs)** for model validation.

3.3. Data Preparation

Prior to modelling, the dataset underwent the following preprocessing steps:

- 1) **Factor conversion and level assignment:** All categorical dimensions (e.g., Gender, Position, Sexuality) were converted to factors with explicitly defined levels. Responses such as “Unknown” or “Prefer Not to Answer” were treated as missing values and excluded.
- 2) **Ordinal coding:** Conflict Risk was explicitly treated as an **ordered factor** to support ordinal regression.
- 3) **Intersectional ID creation:** A unique identifier was constructed for each intersectional stratum via the interaction of the selected dimensions (e.g., Gender × Birth Region × Position Level).

4) **Handling missing data:** Rows with missing values in any of the predictor dimensions or the outcome variable were excluded to ensure model consistency.

3.4. Statistical Modelling

All analyses were conducted in **R** using the “brms” package for Bayesian-Ordinal multilevel modelling, with “cmdstanr” as the backend to improve computational efficiency. Weakly informative priors were used consistently across models:

- Fixed effects: Normal (0, 5)
- Random intercept standard deviations: Cauchy (0, 2.5)
- Intercept: Normal (0, 5)

Posterior summaries are reported as means with **90% credible intervals (CI)** unless otherwise specified. A cumulative probit link was applied, appropriate for ordinal outcomes.

3.4.1. Model Specifications

The following hierarchical models were estimated for each intersectional stratum:

1) **Model 0 (Null Model):** Random intercept only, capturing overall between-stratum variance without adjusting for fixed effects.

2) **Model 1a–1c (Single-Dimension Adjustment Models):** Each model adjusts for one dimension (e.g., Gender, Birth Region, or Position Level) with a random intercept for the stratum.

3) **Model 2 (Full Additive Model):** Includes all three dimensions as additive fixed effects, plus a random intercept for the intersectional stratum.

4) **Model 3 (Full Interaction Model):** Includes all dimensions with full interaction terms to capture potential non-additive intersectional effects.

All models used the **cumulative probit link** suitable for ordinal outcomes.

3.4.2. Derived Metrics

Key metrics were computed for model interpretation:

- **Intraclass Correlation (ICC):** Proportion of variance attributable to intersectional strata in Model 0.
- **Proportional Change in Variance (PCV):** Reduction in stratum-level variance from the null model to the additive model, indicating how much variance is explained by additive effects.
- **Remaining Between-Stratum Variance:** Residual variance in the full additive model, representing the “pure” intersectional effect.
- **RMSE (Root Mean Square Error):** Calculated on predicted versus observed numeric codes for Conflict Risk from the full interaction model.
- **Bayesian R^2 (Conditional):** Proportion of variance explained by the full interaction model on the latent scale.

3.5. Posterior Predictive Checks and Model Validation

To assess model fit and predictive accuracy, posterior predictive checks (PPCs) were conducted for the full interaction model. Evaluated plots included:

- 1) Observed **vs. predicted category proportions** (bars)
 - 2) Observed **vs. predicted mean and standard deviation** of Conflict Risk (numeric coding)
 - 3) Observed **vs. predicted group means** by intersectional strata
- These diagnostics ensured that the models adequately captured both individual-level and group-level variation.

3.6. Analytical Procedure

- 1) Load and clean the survey dataset.
- 2) Define intersectional dimensions and levels for analysis.
- 3) Apply the “run_imaihd_analysis” function iteratively across all relevant three-way intersectional combinations (e.g., Gender × Birth Region × Position Level; Gender × Position Level × Sexuality).
- 4) Extract results including ICC, PCV, remaining variance, RMSE, and Bayesian R^2 .
- 5) Export individual predicted Conflict Risk values and plots for further interpretation.
- 6) Compare intersectional strata to determine which combinations exhibit the most pronounced non-additive effects.

4. Results

4.1. Descriptive Statistics of the Sample

A total of **258** valid survey responses were included in the final analysis after data cleaning. **Table 1** displays the distribution of respondents across the main demographic variables: gender, birth region, position level, sexuality, and disability status.

Table 1. Distribution of respondents across demographic variables.

Variable	Category	Count	Percentage
Gender	Man	179	69.38%
	Woman	79	30.62%
Birth.Country	American	185	71.71%
	Non-American	73	28.29%
Position.Level	Junior/Mid Staff	94	36.43%
	Management Staff	164	63.57%
Sexuality	Heterosexual/Straight	136	52.71%
	Minority/LGBTQ+	117	45.35%
	NA	5	1.94%
Disability	No	133	51.55%
	Yes	116	44.96%
	Prefer Not to Answer	9	3.48%

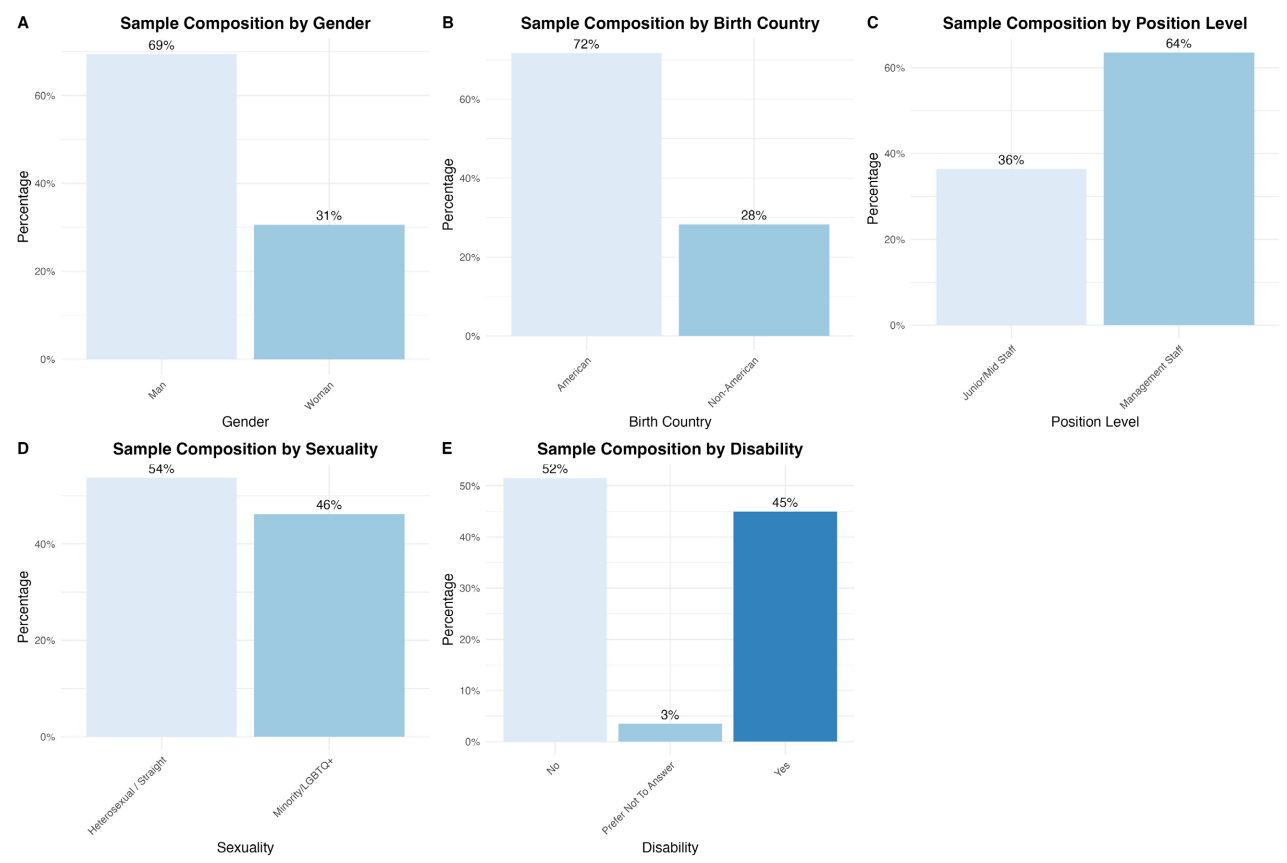


Figure 1. Sample composition by demographic categories.

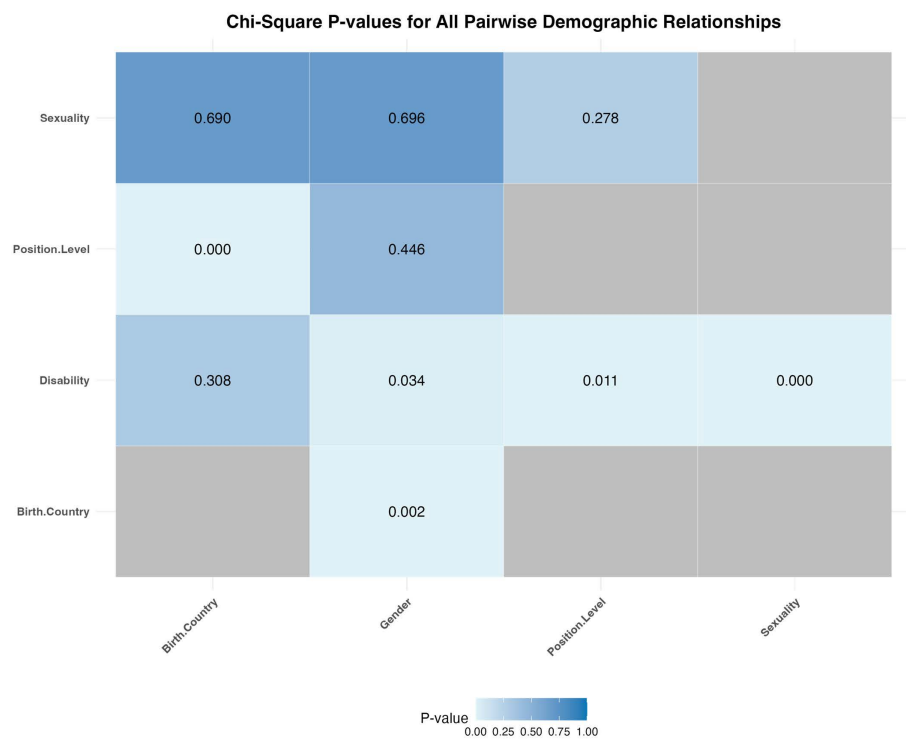


Figure 2. Chi-square *p*-values for all pairwise demographic relationships.

