ANALYSIS OF CROSS-BORDER FORCED LABOR IN CAMBODIA

PREVALENCE STUDY REPORT

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DISCLAIMER

CONTENT

ACRONYMS

CI	Confidence Interval
CITI	Collaborative Institutional Training Initiative
DQA	Data Quality Assurance
DQR	Data Quality Review
FGD	Focus group discussion
TIP Office	U.S. Department of State's Office to Monitor and Combat Trafficking in Persons
KHR	Cambodian Riel
IJM	International Justice Mission
ILO	International Labor Organization
IRB	Institutional Review Board
NGO	Non-Government Organization
NIH	National Institute of Health
NORC	NORC at the University of Chicago
ODK	Open Data Kit
RDS	Respondent Driven Sampling
TIP	Trafficking in Persons
TVPA	Trafficking Victims Protection Act

EXECUTIVE SUMMARY

| RESEARCH BACKGROUND AND METHODOLOGY

International Justice Mission (IJM) works to secure justice for victims of slavery, sexual exploitation, and other forms of violent oppressions.

A part of its plan to evaluate the impact of its programming, with funding from the Walmart Foundation, IJM contracted NORC at the University of an independent research study to obtain baseline prevalence estimates of cross-border forced labor in four provinces in Cambodia, including Banteay Meanchey, Kampong Cham, Prey Veng, and Siem Reap.

◢ SAMPLING APPROACH

The total target sample for the cross-border forced labor study was 1,200 recently returned migrant workers (300 per province) who self-reported having returned to Cambodia from working in another country in the past 18 months. All respondents were required to have met the following eligibility criteria to participate: (1) be 18 years of age or older at the time of scheduling the interview, and (2) lived and worked outside of Cambodia in the past 18 months.

The steps involved in collecting data include:

1. Visiting randomly selected villages

2. Interviewing village leaders to develop an initial sample frame of eligible community members

3. Interviewing village leaders to develop an initial sample frame of eligible community members

4. Visiting community members to confirm eligibility, assess willingness to participate, and schedule an interview

5. Administering the first three cross-border forced labor prevalence surveys in the village

6. Asking the respondent to provide the names and contact information for any other eligible community members that they know and adding these names to the original sample frame (if they were missing)

7. Randomly selecting up to four more people to recruit, prioritizing the people newly identified by respondents

8. Administering the last four cross-border forced labor prevalence surveys in the village

◢ MEASURING FORCED LABOR

The survey instrument for this study used an indicator-based approach. NORC's prior studies and existing literature in human trafficking research informed survey design. Our key measures of forced labor conform to the legal framework established by the International Labor Organization (ILO 2012), and they represent the most agreed-upon indicators of forced labor currently utilized by the research community. The research team conducted a crosswalk exercise to ensure the survey instrument supports both legal frameworks.

To facilitate the analysis and interpretation of study findings, we **first** grouped the forced labor indicators into scaled categories of abuses based on perceived severity of infringement of human rights by employers. Such an approach allows researchers to create a "scale-of-harm" rather than categorizing each violation as equal in possible negative impact. These categories include, starting with the most severe:

1 | Enacted or threatened infringement of physical integrity;

2 | Enacted or threatened restriction of personal freedom including physical movement and/or communication;

3 | Abusive and coercive employment practices to compel migrant workers to do something they did not want to; and

4 | Deceptive contracts, unfair or unsafe work arrangements, or lack of food and shelter.

Second, we applied a two-step scheme to establish the threshold of trafficking victimization, in which we measure "excessive" exit costs used by employers to deter or prevent a migrant worker from leaving an abusive work environment. Under this analytical approach, a migrant worker (1) must have experienced some forms of employer-perpetrated abuse or unfair labor practice, and (2) must have been unable to quit because of fear of serious consequences. While our "scale-of-harm" measures the degree of harm or injury inflicted upon the individual migrant worker, our two-step threshold scheme seeks to qualify what reported experiences may count as trafficking victimization.

⚲ KEY FINDINGS

The ILO indicator, NORC scale of harm, and NORC's two-step threshold revealed a prevalent pattern of forced labor violations among recently returned Cambodian migrant workers. The extensiveness of forced labor violations among the respondents varied a little between the measures. Using the ILO forced labor indicators (a combination of the menace of penalty and involuntariness violations), we estimated that every four in 10 migrant workers from Cambodia were likely to experience both violations at least once during their work in destination countries. Using NORC's measurement, the estimated victimization rates in any of the listed violations in our scale of harm ranged from 13.61% in the most severe type (violation of physical integrity) to 57.31% in a moderate kind of violation (abusive/coercive employment practices). On excessive exit costs, we estimated that 53.21% of Cambodian migrant workers encountered one of the measured abuses and were unable to quit because of fears of serious consequences. The consequences included confiscation of one's accrued earnings, valuables, identification documents, deliberate efforts to ruin someone's reputation, or threats to call in the authorities. The results also showed some variations in the gender of migrant workers, the industry where they were employed, and the province where they were from.

> Using the ILO forced labor indicators, we estimated that every **four** in **10** migrant workers from Cambodia were likely to experience both violations at least once during their work in destination countries.

◢ SPECIFIC FINDINGS ON ILO'S INDICATORS

On **menace of penalty,** we estimate the fraction of Cambodian migrant labor population having experienced at least one of the listed violations to be 46.51%.
On measures of involuntariness, we estimate respondents' rate of victimization to be 60.55%.

◢ SPECIFIC FINDINGS ON NORC'S 4-CATEGORY SCALE OF HARM AND THE TWO-STEP THRESHOLD

4-Category Scale of Harm

1 | On **physical/sexual violence,** we estimate that 13.61% of Cambodian migrant workers have experienced at least one of the measures.

2 | On **restriction of freedom,** we estimate the rate of victimization among the migrant worker population from Cambodia to be 39.67%.