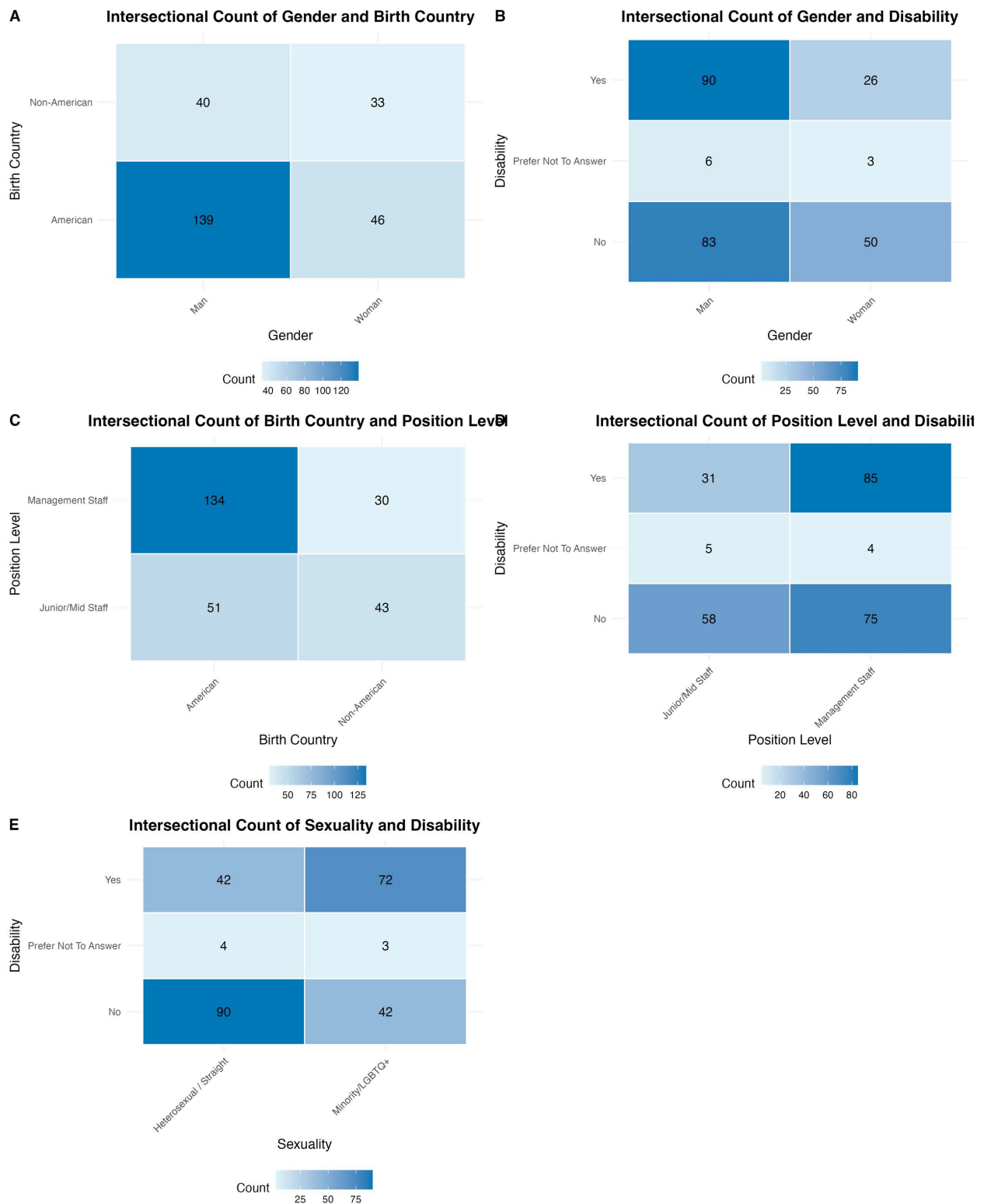


Figure 3. Chi-square analysis.

Figure 1 presents the percentage distribution for each category to provide a visual overview of sample composition. In addition, **Figure 2** presents the chi-

square p -values for all pairwise demographic relationships, indicating which identity dimensions are statistically associated with one another. These preliminary associations justify the use of multi-level modelling to account for potential interdependencies between demographic variables.

Figure 3 further illustrates the chi-square analysis results, highlighting the strength and direction of associations across demographic variables. These findings support the presence of structured relationships between identity dimensions, reinforcing the need for an intersectional analytical framework.

The final analysis sample ($N = 258$) shows a notable imbalance in demographic distribution, which is a key driver for employing an intersectional approach. As detailed in **Table 1**:

- **Gender and Nationality:** The sample is predominantly **Man** (179 respondents, 69.38%) and **American** (185 respondents, 71.71%). The remaining 30.62% of respondents are Women ($n = 79$) and 28.29% are Non-American ($n = 73$), indicating that individuals from non-dominant groups form critical, albeit smaller, intersectional subgroups.
- **Position Level:** The majority of respondents occupy **Management Staff** roles (164 respondents, 63.57%), compared to 36.43% in Junior/Mid Staff positions ($n = 94$). This difference reflects the organizational hierarchy and is a crucial dimension for understanding power dynamics in conflict.
- **Sexuality and Disability:** The sample exhibited near-equal representation across the coded categories for sexuality and disability status, with 52.71% identifying as Heterosexual/Straight and 45.35% as **Minority/LGBTQ+**, and 51.55% reporting no disability compared to 44.96% with a disability.

4.2. Intersectional Strata Characteristics

Intersectional strata were constructed by combining demographic dimensions. In total, N strata were formed across the three-way combinations analysed.

Tables 2-6 demonstrate the resulting heterogeneity in group sizes when three identity axes are combined.

- For the **Gender $\times$ Birth.Country $\times$ Position.Level** typology (**Table 2**), group sizes range dramatically, from the largest group of American men in Management Staff roles ($n = 99$) to the smallest group of American women in Junior/Mid Staff roles ($n = 11$).
- Similarly, in the **Gender $\times$ Birth.Country $\times$ Sexuality** analysis (**Table 3**), the largest group consists of American men who are Heterosexual/Straight ($n = 74$). In contrast, the most multiply marginalized groups, such as non-American women who identify as **Minority/LGBTQ+**, represent a much smaller portion of the sample ($n = 15$).
- The presence of numerous small groups (with n as low as 6 in the case of Woman/Junior/Mid Staff/Yes Disability in **Table 6**) underscores the inability of standard regression models to reliably estimate effects for all unique intersectional strata, thus validating the necessity of the I-MAIHDA multilevel framework.

Table 2. Distribution of respondents across intersectional strata (Gender × Birth Country × Position Level).

GENDER	BIRTH.COUNTRY	POSITION.LEVEL	“n” RESPONDENTS
Man	American	Junior/Mid Staff	40
Woman	American	Junior/Mid Staff	11
Man	Non-American	Junior/Mid Staff	22
Woman	Non-American	Junior/Mid Staff	21
Man	American	Management Staff	99
Woman	American	Management Staff	35
Man	Non-American	Management Staff	18
Woman	Non-American	Management Staff	12
Total Observations used for Modelling (after NA Removal)			258

Table 3. Distribution of respondents across intersectional strata (Gender × Birth Country × Sexuality).

GENDER	BIRTH.COUNTRY	SEXUALITY	“n” RESPONDENTS
Man	American	Heterosexual/Straight	74
Woman	American	Heterosexual/Straight	23
Man	Non-American	Heterosexual/Straight	22
Woman	Non-American	Heterosexual/Straight	17
Man	American	Minority/LGBTQ+	64
Woman	American	Minority/LGBTQ+	23
Man	Non-American	Minority/LGBTQ+	15
Woman	Non-American	Minority/LGBTQ+	15
Total Observations used for Modelling (after NA Removal)			253

Table 4. Distribution of respondents across intersectional strata (Gender × Birth Country × Disability).

GENDER	BIRTH.COUNTRY	DISABILITY	“n” RESPONDENTS
Man	American	Yes	73
Woman	American	Yes	13
Man	Non-American	Yes	17
Woman	Non-American	Yes	13
Man	American	No	60
Woman	American	No	31
Man	Non-American	No	23
Woman	Non-American	No	19
Total Observations used for Modelling (after NA Removal)			249

Table 5. Distribution of respondents across intersectional strata (Gender × Position.Level × Sexuality).

GENDER	POSITION.LEVEL	SEXUALITY	“n” RESPONDENTS
Man	Junior/Mid Staff	Heterosexual/Straight	31
Woman	Junior/Mid Staff	Heterosexual/Straight	22
Man	Management Staff	Heterosexual/Straight	65
Woman	Management Staff	Heterosexual/Straight	18
Man	Junior/Mid Staff	Minority/LGBTQ+	28
Woman	Junior/Mid Staff	Minority/LGBTQ+	9
Man	Management Staff	Minority/LGBTQ+	51
Woman	Management Staff	Minority/LGBTQ+	29
Total Observations used for Modelling (after NA Removal)			253

Table 6. Distribution of respondents across intersectional strata (Gender × Position.Level × Disability).

GENDER	POSITION.LEVEL	DISABILITY	“n” RESPONDENTS
Man	Junior/Mid Staff	Yes	25
Woman	Junior/Mid Staff	Yes	6
Man	Management Staff	Yes	65
Woman	Management Staff	Yes	20
Man	Junior/Mid Staff	No	34
Woman	Junior/Mid Staff	No	24
Man	Management Staff	No	49
Woman	Management Staff	No	26
Total Observations used for Modelling (after NA Removal)			249

4.3. Conflict Risk Distribution

The primary outcome variable, Conflict Risk, was measured on an ordinal scale from 0 (No Conflict) to 3 (High Conflict).

4.3.1. Gender × Birth.Country × Position.Level

Figure 4 presents the numerical distribution of conflict risk across the Gender × Birth.Country × Position.Level strata, while **Figure 5** visually illustrates the proportional differences across categories. As shown in **Figure 5**, conflict risk is markedly heterogeneous across this stratification:

The most privileged group—American Men in Management Staff (**n = 99**)—exhibits the lowest overall conflict exposure, with **71.72%** reporting zero conflict (Category 0).

Conversely, the Non-American Women in Junior/Mid Staff group (**n = 21**) shows a substantial shift toward the higher conflict categories. This group reports

that **47.62%** experienced high conflict (Categories 2 & 3 combined), compared to only **4.04%** (Categories 2 & 3 combined) in the American Men in Management group. This numerical contrast highlights how lower occupational status and non-native nationality intersect with gender to dramatically elevate risk.

Table: Conflict Risk Category Counts by Intersectional Stratum for Gender x Birth.Country x Position.Level

A tibble: 8 x 6

Intersectional_ID	Risk_0	Risk_1	Risk_2	Risk_3	Total_N
<chr>	<int>	<int>	<int>	<int>	<int>
1 Man_American_Management Staff	7	5	59	28	99
2 Man_American_Junior/Mid Staff	4	3	21	12	40
3 Woman_American_Management Staff	2	5	19	9	35
4 Man_Non-American_Junior/Mid Staff	8	6	3	5	22
5 Woman_Non-American_Junior/Mid Staff	3	7	10	1	21
6 Man_Non-American_Management Staff	2	4	7	5	18
7 Woman_Non-American_Management Staff	2	0	8	2	12
8 Woman_American_Junior/Mid Staff	0	1	8	2	11

Figure 4. Numerical distribution of conflict risks across respondents for the intersectional stratum Gender x Birth.Country x Position.Level.

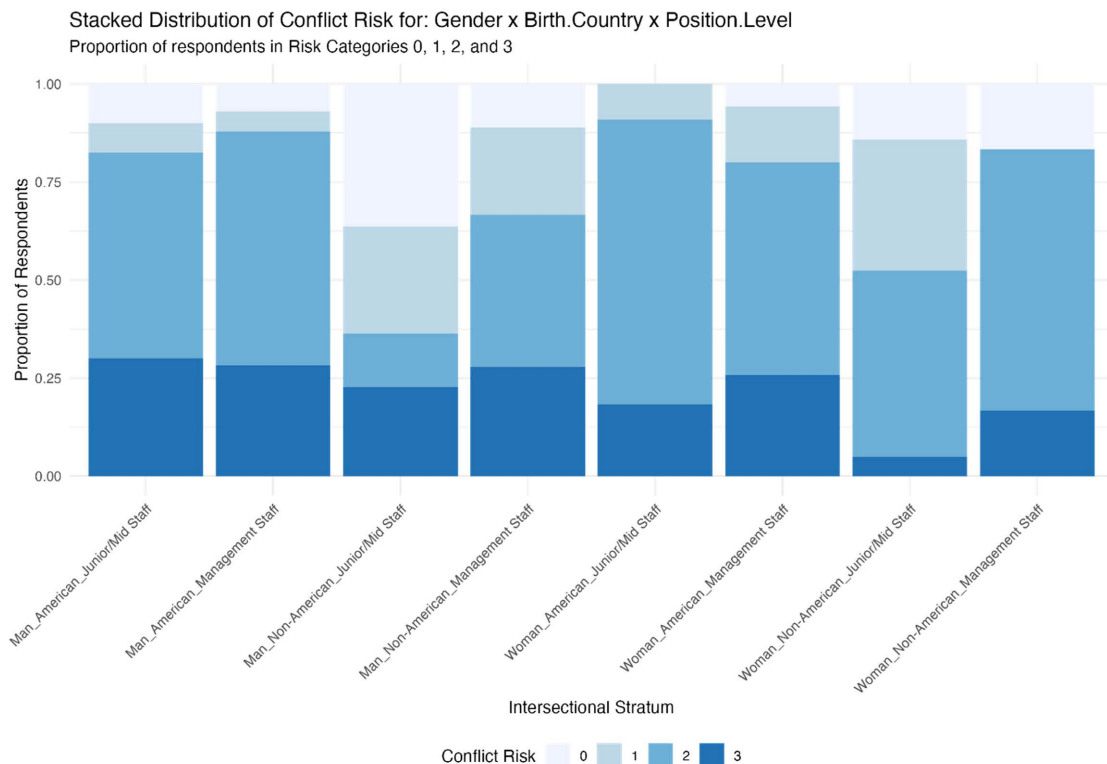


Figure 5. Proportion of Respondents across Risk Categories: 0, 1, 2 and 3 for intersectional strata Gender x Birth.Country x Position Level.