3 | On **abusive/coercive employment practices,** we estimate that 57.31% of Cambodian migrant workers have experienced abusive labor practices or employment tactics by their employers to do things they did not want to do.
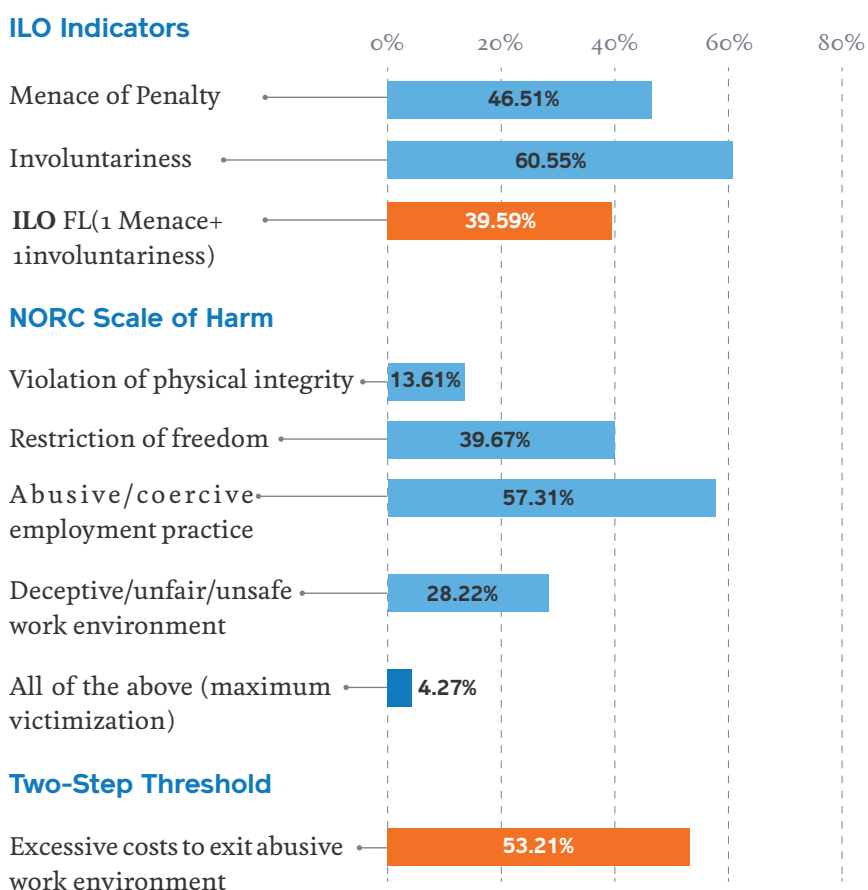
4 | On **deceptive/unfair/unsafe work environment,** we estimated 28.22% of Cambodian migrant labor have experienced at least one of the listed violations.

The Two-Step Threshold to Qualify for Trafficking Violations

On **excessive exit costs,** we estimate that 53.21% of the Cambodian migrant worker population have encountered one of the measured abuses and were unable to quit because of fears of serious consequences.

Figure 1: Summary of Key Forced Labor Indicators

ILO Indicators

Indicator	Value
Menace of Penalty	46.51%
Involuntariness	60.55%
ILO FL(1 Menace+ 1involuntariness)	39.59%

NORC Scale of Harm

Indicator	Value
Violation of physical integrity	13.61%
Restriction of freedom	39.67%
Abusive/coercive employment practice	57.31%
Deceptive/unfair/unsafe work environment	28.22%
All of the above (maximum victimization)	4.27%

Two-Step Threshold

Indicator	Value
Excessive costs to exit abusive work environment	53.21%

Social-family networks are the most frequent recruitment channel among Cambodian migrant workers, with two-thirds of the respondents obtaining their job through family or friends in the destination country. Another 11.21% of the respondents gained employment via government-registered recruitment agencies. Rarely, 2.82% got their job via private recruitment agencies that were not registered with the government.

Cambodian migrant workers also bore financial burdens to fund their migration and employment overseas. More than half of the respondents had to take out a loan to pay recruitment fees and other expenses to secure their employment abroad. The average amount of loans taken was 3,666,827 KHR (approximately $890 USD). The amount ranged from a low of 30,000 KHR (about $7 USD) to a high of 120,000,000 KHR (about $29,268 USD), suggesting a wide variation in personal circumstances. As for the source of loans, friends and family members represented the largest lending source (40.95%), followed by banks (30.76%) and employers (18.09%). The financial distress caused by the loan as well as the potential overlapping of recruiters, employers, and lenders could exacerbate the vulnerability of Cambodian migrant workers.

Migrant workers demonstrated a high level of trust in the justice system in their destination and home countries. Nearly 94% of respondents said they would report a hypothetical forced labor abuse to the authorities. While this figure reveals a high willingness to report, it does not necessarily imply that nearly all migrant workers will effectively report (or even attempt to report) abuses they encounter. First, in a follow-up question, less than half of the respondents who were willing to report (44.13%) correctly identified the appropriate reporting authority. Additionally, several biases could come into play when respondents answer questions regarding hypothetical behaviors. The sample of recently returned migrants may overestimate their willingness to report abuses because they are physically and mentally removed from their previous contract; in other words, it may be "easy for them to say" they would report an abuse. Second, respondents may claim they would report the abuse if they believe the enumerator will approve of that answer (social desirability bias). Moving past the hypothetical scenario, of the 10.02% of respondents who reported actually having experienced or observed unfair/illegal treatment from employers, 98.35% said they reported these violations to the authorities. The disparity between the self-reported victimization rate (10.02%) and the victimization rate we estimated using the ILO indicators (39.59%) suggests that some moderate forced labor violations may go unrecognized and unreported. In other words, those who acknowledged that they experienced or witnessed abusive treatment were more likely to fall under more severe categories of violations and be more motivated to report the crimes.

| RECOMMENDATIONS

Interventions focused on Hidden Vulnerability of Recruitment Chain of Acquaintance. For Cambodian migrant workers, the most prevalent recruitment channel is through family or friends' ties in the destination country. This informal channel could be a double-edged sword. For one thing, this provides a convenient and relatively credible source for many job seekers in their search for overseas employment. For another, such a channel could lead migrant workers to lower their level of scrutiny and caution when exploring job options and deciding to accept an offer. While many programs combatting labor trafficking focus on the license and competency of recruitment agencies or brokers, our data suggest hidden vulnerability that may associate with the network of acquaintance. Additionally, family and friends also serve as primary lenders to migrant workers in financing their migration costs. The potential overlapping of recruiter and lender would further complicate the migrant workers' vulnerable status.

Awareness Building among Migrant Worker Communities regarding Rights or Laws. Our data reveal inadequate awareness within migrant worker communities regarding the living and employment rights and legal protections they are entitled to. The information gap increases their vulnerability to unsafe migration and abusive work environments. Therefore, enhancing awareness of potential migrant workers prior to their departure is critical. For example, government agencies and social organizations can launch education campaigns and outreach efforts to these migrant workers on employment, contracts, potential risks involved, types of common exploitation and abuses, and practical knowledge or practices on protecting their rights and seeking assistance within Cambodia as well as in the destination country. The campaign or training contents can be further tailored to destination country-, gender-, or industry-specific. As more migrant workers from Cambodia become familiar with these internationally recognized employment rights and benefits, collective awareness may also lead to collective action to improve the situation in general.

Clear Guidance on Resources, Legal Services, and Reporting Mechanism. Respondents show a high level of trust in the justice system when it comes to reporting harmful work practices or environments. Despite the great willingness to seek help from these authorities, it is not yet clear to these migrant workers which pathways, agencies,

and/or procedures are most appropriate to report potential violations and seek legal support. Clear policy guidance and reporting mechanism must be provided so migrant workers know exactly which institution(s) has jurisdiction in certain circumstances. Additionally, relevant agencies and organizations can sort available supporting resources and legal services, as well as information about rescue venues in case of emergency, and make this information readily available to migrant workers as part of their pre-departure orientation package.

Close Inspection of Recruitment Agents & Expansion of Access to Affordable Loans.
More than half of the respondents had to take out a loan to finance their journey. The high costs of migration, either in the form of recruitment fees or other expenses, is an area that requires greater government attention and intervention. On one hand, the Cambodian government needs to closely inspect the various recruitment agents' services and implement strict acts or regulations to deter irregular rent-seeking behavior and excessive fee structures. On the other hand, government institutions and communities can work with financial institutions to provide affordable loans and payment schedules to migrant workers with credible histories. The availability of lower-interest loans and sustainable payment plans would largely protect migrant workers from usurious charges from private lenders or debt traps, which increase their vulnerability to forced labor violations.

1. INTRODUCTION
BACKGROUND AND CONTEXT

Human trafficking involves multiple layers of risk prior to, during, and directly after migration. At-risk migrant workers may experience different forms of exploitation during recruitment and migration, when compared to exploitation at their destination, and suffer numerous risks, such as insufficient legal, labor and social protections, that increase their vulnerability to forced labor conditions. The recruitment process often initiates the risks for prospective migrant workers because of unethical recruitment practices leading to forced labor conditions (Verité, 2019; Bryant & Landman, 2020). However, while much trafficking research focuses on the exploitation risks and experiences of migrant workers in their destination country, relatively little is known about exploitation risks and experiences prior to and during migration. The literature suggests that interventions acknowledging the complexity of labor trafficking by addressing multiple risk/protective factors and/or focusing on systems-level (vs. individual-level) change, are likely to be more effective (Zimmerman & Kiss, 2017; Bryant & Landman, 2020; Fabbri, et al., 2021; Zimmerman, et al., 2021). Therefore, it is critical for cross-border counter-trafficking programs to understand both the source- and destination-country trafficking risks and patterns among migrant workers.

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STUDY PURPOSE AND OBJECTIVES

NORC has partnered with the **International Justice Mission** (IJM) to conduct a study to estimate the levels of victimization and unique source-side vulnerabilities driving cross-border labor trafficking in Cambodia. The research and prevalence estimation focus on the four provinces, including Banteay Meanchey, Kampong Cham, Prey Veng, and Siem Reap. The specific primary and secondary research questions are listed below.

Primary Research Questions

1 | What is the overall, estimated scale of Cambodian nationals annually trafficked for cross-border labor?

2 | What proportion of recently return migrant workers have relied on and are willing to interact with the justice system if they experience harmful migration for work?

Secondary Research Questions

1 | What are the key risk factors that increase the vulnerability of Cambodian nationals to cross-border trafficking?

2 | What are the key hubs and primary channels of trafficking out of Cambodia?

The methodology described below allows data collectors to identify and survey a representative sample of recently returned migrant workers in provinces with high rates of worker migration while identifying trafficking patterns and risk/protective factors for cross-border victimization across various industries. Findings will include data and analysis to inform future justice system strengthening interventions to fight cross-border labor trafficking.

2. RESEARCH METHODS

❙ PREVALENCE ESTIMATION METHODOLOGY

◢ SURVEY MEASUREMENT

The survey instrument for this study used an indicator-based approach. NORC's prior studies, as well as existing survey literature in the field of human trafficking research, informed its development. Along similar efforts commonly adhered to by the research community, we sought to conform our key measures of forced labor in accordance with the legal framework established by the **International Labor Organization (ILO 2012).** Specific elements in the instrument represent most, if not all, measurement items commonly found in prevalence studies currently available in the field. In other words, our instrument represents the most agreed-upon common indicators of forced labor or labor trafficking activities currently utilized by the research community on this topic.

The instrument was refined through internal testing, IJM review and cognitive tests with members of the target population, conducted by Chhat Group, the local firm subcontracted by NORC to support in-country data collection activities in Cambodia. During training, we also asked the enumerators to provide feedback on how the instrument could be clarified, based on their field experience, and after pilot testing, we made a final round of revisions based on the trainees' experience implementing the survey in the field. These measures are discussed in more detail in subsequent sub-sections. Moreover, a crosswalk exercise was conducted by the team to ensure that the measures in the survey instrument support the legal frameworks of the International Labor Organization.

The survey instrument contains the following main domains: (1) demographic characteristics (e.g., age, gender, ethnicity, and family composition); (2) debt situation due to migration decisions (e.g., debt amount, borrowing sources); (3) measures of job experiences at workplace (e.g., types of jobs, overtime, payment terms); and (4) various forms of employer-perpetrated abuses, including violence, restriction of physical/communicative freedom, and exploitative practices.

◢ MEASURING FORCED LABOR

For this study, we used standard ILO indicators of forced labor, and grouped and analyzed them in two ways. We first reported the two primary dimensions standard ILO indicators looked for, including "Involuntariness" and "Menace of Penalty", to characterize someone in a forced labor situation. In addition, we proposed a multi-dimensional approach, the "scale of harm", in which we qualitatively assign a level of harm to each set of indicators. We described the details of our criteria below.

For this study, we used standard **ILO** indicators of forced labor, and grouped and analyzed them in two ways. In addition, we proposed a multi-dimensional approach, the "scale of harm".

Scale of Harm

To facilitate the analysis and interpretation of study findings, this team further grouped the multitude of forced labor indicators into scaled categories of abuses based on perceived severity of infringement of human rights by employers. Prior research has used this method to establish the threshold of defining labor trafficking or forced labor, as well as to operationalize a conceptual spectrum upon which the complexity of human trafficking violations can be managed (Zhang, 2012; Zhang et al., 2014). These categories include, starting with the most severe:

1 | Enacted or threatened infringement of physical integrity, i.e., physical or sexual violence against a migrant worker or his/her family;

2 | Enacted or threatened restriction of personal freedom including physical movement and/or communication;

3 | Abusive and coercive employment practices to compel migrant workers to do something they did not want to; and

4 | Any deceptive contracts, unfair or unsafe work arrangement, or lack of food and shelter.