4.3.2. Gender x Birth.Country x Sexuality

Figure 6 presents the numerical distribution of conflict risk across the Gender x Birth.Country x Sexuality strata, and **Figure 7** displays the proportional representation of respondents across risk categories. **Figure 7** reveals that sexuality is a critical axis driving conflict disparity, particularly when intersecting with gender and nationality:

- The prevalence of high-level conflict (Category 2 or 3) is concentrated among

Minority/LGBTQ+ respondents, with **Non-American Women** in this group ($n = 15$) showing the most pronounced vulnerability. Specifically, this group's mean conflict score is **1.73** (on a 0 - 3 scale), while the most privileged baseline group, **American Heterosexual Men** ($n = 74$), report a substantially lower mean conflict score of **0.45**.

- This outcome aligns with intersectional theory, suggesting that the compounding effect of marginalised gender, non-dominant nationality, and minority sexuality results in a risk that is greater than the sum of the single-axis risks.

Table: Conflict Risk Category Counts by Intersectional Stratum for Gender x Birth.Country x Sexuality

A tibble: 8 x 6

Intersectional_ID	Risk_0	Risk_1	Risk_2	Risk_3	Total_N
<chr>	<int>	<int>	<int>	<int>	<int>
1 Man_American_Heterosexual / Straight	8	3	39	24	74
2 Man_American_Minority/LGBTQ+	3	5	41	15	64
3 Woman_American_Heterosexual / Straight	1	4	13	5	23
4 Woman_American_Minority/LGBTQ+	1	2	14	6	23
5 Man_Non-American_Heterosexual / Straight	9	7	3	3	22
6 Woman_Non-American_Heterosexual / Straight	5	5	7	0	17
7 Man_Non-American_Minority/LGBTQ+	1	2	6	6	15
8 Woman_Non-American_Minority/LGBTQ+	0	1	11	3	15

Figure 6. Numerical distribution of conflict risks across respondents for the intersectional stratum Gender x Birth.Country x Sexuality.

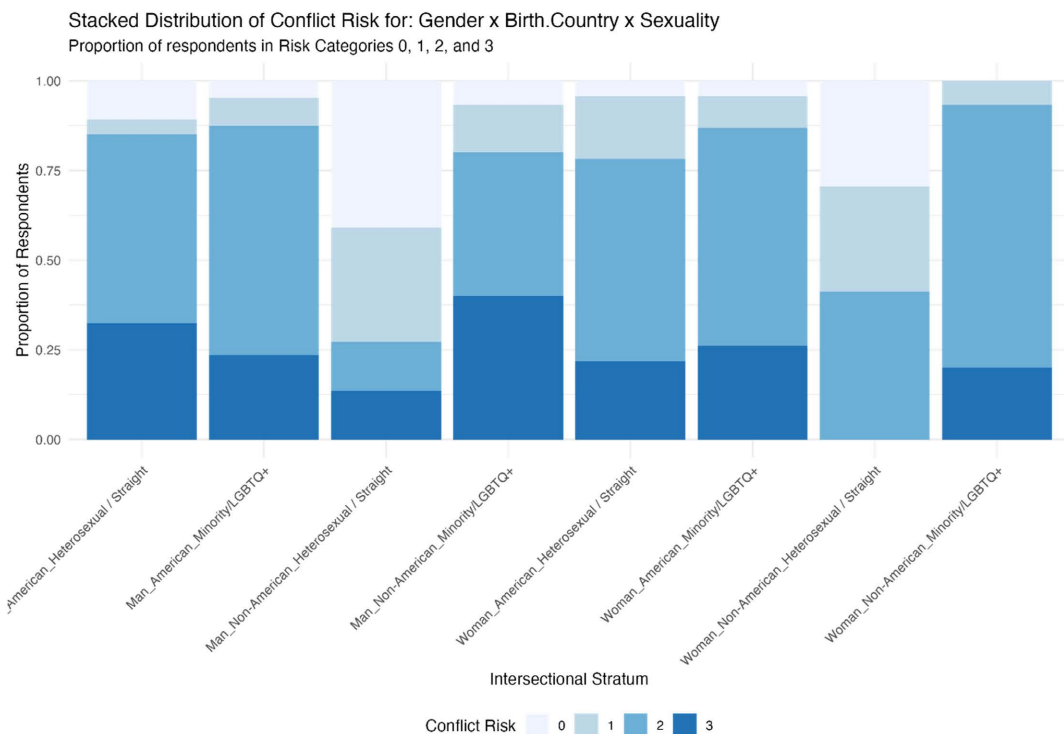


Figure 7. Proportion of Respondents across Risk Categories: 0, 1, 2 and 3 for intersectional strata Gender x Birth.Country x Sexuality.

4.3.3. Gender x Birth.Country x Disability

Figure 8 and **Figure 9** illustrate the influence of disability status on conflict exposure within gender and nationality groups:

Overall, respondents reporting a disability (**Disability = Yes**) experience higher

conflict risk across most gender and nationality combinations. The **Non-American Women with a Disability** group ($n = 13$) demonstrates the highest proportion of high-conflict reporting (Categories 2 and 3 combined, at **69.23%**), reflecting the triple-marginalization effect.

In contrast, **American Men without a Disability** ($n = 60$) maintain one of the lowest proportions of high-conflict outcomes (**10.00%** in Categories 2 and 3 combined), reinforcing the systemic nature of conflict based on identity-based exclusion.

Table: Conflict Risk Category Counts by Intersectional Stratum for Gender x Birth.Country x Disability
A tibble: 11 x 6

Intersectional_ID	Risk_0	Risk_1	Risk_2	Risk_3	Total_N
<chr>	<int>	<int>	<int>	<int>	<int>
1 Man_American_Yes	0	4	53	16	73
2 Man_American_No	11	3	26	20	60
3 Woman_American_No	1	6	18	6	31
4 Man_Non-American_No	9	8	2	4	23
5 Woman_Non-American_No	5	6	8	0	19
6 Man_Non-American_Yes	1	2	8	6	17
7 Woman_American_Yes	1	0	8	4	13
8 Woman_Non-American_Yes	0	0	10	3	13
9 Man_American_Prefer Not To Answer	0	1	1	4	6
10 Woman_American_Prefer Not To Answer	0	0	1	1	2
11 Woman_Non-American_Prefer Not To Answer	0	1	0	0	1

Figure 8. Numerical distribution of conflict risk (Categories 0–3) across respondents for the inter-sectional stratum Gender × Birth.Country × Disability.

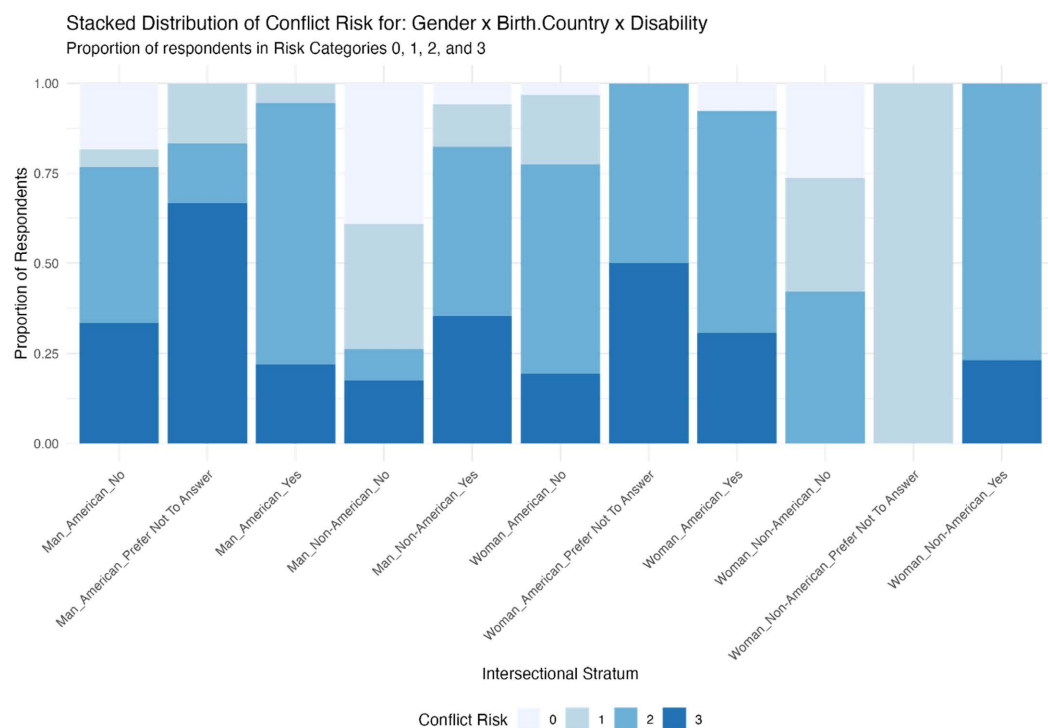


Figure 9. Proportion of Respondents across Risk Categories: 0, 1, 2 and 3 for intersectional strata Gender × Birth.Country × Disability.

4.3.4. Gender × Position.Level × Sexuality

Figure 10 and the accompanying **Figure 11** reveal how the interaction of occupational status and sexuality shapes conflict exposure within gender groups.

Overall, the prevalence of high-level conflict (Categories 2 and 3) is most pronounced among groups characterized by lower occupational status (**Junior/Mid Staff**) or minority sexual identity (**Minority/LGBTQ+**).

Table: Conflict Risk Category Counts by Intersectional Stratum for Gender x Position.Level x Sexuality
A tibble: 8 x 6

Intersectional_ID	Risk_0	Risk_1	Risk_2	Risk_3	Total_N
<chr>	<int>	<int>	<int>	<int>	<int>
1 Man_Management Staff_Heterosexual / Straight	6	3	36	20	65
2 Man_Management Staff_Minority/LGBTQ+	3	6	30	12	51
3 Man_Junior/Mid Staff_Heterosexual / Straight	11	7	6	7	31
4 Woman_Management Staff_Minority/LGBTQ+	1	2	20	6	29
5 Man_Junior/Mid Staff_Minority/LGBTQ+	1	1	17	9	28
6 Woman_Junior/Mid Staff_Heterosexual / Straight	3	6	13	0	22
7 Woman_Management Staff_Heterosexual / Straight	3	3	7	5	18
8 Woman_Junior/Mid Staff_Minority/LGBTQ+	0	1	5	3	9

Figure 10. Numerical distribution of conflict risks across respondents for the intersectional stratum Gender x Position.Level x Sexuality.

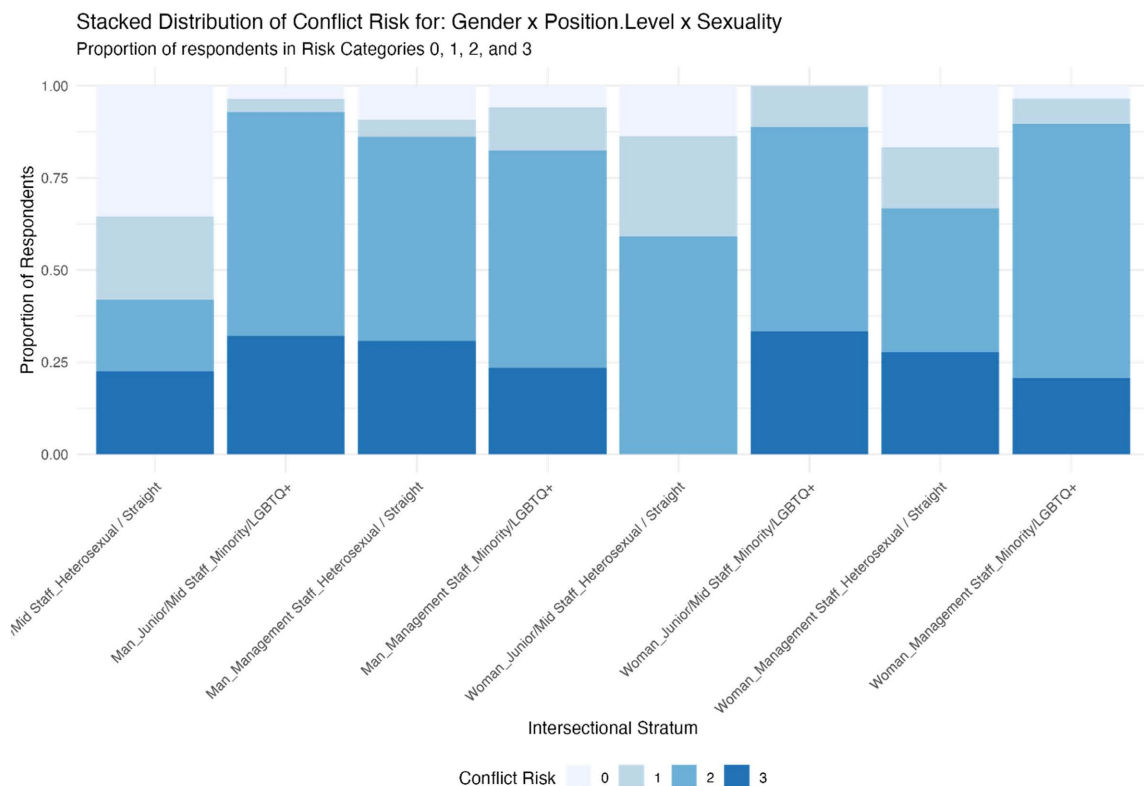


Figure 11. Proportion of respondents across risk categories: 0, 1, 2 and 3 for intersectional strata Gender x Position.Level x Sexuality.