Two-Step Scheme

We then applied a two-step scheme to establish the threshold of trafficking victimization. Here, we measure "Excessive" exit costs used by employers to deter or prevent a migrant worker from leaving his/her job. This includes confiscation of one's accrued earnings, valuables, identification documents, deliberate efforts to tarnish/ruin someone's reputation, or threat to call in the authorities. Using this approach, a migrant worker must have (1) experienced some form of abuse or unfair labor practice, and (2) been unable to leave the job out of fear of serious repercussions.

While our measures included in the survey can accommodate other configurations in the grouping of human rights violations, we believe the Scale of Harm and two-step scheme as described here offers a convenient and intuitive way to convey what specific types of abuses we sought to uncover under the legal frameworks stipulated by ILO conventions. Further, the wide spectrum of measures increases flexibility that allows other researchers to reconfigure their own research questions in secondary data analysis. As shown later in the presentation of the findings, our scale of harm appeared to work well in concordance validity in this study. The more the perceived severity of the abuses, the fewer victims; and vice versa: the lesser the severity, the more victims.

▌ SAMPLING

◢ SAMPLING DESIGN

The sampling design was developed based on the results of a formative assessment that gathered input from recently returned migrant workers and NGO staff who supported migrant workers. We used a multi-step approach to sampling respondents. First, we purposively selected four provinces in which we expected to be able to find a

large population of recently returned migrant workers (i.e., those who had returned to Cambodia from working abroad 18 months or fewer from the time of data collection). The provinces chosen included Banteay Meanchey, Kampong Cham, Prey Veng, and Siem Reap. These were among the provinces most frequently cited in the formative assessment as destinations for recently returned migrant workers.

Second, we used a random cluster sample approach to select 48 villages from which to sample respondents. After obtaining lists of all districts, communes, and villages within each of the four provinces, we randomly selected eight districts within each province, three communes within each selected district, and two villages within each selected commune. This approach allowed us to obtain a roughly representative sample of villages while also minimizing data collection costs by limiting the amount of travel required. We aimed to collect data on six to seven respondents per village, but we recognized that some of the randomly selected villages might not have six recently returned migrant workers. Therefore, we created a list of 45 alternate villages that could be sampled from, as needed.

Finally, when data collectors went to each selected village, they aimed to recruit six to seven respondents per village. In the formative assessment, we learned that village leaders were well-trusted by recently returned migrant workers and were considered knowledgeable about the people within their villages. Thus, when data collectors first entered a village, they started by talking to village leaders and asking them to identify all the recently returned migrant workers in the community. This list served as a draft sample frame for the village. Village leaders identified between zero and 12 recently returned migrant workers in each village, with an average of three eligible community members per village. When village leaders did not identify any recently returned migrant workers, data collectors informally confirmed this information by chatting with several other community members that they happened to meet and asking if they knew any recently returned migrant workers. If so, they added these people to the sample frame. If not, they concluded that there were no eligible participants in the village and moved to the selected alternate village to replace it. If the village leader identified any eligible community members, the data collectors drafted a sample frame by listing the eligible members. They then randomly selected up to three of these people to recruit into the survey.

At the end of each survey, respondents would be asked if they knew and would be willing to share contact information for any other eligible community members in the village. This was intended to check the completeness of the sample frame developed from the village leader's information. If the respondents identified eligible community members not previously on the sample frame, data collectors added these people to the sample frame and randomly selected the next up to three participants from the newly added members. This ensured that people not known by the village leader, who might be systematically different than the people known to the village leader, were not excluded from the survey. Across all villages, respondents added an additional zero to four community members to the sample frame. The average number of community members added to the sample frame was less than one (0.6) per village, suggesting that the village leaders' lists were typically complete. However, there were six villages in which respondents identified an equal number or more eligible community members than the village leaders did. For a breakdown of the number of eligible and sampled community members by district, as well as the number of communes and villages from which data were collected, see Table 11 of ANNEX I. SAMPLING PROCEDURES AND POPULATION ESTIMATIONS.

DATA COLLECTION PREPARATION

◢ FORMATIVE ANALYSIS

Formative assessment is developmental research conducted in preparation for a study employing novel methods and/or relying on untested functional and analytical assumptions.[1] The purpose of formative assessment is to validate a proposed research design as well as gather key inputs required for survey logistics and planning. Because the link-tracing estimation strategies proposed under the Analysis of Cross-Border Forced Labor in Cambodia have not been previously conducted with the target populations and respondents, a formative assessment was conducted in December 2021 through March 2022 to test several critical assumptions that surfaced during the research design stage.

Formative assessment activities were informed by the research design report, a desk review, and consultative meetings/discussions with IJM and Chhat Group.

Field activities were structured around a formative assessment objectives document, which outlined key items and parameters from the research design document that required further investigation. Broadly speaking, these objectives included assessing:

- The extent to which target respondents are able and willing to speak with the research team; provide accurate data on themselves; and refer persons known to them to participate in the study;

- Ability of network-based referral chains to branch out to especially hidden or hard-to-reach respondents;

- Sample size calculation inputs including, number and characteristics of seeds and expected referral counts/participation rates; and

- Logistical assumptions related to data collection including modalities, sampling, primary and secondary sampling units, locations, and budgetary inputs.

Methods for addressing the above included:

- Informational interviews with stakeholders, including sector experts and Non-governmental organizations (NGOs); and

- Focus group discussions (FGDs) and semi-structured interviews with target population respondents.

Chhat Group identified and recruited participants for FGDs based on inclusion criteria: men or women who are returned migrant workers, 18 years of age or older. One FGD included men who had worked in the fishing industry, one included men who had worked in any other industry, and one included women who had worked in any industry. FGDs lasted around 2 hours. Informational interviews were conducted using an online platform (Zoom) or in person with representatives from ADHOC, Central, Chab Dai, LSCW, Rattanak, and Winrock. Findings from the formative assessment informed the final research methodology, sampling strategy, and instrument design, as well as compensation for respondents. Respondents received 4000 KHR for participating in the forced labor assessment and 4000 KHR for each successful respondent they recruited into the study.