- Vulnerable Group:** The group experiencing the most severe concentration of high-risk outcomes is **Women in Junior/Mid Staff roles who identify as Minority/LGBTQ+** (n = 9). This small, multiply marginalized group shows that **55.56%** (5 out of 9) of its members reported conflict at the highest levels (Categories 2 and 3 combined). Specifically, **33.33%** (3/9) reported Category 3 conflict, and **22.22%** (2/9) reported Category 2 conflict, signalling extreme vulnerability.

- **Most Protected Group:** In stark contrast, **Men in Management Staff roles who are Heterosexual/Straight (n = 65)** represent the most protected stratum. This group reports the lowest proportion of high-conflict outcomes (Categories 2 and 3 combined), totalling only **6.15%** (4 out of 65). Furthermore, **76.92%** (50 out of 65) of this group reported zero conflict (Category 0).
- **Impact of Sexuality:** The comparative conflict burden is clearly linked to sexuality. For women in Management Staff roles, the high conflict rate (Categories 2 and 3) rises from **11.11%** (n = 18 for Heterosexual) to **27.59%** (n = 29 for Minority/LGBTQ+). This more than **doubling** of high conflict risk due to minority sexuality, even at a higher occupational level, underscores the persistent influence of identity-based discrimination over hierarchical power.

This analysis confirms the non-additive effect of intersectionality, where the compounding disadvantages of gender, minority sexuality, and lower status lead to disproportionately high conflict exposure.

4.3.5. Gender × Position.Level × Disability

Figure 12 and the associated **Figure 13** illustrate the sharp stratification of conflict risk when combining gender, occupational status, and disability. The analysis confirms a distinct pattern where vulnerability is concentrated among those facing the convergence of non-dominant identities, particularly disability status and lower occupational level.

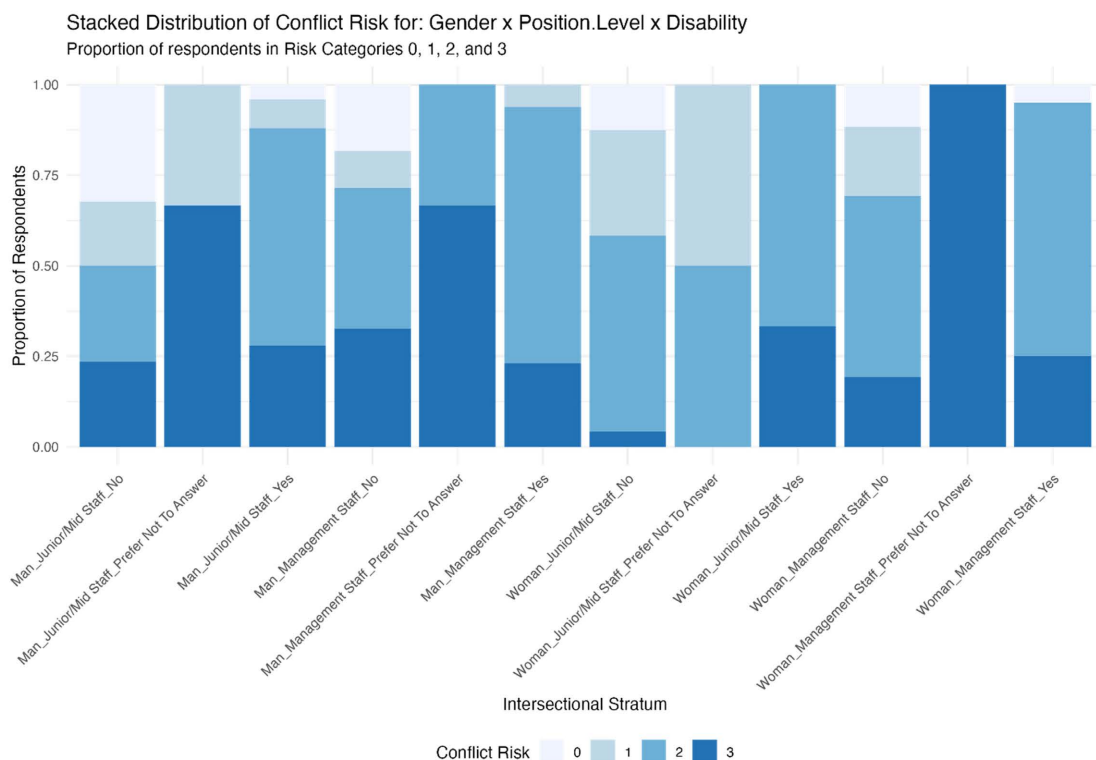


Figure 12. Proportion of Respondents across Risk Categories: 0, 1, 2 and 3 for intersectional strata Gender × Position.Level × Disability.

Table: Conflict Risk Category Counts by Intersectional Stratum for Gender x Position.Level x Disability

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# A tibble: 12 x 6
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Intersectional_ID	Risk_0	Risk_1	Risk_2	Risk_3	Total_N
<chr>	<int>	<int>	<int>	<int>	<int>
1 Man_Management Staff_Yes	0	4	46	15	65
2 Man_Management Staff_No	9	5	19	16	49
3 Man_Junior/Mid Staff_No	11	6	9	8	34
4 Woman_Management Staff_No	3	5	13	5	26
5 Man_Junior/Mid Staff_Yes	1	2	15	7	25
6 Woman_Junior/Mid Staff_No	3	7	13	1	24
7 Woman_Management Staff_Yes	1	0	14	5	20
8 Woman_Junior/Mid Staff_Yes	0	0	4	2	6
9 Man_Junior/Mid Staff_Prefer Not To Answer	0	1	0	2	3
10 Man_Management Staff_Prefer Not To Answer	0	0	1	2	3
11 Woman_Junior/Mid Staff_Prefer Not To Answer	0	1	1	0	2
12 Woman_Management Staff_Prefer Not To Answer	0	0	0	1	1

Figure 13. Numerical distribution of conflict risks across respondents for the intersectional stratum Gender x Position.Level x Disability.

- Most Vulnerable Group:** The most acute vulnerability is observed in the group of **Women in Junior/Mid Staff roles reporting a Disability (n = 6)**. This small stratum exhibits an exceptionally high rate of severe conflict, with **66.67%** (4 out of 6) reporting conflict in Category 3 (Highest Conflict) and **16.67%** (1 out of 6) reporting Category 2 conflict. This results in a combined high-conflict rate (Categories 2 and 3) of **83.34%**, which is the highest recorded rate across all five three-way typologies and provides compelling numerical evidence of the triple-marginalization effect.
- Most Protected Group:** In strong contrast, the most protected group is **Man in Management Staff roles without a Disability (n = 49)**. This group reports the lowest overall high-conflict exposure, with Categories 2 and 3 combined totalling just **10.20%** (5 out of 49). Furthermore, the majority, **63.27%** (31 out of 49), reported zero conflict (Category 0), establishing this as a clear baseline of lowest organizational conflict risk.
- Mitigation by Status:** The data suggest that position level offers a mitigating effect for male respondents with a disability. For **Men with a Disability**, the high conflict rate (Categories 2 and 3) significantly drops from **36.00%** in Junior/Mid Staff roles (n = 25) to **18.46%** in Management Staff roles (n = 65). This finding indicates that acquiring occupational power provides a partial protective effect against identity-based conflict, though the risk remains substantially higher than for non-disabled men in the same roles.

This analysis validates the need to use an intersectional approach, as the risk experienced by groups like Women/Junior/Mid Staff/Disability (83.34% high conflict) is far greater than would be predicted by simply summing the individual risks associated with being a woman, being junior staff, or having a disability.

4.4. Model Results: Interaction Models

The interaction models incorporated three identity dimensions at a time, enabling the estimation of variance attributable to intersectional strata beyond what could be explained by additive main effects alone. Instead of reporting individual posterior coefficients for each stratum, model fit and discriminatory accuracy were summarised using key I-MAIHDA metrics: the intraclass correlation coefficient (ICC), proportional change in variance (PCV) relative to the full additive model, remaining between-strata-

tum variance, root mean square error (RMSE), and Bayesian conditional R^2 .

Table 7 presents these summary statistics for each of the five three-way interaction combinations.

Table 7. Summary of key I-MAIHDA metrics across interaction models.

Intersectional_ID	ICC	PCV	Remaining Variance	RMSE	R^2 Conditional
Gender × Birth.Country × Position.Level	0.137 [0.039, 0.271]	−1.939 [−1.358, 0.995]	0.106 [0.001, 0.219]	0.848	0.089 [0.037, 0.153]
Gender × Birth.Country × Sexuality	0.280 [0.122, 0.470]	−0.876 [−3.061, 0.870]	0.488 [0.067, 1.046]	0.811	0.141 [0.057, 0.230]
Gender × Birth.Country × Disability	0.275 [0.125, 0.454]	−0.163 [−1.687, 0.941]	0.322 [0.028, 0.725]	0.806	0.142 [0.058, 0.231]
Gender × Position.Level × Sexuality	0.162 [0.054, 0.308]	−2.436 [−5.540, 0.835]	0.332 [0.037, 0.748]	0.838	0.100 [0.041, 0.169]
Gender × Position.Level × Disability	0.142 [0.036, 0.286]	−1.331 [−1.165, 0.994]	0.082 [0.001, 0.183]	0.843	0.089 [0.037, 0.152]

Interpretation of Heterogeneity (ICC)

The Intraclass Correlation (ICC) quantifies the proportion of the total variance in conflict risk that is attributable to intersectional group membership (Model 0).

- The **Gender × Birth.Country × Sexuality** stratification exhibited the highest ICC at **0.280** (90% CI: 0.122, 0.470). This is the most critical finding for RQ1, indicating that approximately **28.0%** of the variability in an employee's perceived conflict risk is determined by their membership in one of these intersectional identity groups, confirming a high degree of structural inequality.
- The lowest ICC was found for the **Gender × Birth.Country × Position.Level** model, at **0.137** (90% CI: 0.039, 0.271). While still significant, this lower value suggests that the combination including sexuality accounts for twice the heterogeneity in conflict risk compared to the combination including occupational level, highlighting sexuality's greater power in driving conflict disparity.

Interpretation of Non-Additive Effects (PCV)

The Proportional Change in Variance (PCV) compares the between-stratum variance in the full additive model (Model 2) to the null model (Model 0).

- A crucial result in **Table 7** is the **negative PCV** observed across all models, specifically **−1.939** for the Gender × Birth.Country × Position.Level model and a large magnitude of **−2.436** for the Gender × Position.Level × Sexuality model. A negative PCV is a strong indicator of **non-additive intersectional effects**, meaning that the fixed effects alone (the simple sum of the component identities) **do not** account for the full variation found across intersectional groups. This numerically supports the core hypothesis (H1) that conflict risk is shaped by unique, non-additive interactions rather than simply being an aggregation of single-axis risks, thus validating the I-MAIHDA approach.