◢ DATA COLLECTION ACTIVITIES

Data collection activities include a cross-border forced labor prevalence survey administered in four provinces of Cambodia (Banteay Meanchey, Kampong Cham, Prey Veng, and Siem Reap). Supporting activities include the screener to determine potential respondents' eligibility to participate in the study (i.e., whether they fit the inclusion criteria). Data collection instruments for the survey were structured around forced labor statistical definitions used by the U.S. Department of State's Office to Monitor and Combat Trafficking in Persons (TIP) office, ILO, and government of Cambodia and were refined in consultation with IJM and during a formative assessment period. Detailed parameters of data collection tools including sampling approach, estimated duration of respondent interaction, and topics covered are outlined in Table 1.

Table 1: Data Collection Activities and Parameters

Activity	Cross-border forced labor prevalence survey	Phone screener
Target sample	1,200 recently returned migrant workers in Banteay Meanchey, Kampong Cham, Prey Veng, and Siem Reap	All potential study participants
Selection / sampling method	Random cluster sampling of villages; interviewing village leaders to create a village sample frame; adding to the sample frame with information collected from respondents	Random selection from village sample frame
Estimate Duration	60 min	10 min
Purpose	Assess forced labor status and willingness to rely on the justice system	Determine eligibility to participate in study
Survey topics	• Demographic information • General details on most recent job outside of Cambodia • Assessment of forced labor indicators: Living conditions, unfair recruitment, conditions of work and employment (work and life under duress), freedom of movement and possibility of leaving employer without risk, intimidation as means of coercion • Past experience interacting with the justice system • Hypothetical willingness to interact with the justice system • Knowledge of other eligible community members	• Age • Current county of residence • Migration destination country • Timing of return • Explicit consideration of study rules

▎ TRAINING AND FIELD WORK

For data collection, NORC subcontracted with Chhat Group, a local data collection, research, and consultancy firm in Cambodia. Chhat Group was selected based on their experience managing data collection activities in Cambodia; ability to rapidly mobilize to recruit a large pool of experienced and qualified interviewers; demonstrated expertise managing mixed-methods research; experience using tablets for data collection; past performance conducting exercises of similar scope and scale; and value for money.

◢ INTERVIEWER TRAINING AND PILOTING

NORC conducted a two-day English-language training of trainers with Chhat Group's core leadership team, which took place May 2-3, 2022. After this, the core leadership team conducted a seven-day Khmer-language training and pilot test with the enumerators. The trainings were focused on orienting participants to the study, data collection procedures, sampling, logistics, respondent screening, survey administration, and trauma-informed research practices. In addition, both trainings included a "lab review" of the survey. The purpose of the lab review was to draw on the participants' extensive research experience in Cambodia to improve comprehension and contextual appropriateness of the survey questions; ensure response options were clear, exhaustive, and mutually exclusive; and identify additional guidance that interviewers might need to help them clarify or probe respondents in cases where a question was unclear. The enumerator training also included a field pilot of the survey instrument.

The survey instruments were updated based on the lab review, and field piloted with recently returned migrant workers in the target provinces but outside the targeted villages. The purpose of the field test was to assess whether respondents struggled with understanding, comprehension, or recall; identify which tools/approaches were helpful in improving comprehension and recall; determine if any questions were subject to response bias or perceived as overly sensitive by respondents; and identify any other unforeseen issues or challenges. Following the field test, NORC and Chhat Group conducted extended debrief sessions with the enumerators to identify any necessary final adjustments to the instruments prior to the main training.

Following the training, 22 interviewers were selected to participate in field work. Selection was made based on training attendance and participation, pilot performance, and written exams. Selected teams then travelled to their respective provinces to commence data collection, which took place from June 1 to July 1.

◢ DATA QUALITY ASSURANCE

Data collection was tablet-based, utilizing SurveyCTO/Open Data Kit (ODK). Survey programming was conducted in-house by NORC and data collection platforms/servers were centrally managed by the research team. All tablets and servers were encrypted to ensure maximum data security. Data uploads were completed on a daily basis (connectivity permitting) to allow for real-time data quality reviews.

A DQA (Data Quality Assurance) protocol was established to set forth data quality standards/requirements and team member responsibilities in ensuring high quality data during field work. Data quality reviews (DQRs) were conducted by NORC's data management team at regular intervals throughout the course of data collection. The purpose of a DQR is to proactively identify and remedy issues related to survey programming, question clarity, and enumerator error/performance.

◢ RESEARCH ETHICS AND STUDY AUTHORIZATION

This study was conducted in line with human subjects research guidelines both in the United States and Cambodia. NORC follows established protocols for gathering informed consent, protecting anonymity and identifying information, and ensuring ethical data collection—including from vulnerable populations. To ensure compliance with our high ethical standards, all research involving vulnerable populations must pass through formal Institutional Review Board (IRB) review prior to data collection and all research staff must complete a certified course in Protecting Human Research Participants through the National Institutes of Health (NIH) or Collaborative Institutional Training Initiative (CITI).

Field teams were extensively trained on research ethics, including confidentiality and informed consent procedures. Consent/assent was verbally attained from study participants, and all respondents were offered a printed consent/study information sheet signed/certified by the enumerator for record-keeping purposes. NORC also provided interviewers with contextually-grounded training on psychological first aid and trauma-informed research.

NORC sought and received approval from its internal IRB (Institutional Review Board), which follows a formal process for ensuring all research projects are conducted in accordance with the U.S. Federal Policy for the Protection of Human Subjects. NORC's IRB is registered with the U.S. Department of Health and Human Services Office of Human Research Protection and has a Federal-wide assurance (Federal-Wide Assurance FWA 00000142). The Government of Cambodia does not have any official policies related approvals for socio-behavioral research. However, IJM reviewed the study's ethical protocols. During the formative assessment, NORC also sought input from local migrant worker-supporting NGOs on the study's ethical protocols, including incentives, risks and perceived risks that may be faced by respondents, and suggested mitigation strategies.

▌ STUDY LIMITATIONS

While we are confident of our findings and their implications, some limitations exist that may pose challenges to the interpretation of our study findings.

◢ FORCED LABOR ESTIMATES APPLY ONLY TO THE MOST RECENT JOB OF "RECENTLY RETURNED MIGRANT WORKERS"

A key limitation of the proposed design is that the count of forced laborers will only reflect the experiences of migrant workers who recently returned from destination locations (i.e., 18 or fewer months prior to the study). The experiences of migrant workers in forced labor situations with extreme limitation of freedom, without the ability to return to Cambodia, will not be included in the study. Furthermore, individual returnees will only be asked about their most recent work experience, in which they may have been employed for a relatively short or longer period of time. If a respondent has migrated more than once in the last 18 months and reports that he has not experienced forced labor/trafficking in his last job, that does not necessarily mean that he has not experienced forced labor/trafficking in the last 18 months.

◢ POPULATIONS EXCLUDED FROM THE REACH OF OUR DATA COLLECTION ACTIVITIES

The individuals who may be most difficult to reach might include, for example, 1) returnees who have not disclosed or do not wish to disclose having been deceived or cheated for fear of being stigmatized or feeling ashamed, and 2) individuals who

fear retribution by traffickers or local recruiters. Individuals who were exploited in particularly irregular labor sectors, such as sex work, begging, or petty theft, may also be more difficult to reach and obtain disclosure or linkages from.

◢ COUNTRIES' COVID-19 GUIDELINES INFLUENCE MIGRANT WORKERS' MOVEMENT ACROSS BORDERS

Access to returnees might be affected by changing guidelines regarding quarantine/isolation upon re-entry into Cambodia. Furthermore, over the past 18 months, COVID-19 guidelines have repeatedly impacted people's ability to migrate for work or return home from overseas migration. As a result, the base population of interest—recently returned migrant workers—may not be representative of the base population of interest under normal circumstances, and the forced labor prevalence rate estimated at this time may not be directly comparable to an estimate made in the future when the pandemic has passed.

3. FINDINGS

▎ DEMOGRAPHIC CHARACTERISTICS

As shown in Table 2, the gender distribution skewed slightly female, with more women (60.13%) than men (39.87%). A plurality of the sample were 31-45 years old (40.12%), and roughly a quarter of the sample fell into the each of the following two age ranges: 18-30 years old (26.99%) and 41-50 years old (25.50%). 7.39% of the sample was 50 years of age and older.

Table 2: Respondent Demographics (Proportions)

Total Sample		Positive N**	Sample Statistic*
Sex	Male	480	39.87%
	Female	724	60.13%
Age	18–30	325	26.99%
	31–40	483	40.12%
	41–50	307	25.50%
	50+	89	7.39%
Ethnicity	Khmer	1182	98.17%
	Other	22	1.83%
Education	No formal Schooling	94	7.81%
	Primary incomplete	553	45.93%
	Primary complete	158	13.12%
	Secondary incomplete	246	20.43%
	Secondary complete	125	10.38%
	College/tertiary incomplete	19	1.58%
	College/tertiary complete	9	0.75%

Province		Banteay Meanchey	Kampong Cham	Prey Veng	Siem Reap
Sex	Male	103	151	122	104
	Female	197	150	178	199
Age	18–30	86	69	66	104
	31–40	135	122	117	109
	41–50	60	85	91	71
	50+	19	25	26	19

ANALYSIS OF CROSS-BORDER FORCED LABOR IN CAMBODIA

		Banteay Meanchey	Kampong Cham	Prey Veng	Siem Reap
Ethnicity	Khmer	299	281	300	302
	Other	1	20	0	1
Education	No formal Schooling	27	20	18	29
	Primary incomplete	126	108	132	187
	Primary complete	49	39	38	32
	Secondary incomplete	57	84	70	35
	Secondary complete	35	34	39	17
	College/tertiary incomplete	3	12	2	2
	College/tertiary complete	3	4	1	1

*Notes: *Sample statistics reflect the percentage of those identified as positive of the indicator based on the total sample size (N=1,204); ** Number of respondents identified as positive by the indicator.*

Ethnically, 98% of respondents identified as Khmer. Nearly all non-Khmer respondents came from Kampong Cham. Regarding education, just over half of the migrant workers received either no formal schooling or an incomplete primary education. The fraction of respondents with no or incomplete primary education was much higher in Siem Reap, at 71%. Those who completed secondary education account for 10% of the sample, and those with college or tertiary level degrees account for only 2%.

▌ EMPLOYMENT CHARACTERISTICS

As shown in Figure 2, the predominant employment destination for the sampled Cambodian migrant workers was Thailand (88%). However, small shares worked in the Republic of Korea (6%) or Malaysia (3%). On job types, construction and manufacturing represented the largest share of all reported employment (32% each), followed by agriculture (17%), Service (7%), fishing (4%), and domestic work (3%). The distribution of job sectors within each gender group were similar in the most prevalent industries such as construction (30% among men and 34% among women), manufacturing (35% among men and 30% among women), agriculture (15% among men and 18% among women), and services (6% among men and 8% among women).

Figure 2: Respondent Country Worked and Job Industry
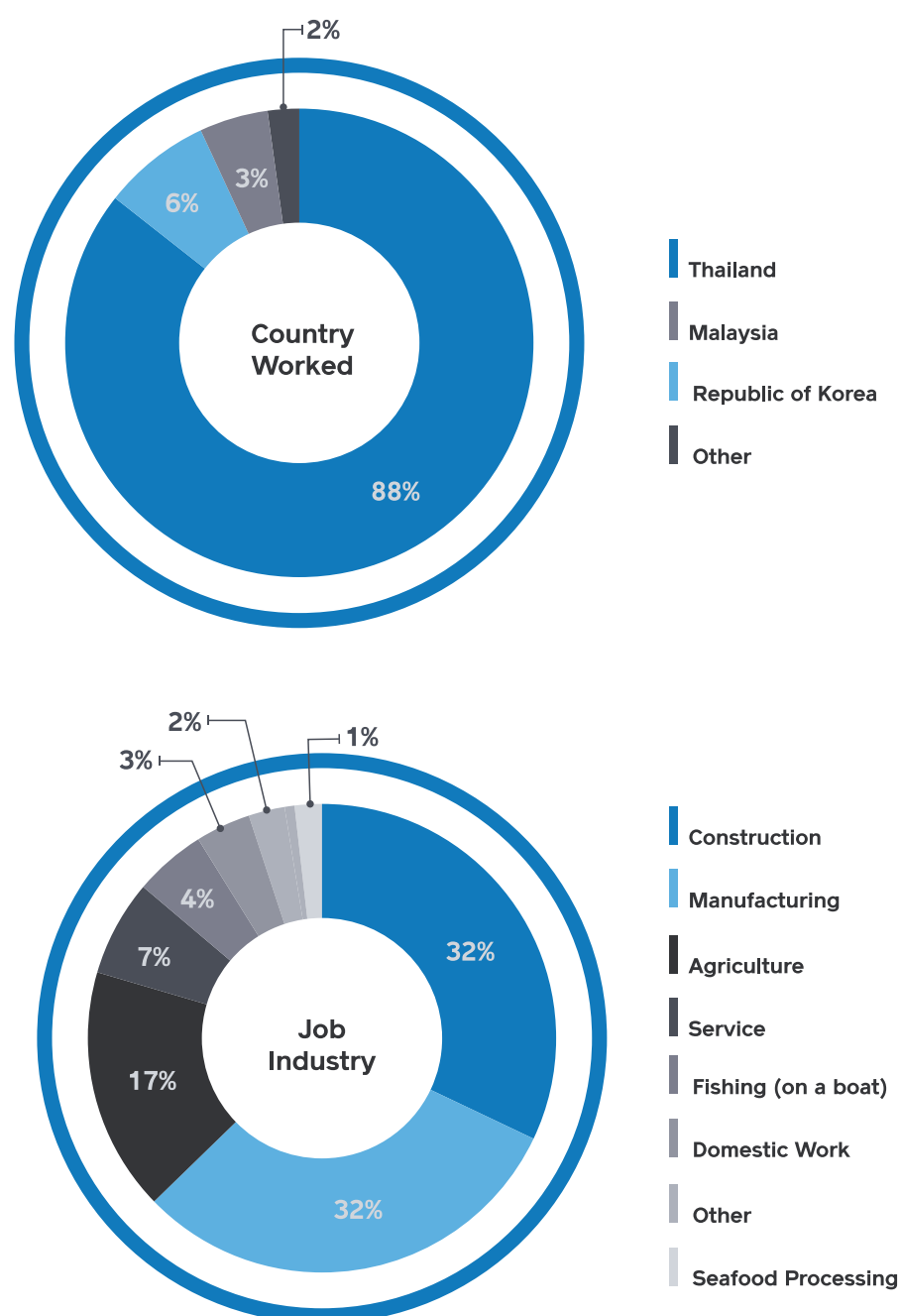
Notes: Categories were only included if they were reported by at least 2 percent of respondents, all other categories were then combined into other.