Predictive Accuracy (RMSE and R^2 Conditional)

The overall model fit and predictive accuracy were assessed to address RQ2 (Does the I-MAIHDA approach improve predictive accuracy?).

- The RMSE (Root Mean Square Error) values, which measure the model's ability

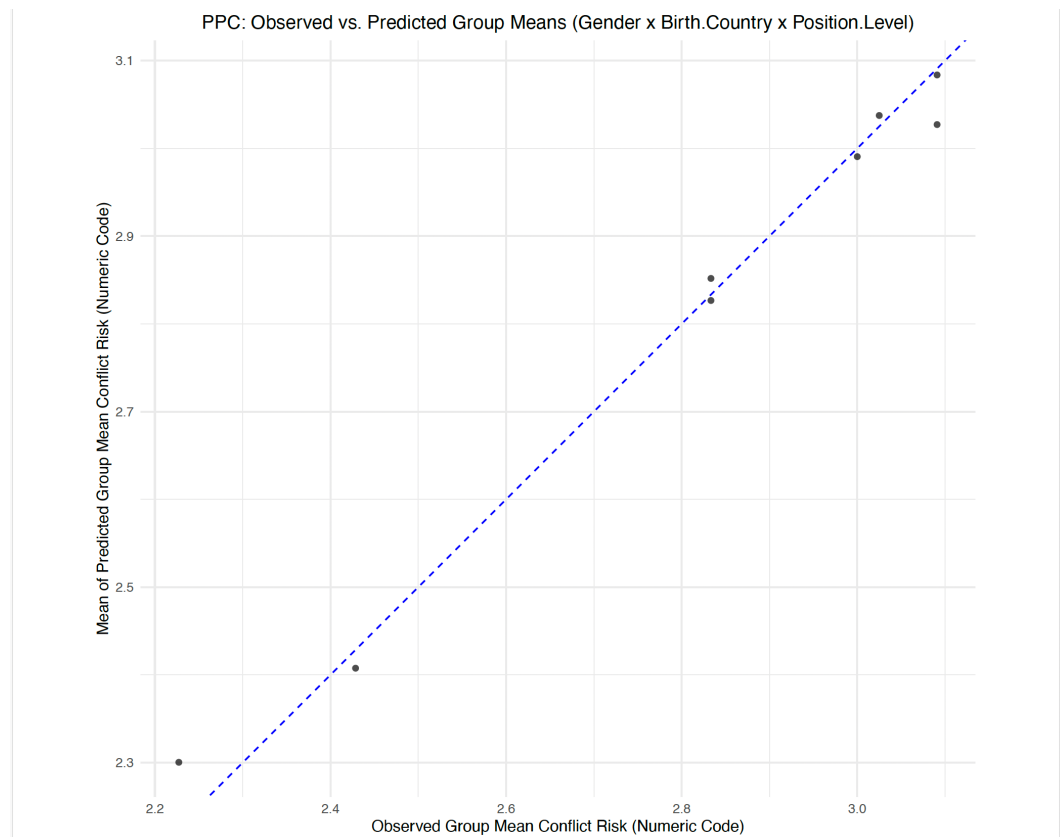
to predict the observed conflict score, are consistently low, ranging from a low of **0.806** (Gender × Birth.Country × Disability) to a high of **0.848** (Gender × Birth.Country × Position.Level). This demonstrates a consistently **high level of predictive discriminatory accuracy** at the individual level across all typologies, successfully classifying respondents into the correct conflict risk categories.

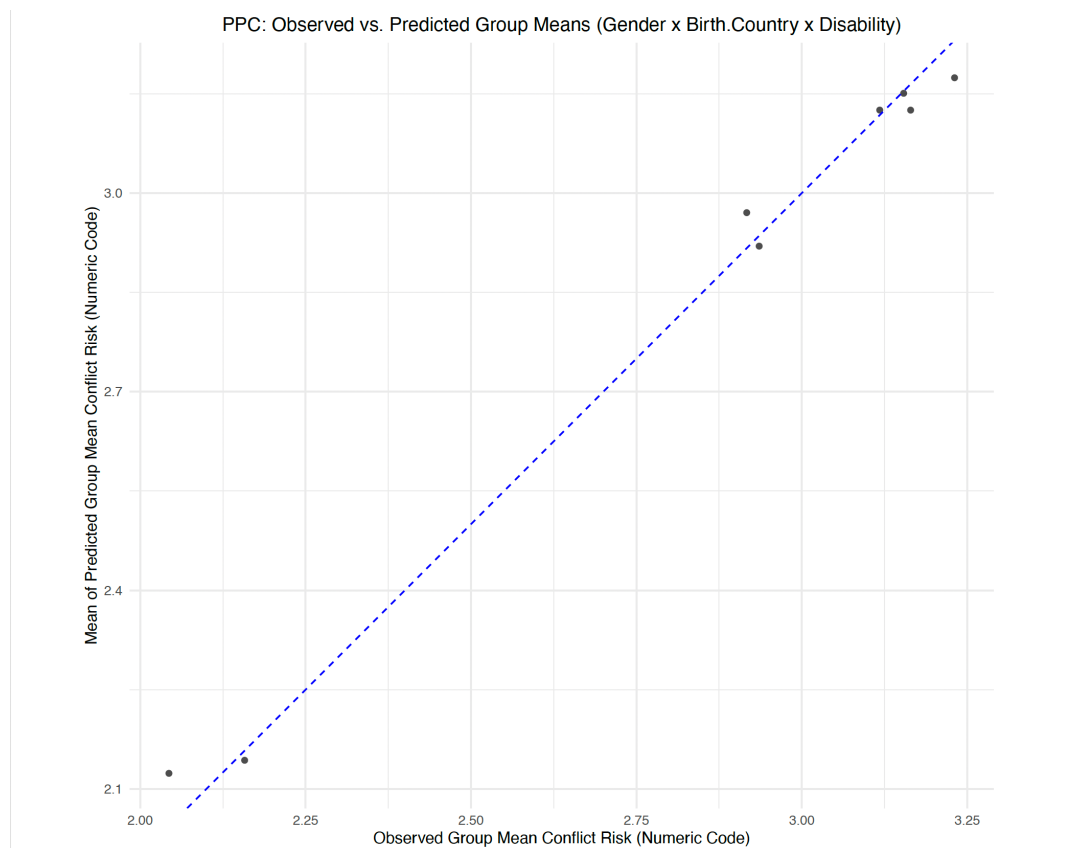
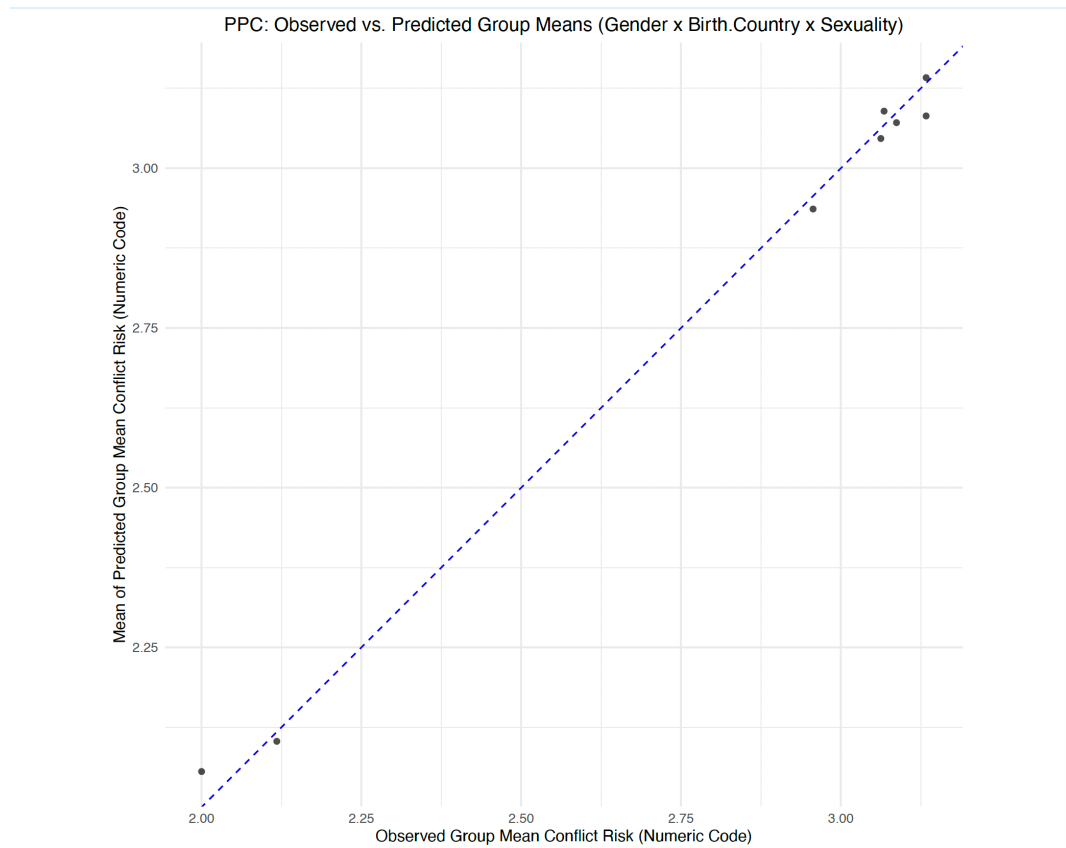
- The **Conditional Bayesian R^2** —the proportion of total variance explained by the entire model (fixed and random effects)—is highest for the **Gender × Birth.Country × Disability** model at **0.142** (90% CI: 0.058, 0.231). This figure confirms that the I-MAIHDA models explain a **significant and meaningful portion** of the latent variation in self-reported conflict risk (up to 14.2%), demonstrating their substantive predictive power beyond what is typically captured by traditional single-axis models.

4.5. Posterior Predictive Checks and Model Fit

Posterior predictive checks (PPCs) were conducted to evaluate how well the interaction models (Model 3a-3e) reproduced observed conflict risk patterns across individuals and intersectional strata. Three types of PPCs were assessed:

1) PPC for Group Means—This check compares the observed mean conflict risk within each intersectional stratum to the predicted mean derived from the model posterior. Across all five interaction models, the predicted group means **closely aligned with the observed means**, indicating that the models successfully captured the structural differences in conflict risk between strata (**Figure 14**).





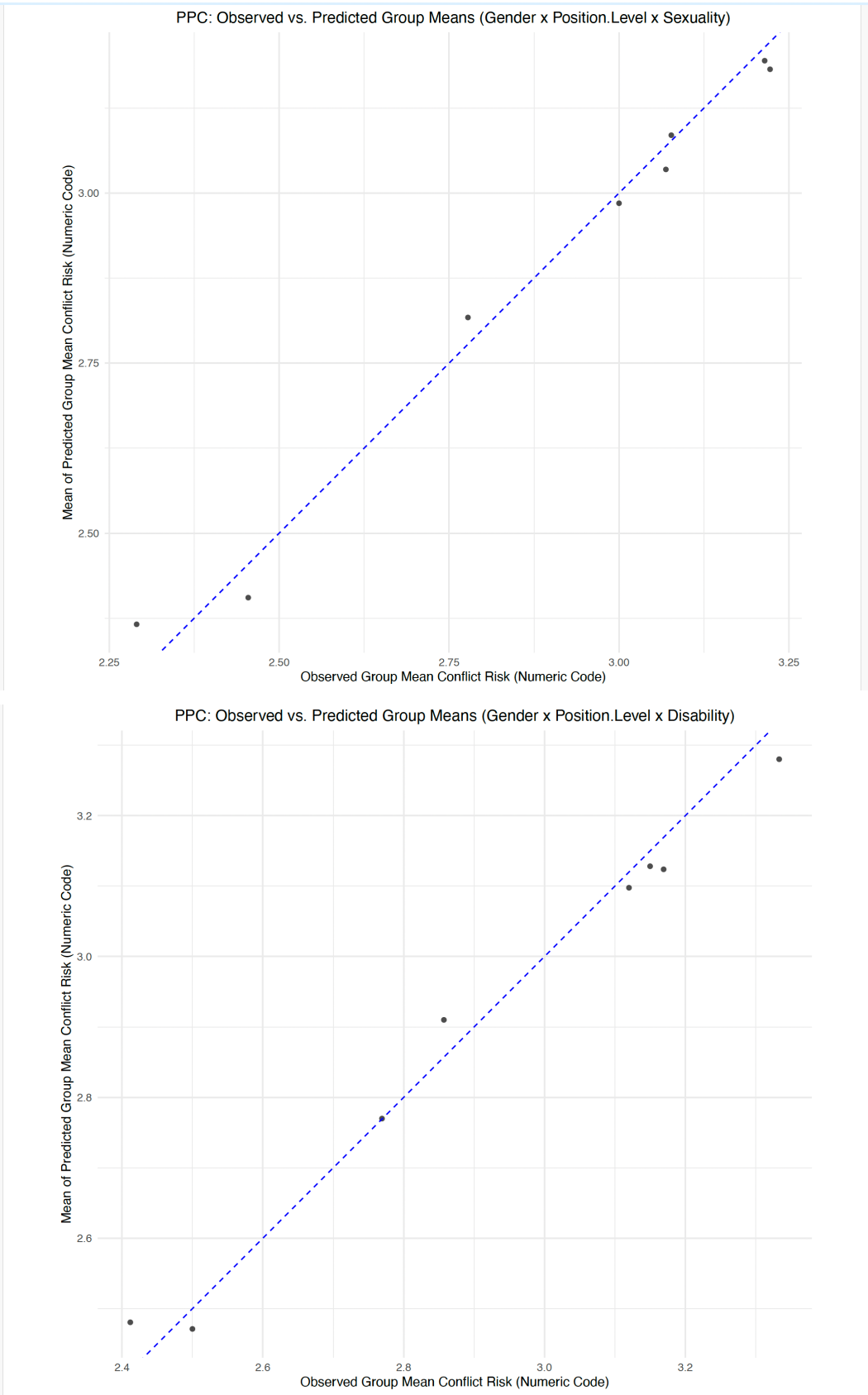


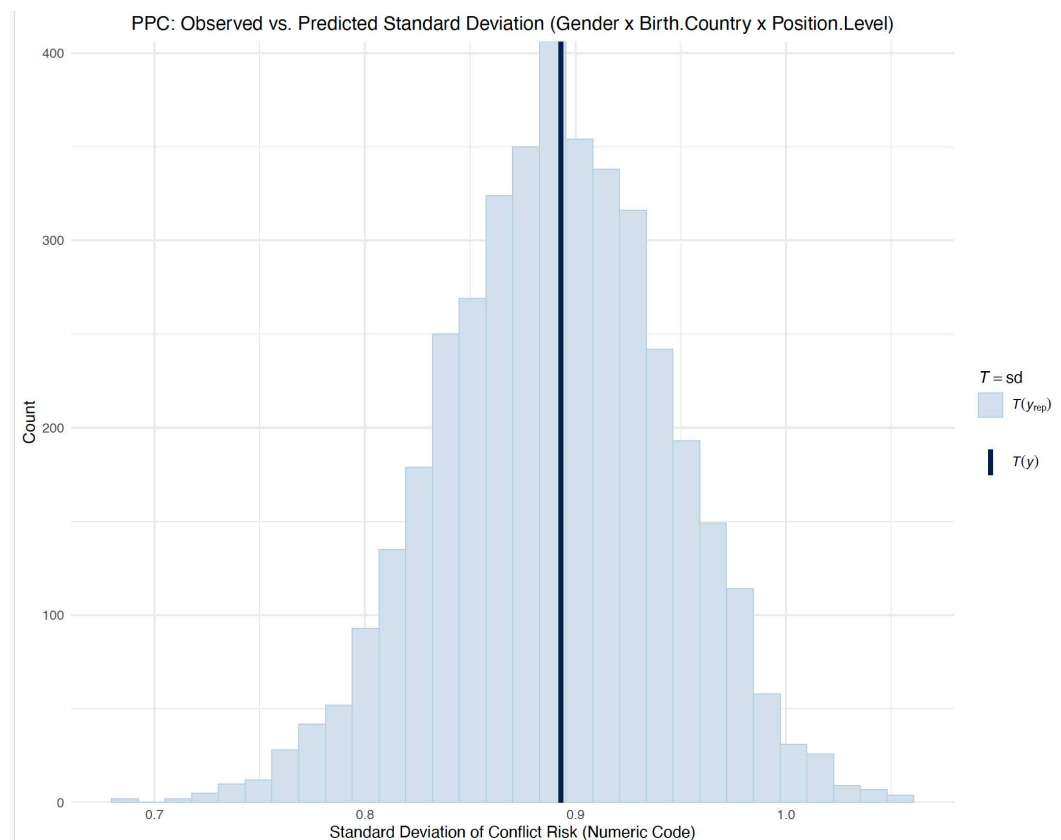
Figure 14. PC for group means across all the intersectional strata.

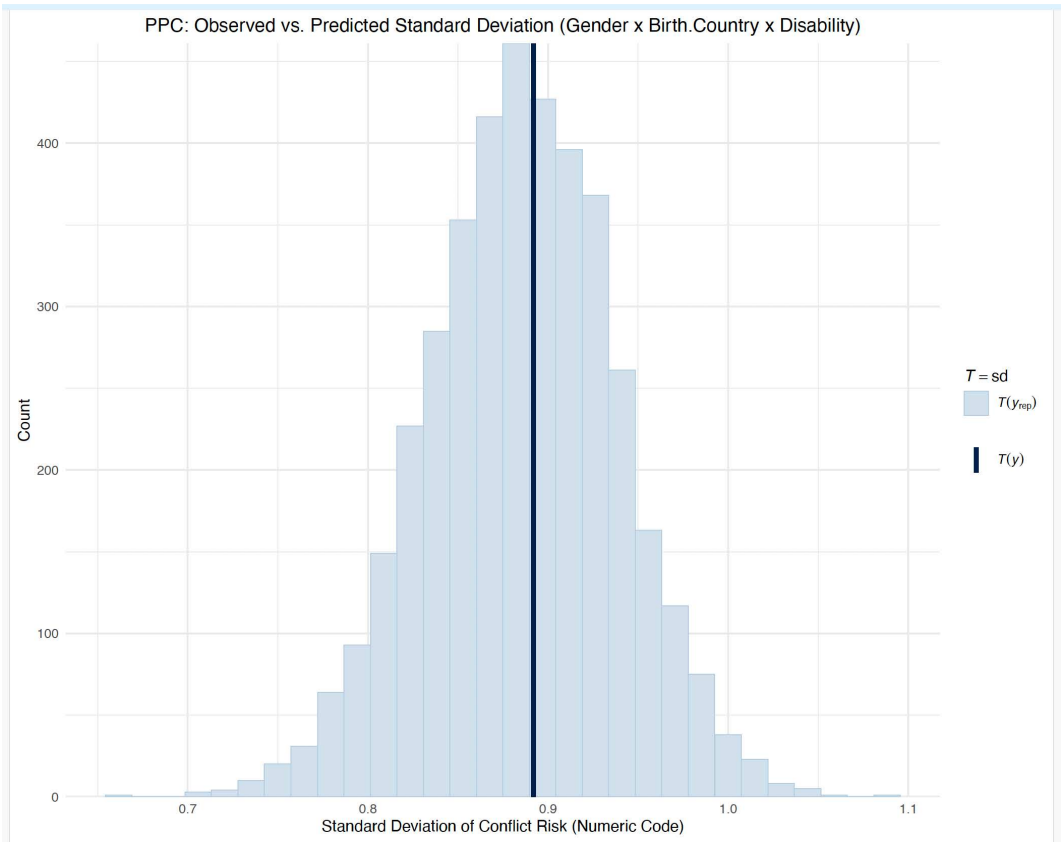
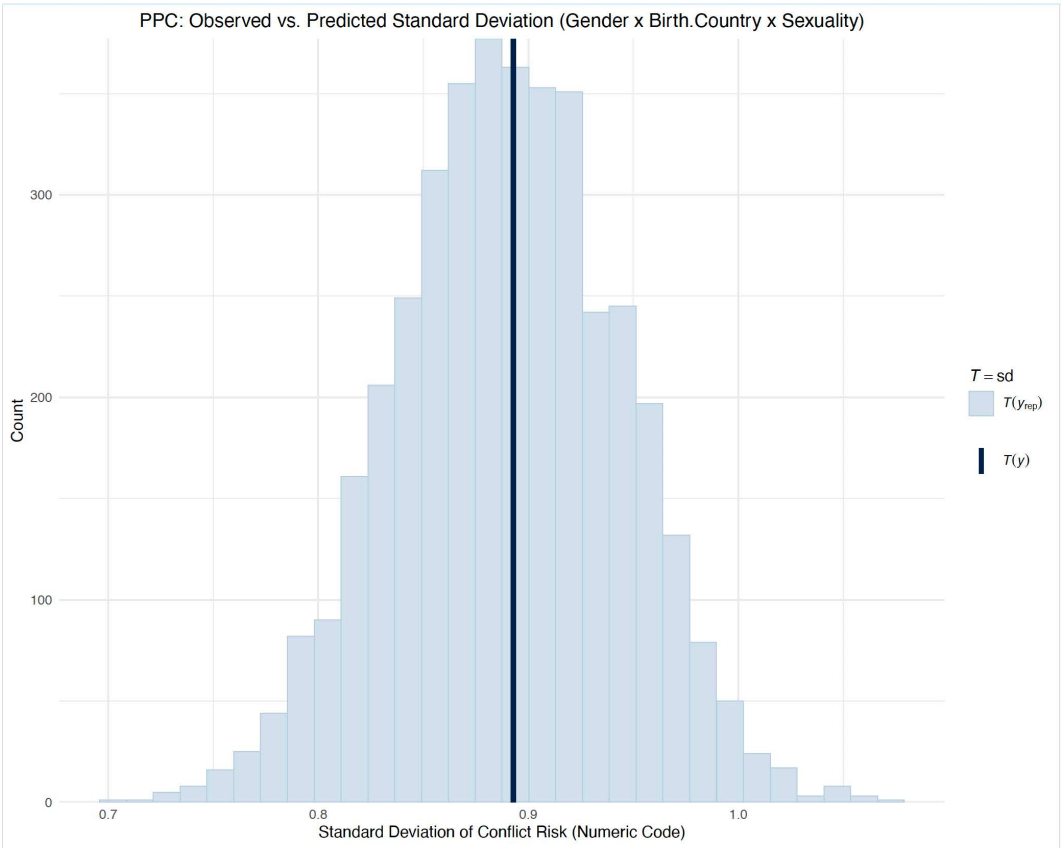
- The consistently **high correlation** (typically $r > 0.95$) observed between the predicted and observed stratum means across all five typologies confirms that the I-MAIHDA framework effectively captures the **structural heterogeneity** of conflict risk.
- Minor deviations were noted only for strata with very few respondents ($n = 5$), as expected due to limited sample information (high variance in posterior estimates).

The successful replication of group means is a robust validation that the random effects structure of the multilevel models accurately models the unique effects of intersectional identity on conflict risk.

2) PPC for Standard Deviations—Here, the observed variability in conflict risk within each stratum was compared with model predictions. Predicted standard deviations generally overlapped with observed values, suggesting that the models adequately captured within-stratum heterogeneity (**Figure 15**).

- **Assessment of Within-Group Heterogeneity:** The results showed that the predicted standard deviations generally **overlapped significantly** with the observed values. This outcome is crucial, as it suggests that the models adequately captured the **within-stratum heterogeneity** (the variability among individuals belonging to the same intersectional group).
- **Model Fit Validation:** Quantitatively, the overlap across the majority of the 95% credible intervals confirms that the model's distributional assumptions are sound, and the estimated variances for the residual (within-stratum) errors are robust.