Table 3: Respondent Job Industry (by gender)

	Male respondent (n=480)	Female respondents (n=724)
Construction	145	246
Manufacturing	**167**	**246**
Agriculture	72	133
Seervice	27	57
Fishing (on aboat)	**41**	**7**
Domestic Work	**5**	**35**
Other	15	14
Seafood Processing	8	14

Notes: Categories were only included if they were reported by at least 2 percent of respondents, all other categories were then combined into other.

As shown in Table 4, the majority of the Cambodian migrant workers obtained work visas for their country of employment, accounting for close to 80.73% of the sample, followed by a small number of tourist visas (4.24%) and student visas (0.83%). A sizeable minority of respondents worked without visas or under some other undocumented conditions (13.62%).

Respondents reported various strategies for obtaining employment in destination countries. Nearly half (43.85%) reported that a family member was already living in the destination country. When summed with the percentage of respondents who already had a friend living in the destination country (22.01%), a majority (65.86%) of respondents obtained jobs through a social network. Other recruitment channels included a government registered official job recruitment agency (11.21%) or self-initiation (10.13%). Less frequently, respondents obtained employment opportunities through a recruitment agency with unknown registration status (3.16%), a private recruitment agency not registered with the government (2.82%), a private broker or human smuggler (2.08%), or an individual with connections of job placement in the destination country (1.83%).

A quarter of the sample, 25.08%, paid a fee to secure employment in destination countries; half (50.58%) of respondents had to take out a loan to pay for the fee. As for the sources of loans, friends and family members represented the largest lending source, accounting for 40.95% of those who took out a loan, followed by banks (30.76%) and employers (18.09%). In general, it was rare for migrant workers to borrow money directly from a private broker (just 5.43%).

Respondents reported various strategies for obtaining employment in destination countries. Nearly half (43.85%) reported that a family member was already living in the destination country.

The average amount of recruitment fees paid to secure a job in the destination countries amounted to 1,642,520 Cambodian Riel (KHR), or about $401 USD, and ranged from a low of 20,000 KHR (about $5 USD) to 30,000,000 KHR (about $7,317 USD), suggesting wide variation in personal circumstances. 4.82% of the sample were unsure whether the lump sum payment they made to the recruiter included other expenses beyond recruitment fees. Therefore, we separately calculated the average and range of the fee they reported. As expected, the average amount was higher (3,853,190 KHR, or about $940 USD), but the range was fairly consistent between 30,000 KHR (about $7 USD) to 28,700,000 KHR (about $7000 USD). Last, we found that the average amount of loans taken out by migrant workers was much higher (3,666,827 KHR, or about $890 USD) than the average fee paid to obtain a job. There were also wide variations in the amounts taken by individual migrant workers, ranging from 30,000 KHR (about $7 USD) to 120,000,000 KHR (about $29,268 USD).

Table 4: Employment Characteristics

		Positive N**	Sample Statistic*
Visa Type	Student	10	0.83%
	Working	972	80.73%
	Tourist	51	4.24%
	I was working without a visa	164	13.62%
	Other	7	0.58%
How job was obtained	A family member already in the destination country	528	43.85%
	A friend already in the destination country	265	22.01%
	A government registered official job recruitment agency	135	11.21%
	A private recruitment agency (not registered with the government)	34	2.82%
	A recruitment agency (respondent unsure if it was registered or not)	38	3.16%
	An individual with connections of job placement in the destination country	22	1.83%
	I found it myself	122	10.13%
	Private broker/ Human smuggler	25	2.08%
	Other	35	2.91%
Fee/ loan to secure job	Paid a fee to secure job	302	25.08%
	Took out a loan	609	50.58%

		Positive N**	Sample Statistic*
Source of loan taken	Employer	110	18.09%
	Private Broker	33	5.43%
	Freind/family member	249	40.95%
	Bank	187	30.76%
	Other	29	4.77%
Fee/ Paid to source a job in Cambodian Riel (KHR)	**Recruitment Fee only** Mean	1,642,520.00	
	Standard Deviation	3,897,766.00	
	Range	20,000.00	30,000,000.00
	Lump Sum *(may or may not include other expenses)* Mean	3,853,190.00	
	Standard Deviation	5,739,913.00	
	Range	30,000.00	28,700,000.00
Loan amount in Cambodian Riel (KHR)	Mean	3,666,827.00	
	Standard Deviation	7,538,427.00	
	Range	30,000.00	120,000,000.00