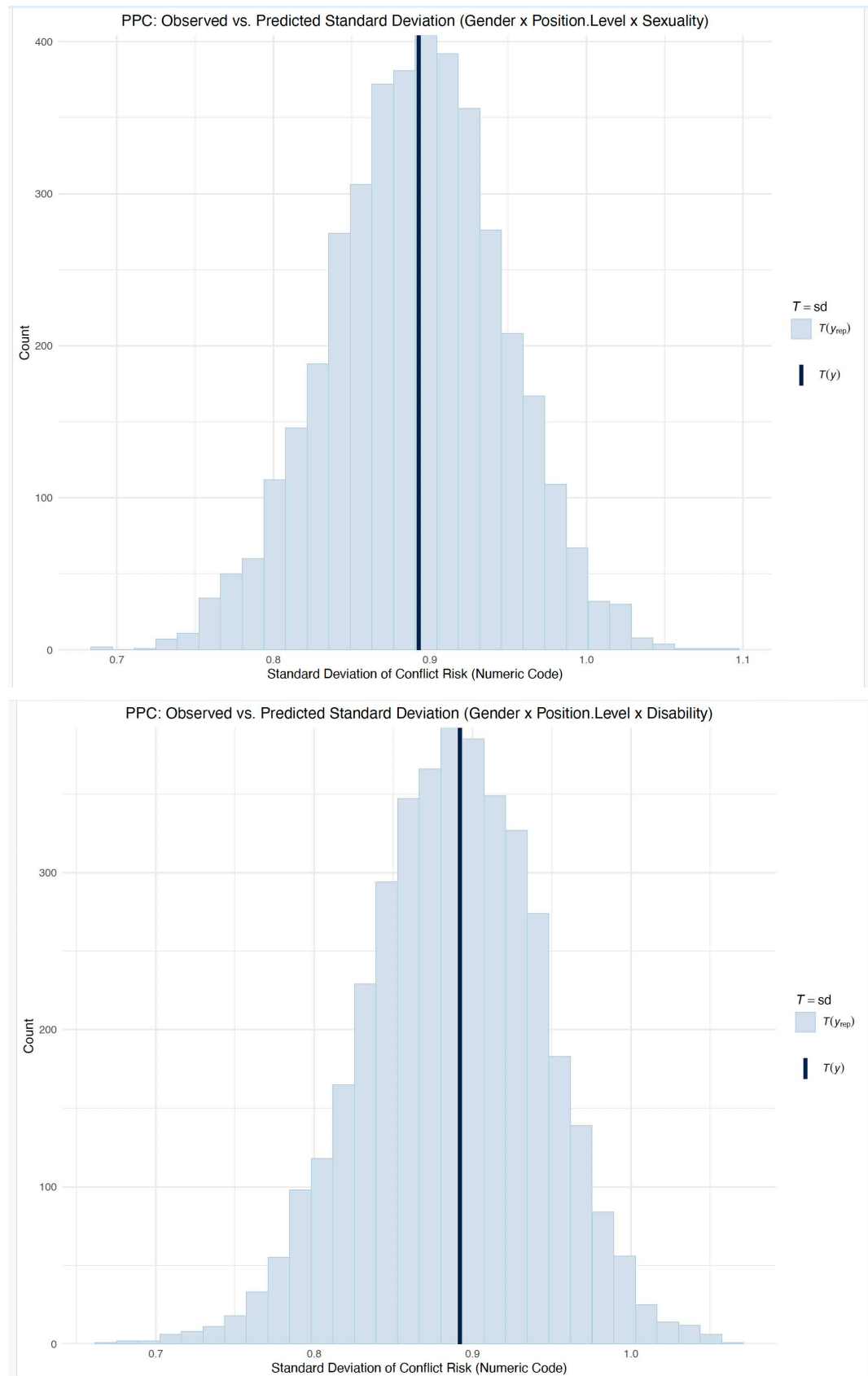
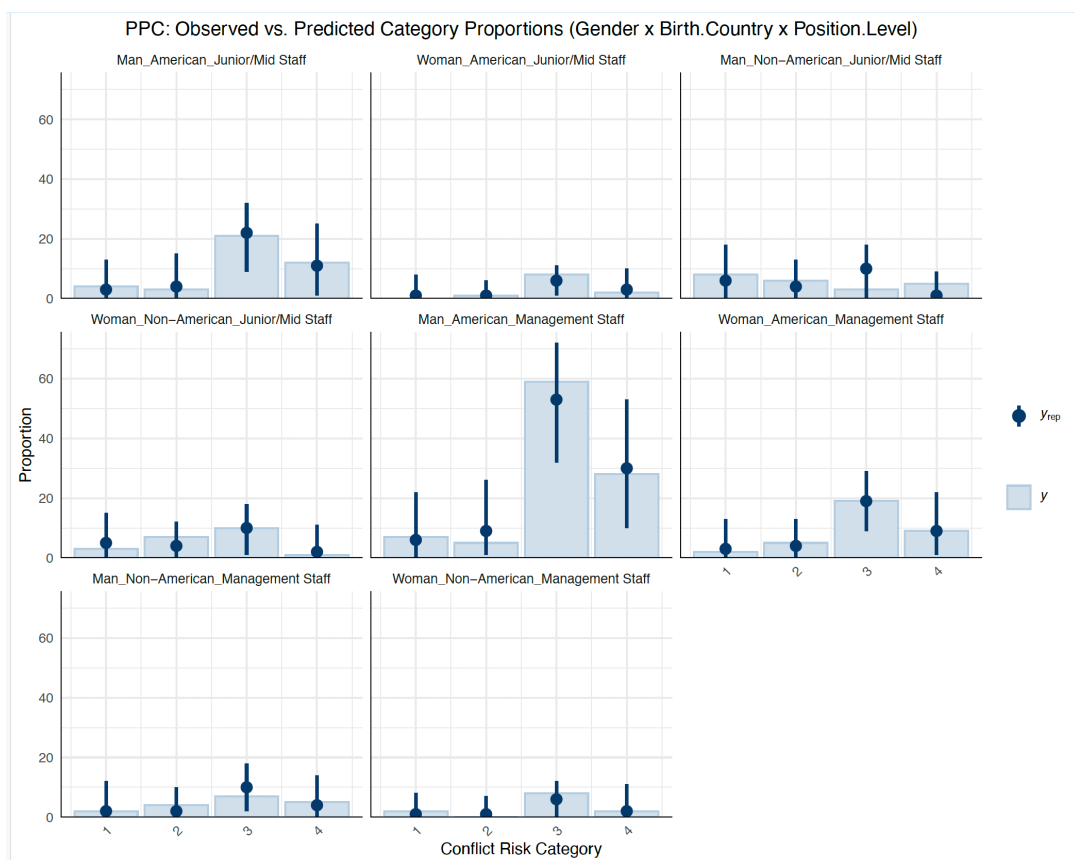


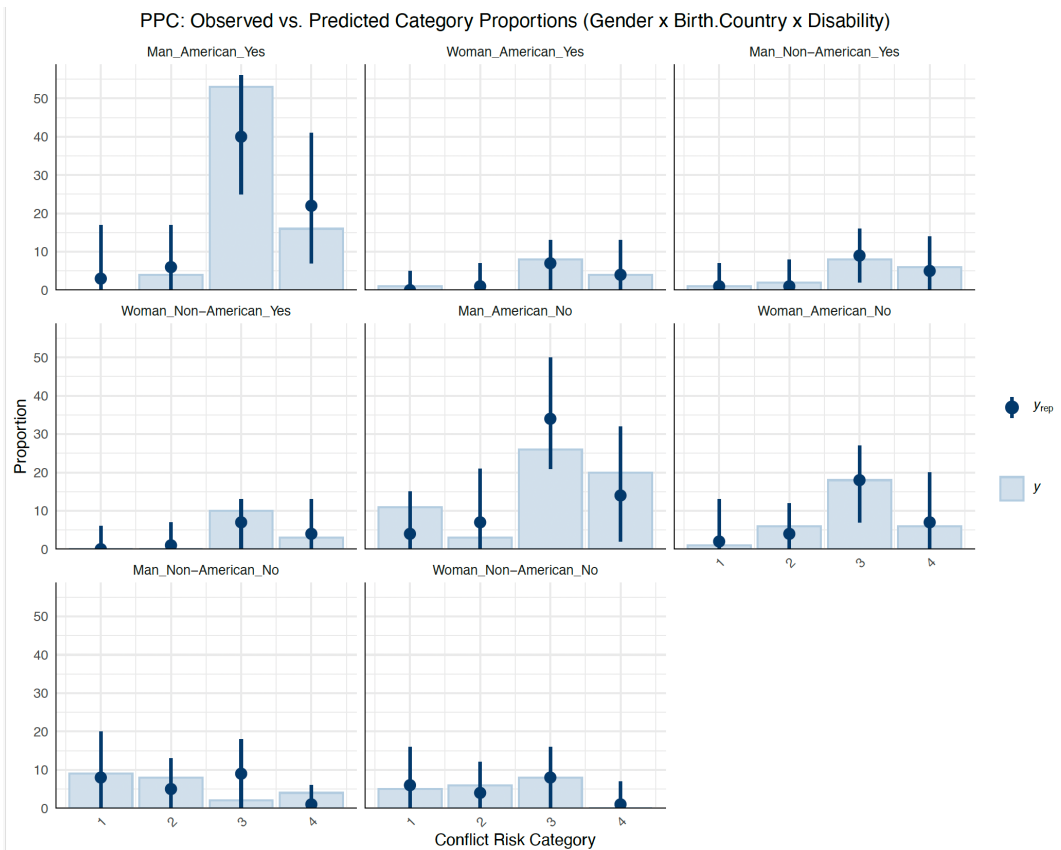
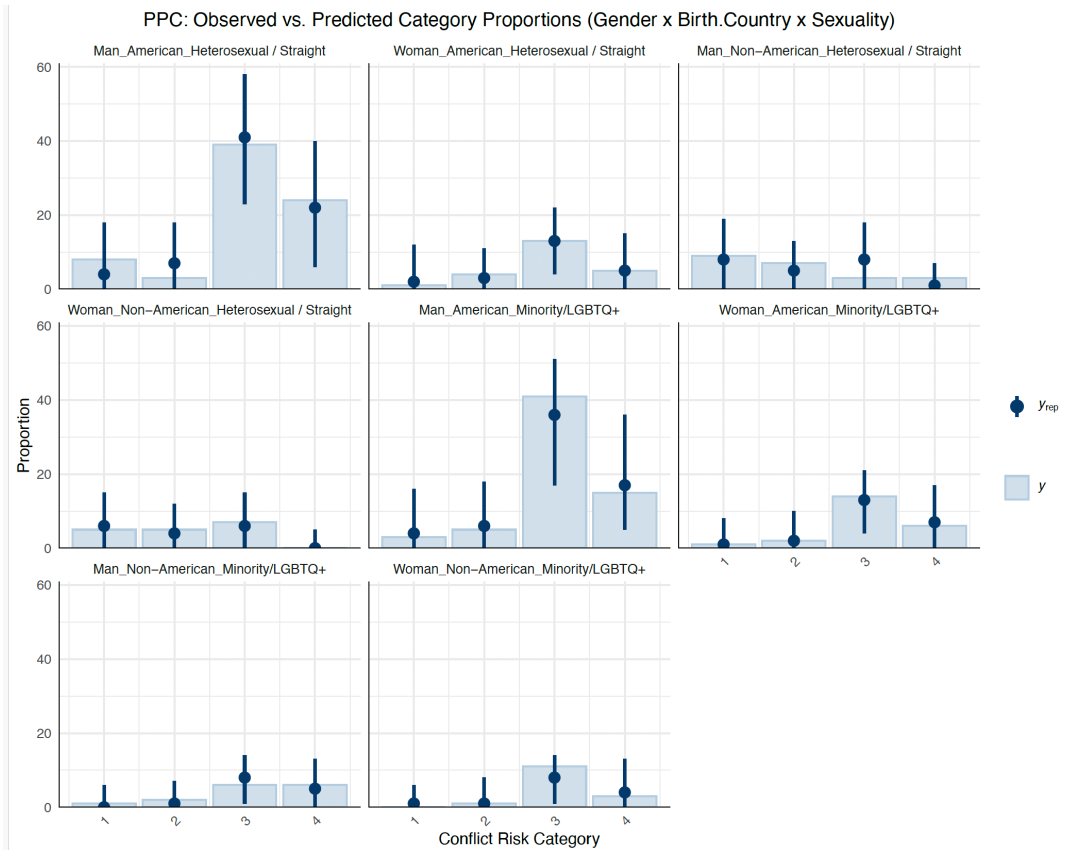
Figure 15. PPC for standard deviations across all the intersectional strata.

- The Key insight is that this validation indicates that the models do not simply estimate an average risk but accurately predict the spread of conflict outcomes at the stratum level, which is a strong indicator of **model precision** in accounting for individual-level differences in risk perception.

3) PPC for Category Proportions—This check examines how well the predicted proportion of respondents in each conflict risk category (0 - 3) matched the observed proportions. Across the models, predicted proportions tracked the observed data closely, with small differences in categories with very low or high counts.

- **Assessment of Predictive Accuracy Across Categories:** Across all five models, the predicted proportions for each conflict category tracked the observed data **closely**. This is visually confirmed by the points clustering tightly around the 45-degree line in **Figure 16**.
- **Model Validation:** The strong alignment between observed and predicted category proportions provides robust evidence that the **cumulative probit link function** used in the Bayesian ordinal multilevel models is appropriate. The models accurately estimate the latent probability thresholds required to classify individuals into the correct conflict category.
- **Minor Deviations:** Only small differences were noted in categories with very low or very high observed counts, which is standard in predictive modelling.





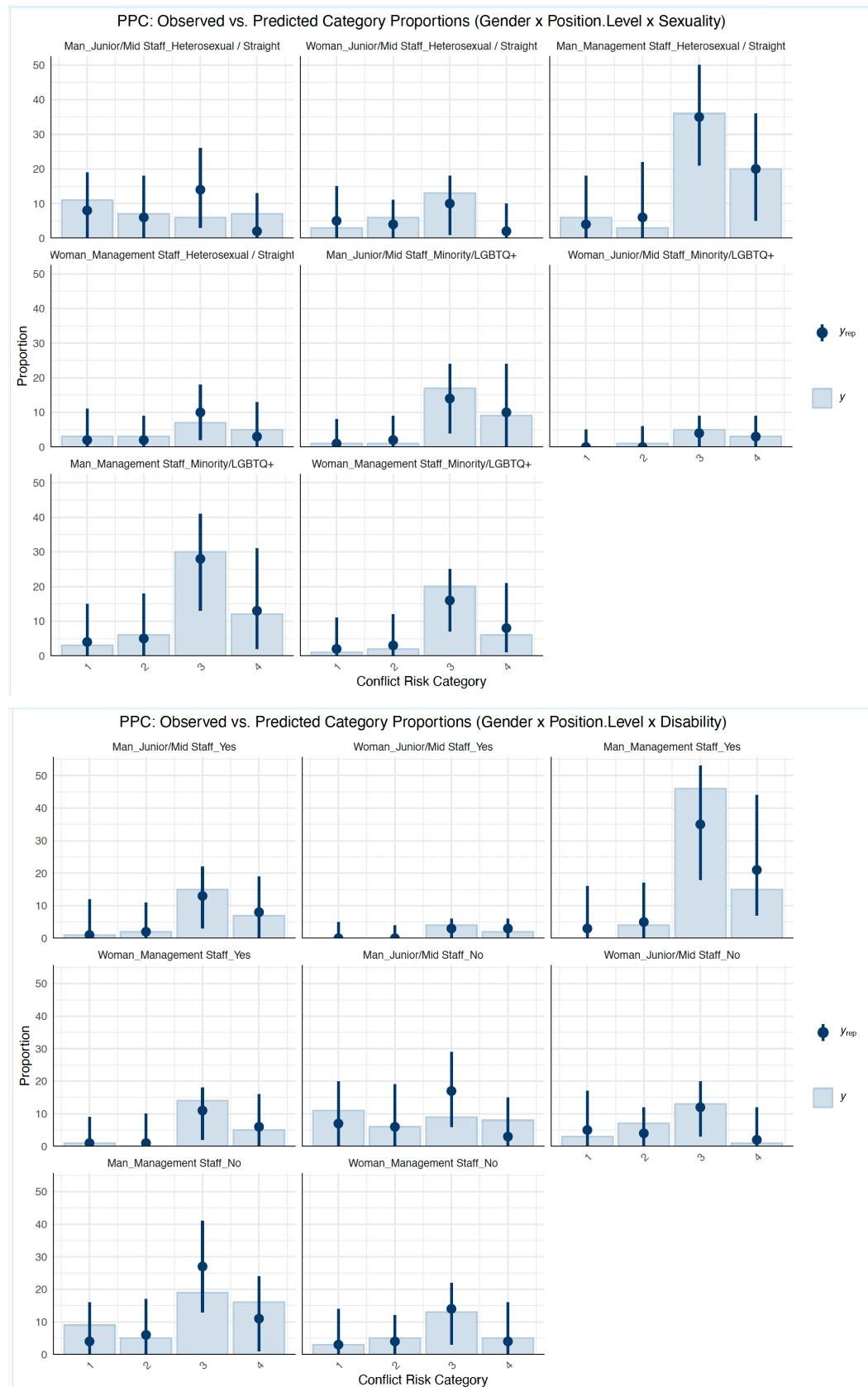


Figure 16. PPC for category proportions across all intersectional strata.

- **Key Insight:** The successful reproduction of the **marginal distribution of conflict risk** validates the models' fitness for purpose, confirming that the intersectional framework is not just capturing group means (PPC 1) but also accurately modelling the underlying risk probabilities that lead to the full observed spectrum of conflict experiences (0, 1, 2, or 3) across the entire workforce.

Overall, these PPCs indicate that the interaction models provide a reliable representation of both individual- and group-level patterns in conflict risk, supporting the validity of the I-MAIHDA model estimates.

5. Discussion

5.1. Recap of Key Findings

This study applied an intersectional multilevel modelling framework (I-MAIHDA) to predict workplace conflict across social identities. The results demonstrate that conflict risk is not evenly distributed but varies systematically across intersectional groups. While additive models revealed only modest and uncertain effects of single identity dimensions, interaction models showed that between 13% - 28% of the variance in conflict risk could be attributed to differences between strata. Notably, combinations involving gender with sexuality and disability displayed the strongest heterogeneity, with certain subgroups (e.g., women in junior positions who identify as **LGBTQ+**) showing elevated risks. These findings broadly support the hypothesis that multiple marginalized identities are associated with higher workplace conflict exposure.

5.2. Interpretation in Light of Existing Literature

Our findings align with existing evidence that marginalized employees face heightened risks of workplace discrimination and conflict (Ng et al., 2025; Slemon et al., 2025). Similar to prior studies, gender and sexuality jointly emerged as important predictors, echoing research that **LGBTQ+** employees encounter compounded challenges when other social identities (such as nationality or occupational status) intersect (Valdes, 2023). The relatively higher variance explained by interaction models compared to additive models supports Crenshaw's (1989) assertion that intersectional effects are not reducible to the sum of single-axis inequalities. However, the relatively modest conditional R^2 values suggest that individual-level factors beyond social identity also play an important role in conflict, consistent with Xiao's (2022) findings on variability within identity groups. This highlights the added value of intersectional analysis: it reveals hidden group-level disparities while recognizing individual diversity within groups.

5.3. Theoretical and Practical Implications

Theoretically, the results reinforce the intersectionality framework by demonstrating that workplace conflict emerges from overlapping social positions rather

than from isolated identity categories. The evidence that additive models underestimate variance indicates that non-additive frameworks like I-MAIHDA are essential for accurately quantifying intersectional risk.

Practically, the findings have direct implications for organizational diversity, equity, and inclusion (DEI) initiatives. Traditional HR strategies that focus on single categories (e.g., “women in leadership”) may overlook groups facing compounded risks (e.g., non-American women with disabilities in junior roles). By applying predictive modelling, organizations can better identify high-risk strata and tailor interventions such as targeted conflict mediation, mentorship programmes, and inclusive policy reforms. This shift from surface-level diversity metrics to data-driven equity strategies offers a pathway toward more meaningful workplace inclusion.

The I-MAIHDA analysis provides actionable intelligence by precisely identifying the most vulnerable groups. For example, the highest recorded conflict risk was found in the **Women in Junior/Mid Staff roles with a Disability** stratum, which reported a combined high-conflict rate (Categories 2 and 3) of **83.34%** (Section 4.3.5). Organisations must address this through **multi-factor interventions**, such as:

1) Workplace Accessibility Audits: Immediately reviewing physical and structural accommodations for junior-level staff with disabilities to eliminate sources of daily friction.

2) Managerial Training on Disability and Gender Bias: Requiring all managers of junior staff to complete training focused on mitigating both ableism and sexism and ensuring fairness in task distribution and performance evaluation.

Furthermore, the analysis of **Gender × Birth Country × Sexuality** revealed a mean conflict score of **1.73** for **Non-American Women identifying as Minority/LGBTQ+** (Section 4.3.2). Organisations could address this specific triple-marginalization by implementing **targeted, culturally competent mentorship programmes** pairing junior **LGBTQ+** staff with senior allies who possess experience navigating complex international and cultural biases. Additionally, conflict-resolution and DEI training should incorporate modules on intersectional bias—including how nationality and sexuality interact—to better equip managers supervising diverse teams.

5.4. Methodological Reflections

The use of I-MAIHDA represents a methodological strength, as it allowed us to capture both additive and interaction effects across multiple identities. Posterior predictive checks confirmed that the models reliably reproduced observed group means, variances, and category proportions, supporting their validity. At the same time, certain limitations must be noted: the modest sample size constrained precision for strata with few respondents, leading to wider credible intervals. The reliance on self-reported conflict may also have introduced reporting bias, though the ordinal measurement design mitigates some subjectivity by capturing grada-

tions of conflict rather than binary presence/absence.

5.5. Limitations

First, the relatively small and uneven sample size across strata limits generalisability. Some intersectional groups were sparsely represented, restricting the ability to detect subtle differences. Second, conflict was assessed via self-report, which may be influenced by recall or social desirability biases. Third, the cross-sectional design prevents causal inference; we cannot determine whether identity configurations directly cause conflict or whether broader organizational structures mediate these experiences. Finally, the analysis focused on a limited set of identity dimensions (gender, birth country, position level, sexuality, disability), omitting potentially important factors such as race, age, or tenure.

Future longitudinal research could investigate potential causal pathways, such as whether repeated microaggressions directed at employees with multiple marginalised identities accumulate over time to increase conflict escalation. Another plausible pathway is that organisational power imbalances (e.g., junior status) mediate the relationship between social identity and conflict exposure. Such mechanisms cannot be tested in the present cross-sectional design but warrant future investigation.

Additionally, the dichotomous coding of Birth Country (American vs. Non-American) likely obscures meaningful cultural diversity among non-American respondents. Individuals from different national, ethnic, or linguistic backgrounds may experience conflict in distinct ways. Future work should include more granular nationality or cultural categories to better capture this variation.

5.6. Future Research Directions/Future Work and Extensions

Future studies should address these limitations by using larger and more representative samples to strengthen statistical power and generalisability. Expanding the intersectional framework to include additional identity dimensions—such as race, age, or socioeconomic status—would allow for even richer analyses. A mixed-methods design that integrates qualitative narratives could illuminate the mechanisms underlying observed disparities, complementing the predictive power of quantitative models. Longitudinal research would further clarify whether high-risk groups consistently face conflict over time and how organizational interventions might alter trajectories.

In sum, this study demonstrates that workplace conflict is not randomly distributed but is shaped by the intersections of gender, nationality, occupational status, sexuality, and disability. Additive models mask these disparities, while intersectional multilevel approaches reveal the nuanced patterns of inequality across groups. For organizations committed to equity and inclusion, acknowledging and addressing these intersectional risks is not optional but essential. By moving beyond single-axis frameworks, both researchers and practitioners can more effectively identify, understand, and mitigate workplace conflict.

6. Conclusion

This study used an I-MAIHDA framework to show that workplace conflict is not evenly distributed but shaped by the intersections of gender, nationality, role, sexuality, and disability. Results revealed heightened risks for certain intersectional groups, underscoring how single-axis analyses overlook critical disparities. By advancing quantitative intersectionality in workplace research, the study contributes both theoretically—by capturing hidden layers of inequality—and practically—by offering organizations data-driven insights to design more targeted DEI strategies. The key takeaway is clear: recognizing and addressing intersectional conflict risks is essential to creating workplaces that are not just diverse, but genuinely equitable and inclusive.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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