*Notes: *Sample statistics reflect the percentage of those identified as positive of the indicator based on the total sample size (N=1,204); ** Number of respondents identified as positive by the indicator.*
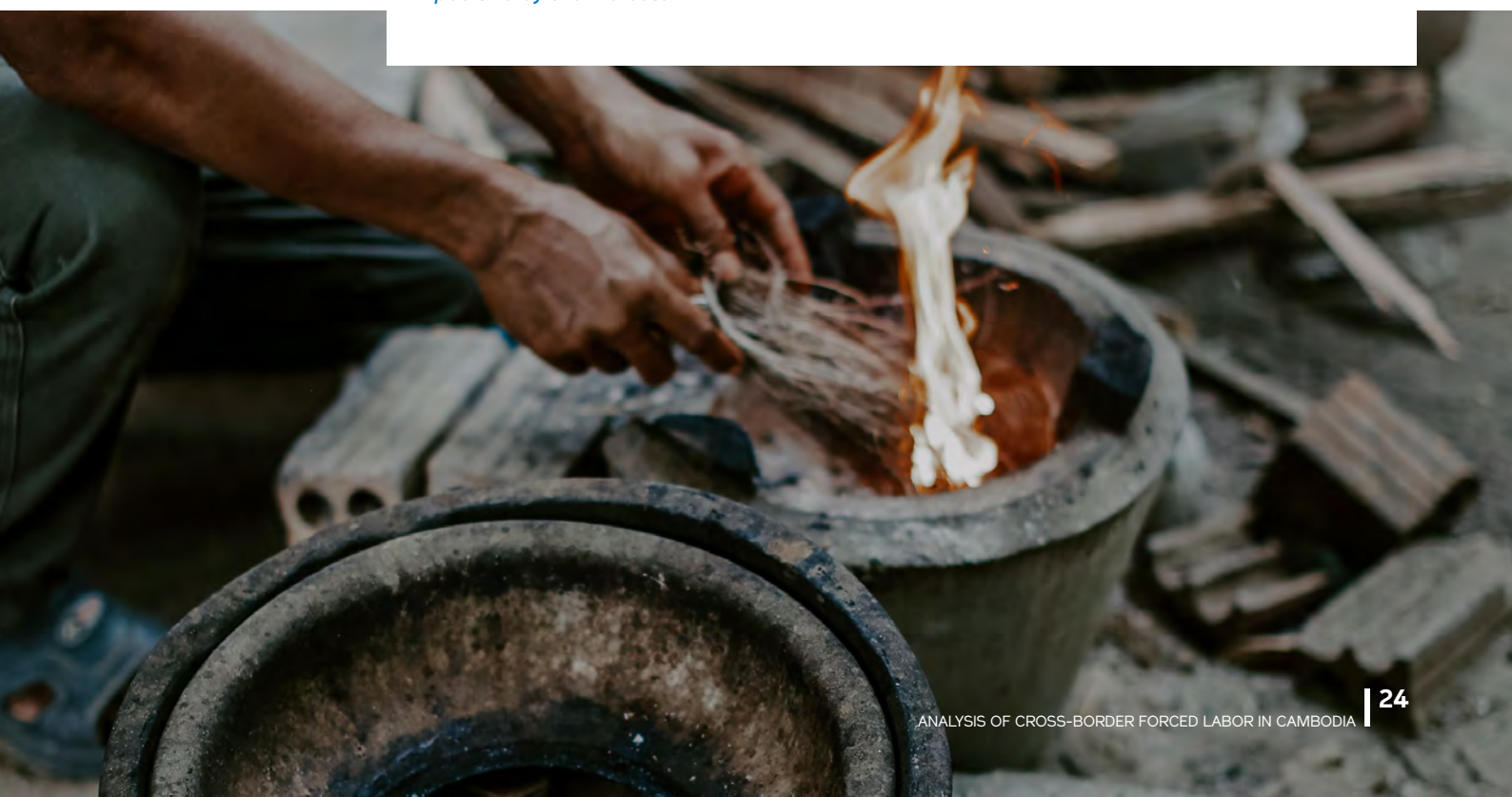
I PATTERNS OF FORCED LABOR VIOLATIONS

◢ ACTUAL OR THREAT OF PHYSICAL/SEXUAL VIOLENCE

All summary statistics presented in the following sections are weighted averages using the sample weights described in ANNEX I. SAMPLING PROCEDURES AND POPULATION ESTIMATIONS.

As shown in Table 5, we found that the actual or threat of physical violence among Cambodian migrant workers in destination countries was rather limited: 13.61% of respondents reported having experienced some form of threatened or actual physical violence in the hands of their employers or people who worked for their employers.

An equal share of respondents reported that their employer threatened or enacted, or purely enacted, physical or sexual violence on them to make them do something they did not want to do (13.59%).

We estimate the prevalence of an employer harming or threatening to harm an employee's family to make them do something they did not want to do to be 0.41%. We find fear for physical consequences if one were to quit his/her job before the contract would end was even rarer (0.04%).

Table 5: Violation of Physical Integrity

Question	Positive N*	Sample Statistics**	Population Estimation	95% Conf. Intervals	
				Lower	Upper
Employer threatened or enacted physical or sexual violence on you to make you do something you did not want to do.	163	13.54%	13.59%	11.15%	16.04%
Violence would occur to migrant worker if they dare to leave his/her job before the contract is finished.	2	0.17%	0.04%	–0.02%	0.10%
Employer harmed your family to make you do something you did not want to do, or threatened to do so.	7	0.58%	0.41%	0.04%	0.79%
Any of the above	*164*	*13.62%*	*13.61%*	*11.17%*	*16.06%*

*Notes: *Number of respondents identified as positive by the indicator; **Sample statistics reflect the percentage of those identified as positive of the indicator based on the total sample size (N=1,204).*

◢ RESTRICTION OF FREEDOM IN MOVEMENT/COMMUNICATION

Table 6 presents estimates on restriction of freedom in movement and/or communication. We found that less than half of all respondents, 39.67%, had experienced at least one form of this violation. Most common were reports from respondents living in employer-provided housing that they were not allowed to live outside of employer-provided housing and keep their job (25.14%) or reports that an employer does not allow an employee to move around freely in the community after their shift is over (16.60%). 7.08% of respondents reported that their employers withhold their identification documents to make them do something they did not want to do. Less common among Cambodian migrant workers were reports of employers taking away their freedom of movement and/or communication or leaving them stranded in faraway places if they quit before the contract finished (4.23%), employers or recruiters holding identification documents (3.32%), and employers using or threatening to use isolation, confinement, and surveillance to compel respondents to do things they did not want to do (1.84%).

Table 6: Restriction of Freedom in Movement/Communication

Question	Positive N*	Sample Statistics**	Population Estimation	95% Conf. Intervals	
				Lower	Upper
Employer ever withheld your identity documents or threatened to do so to make you do something you did not want to do.	87	7.23%	7.08%	5.17%	8.99%
Employer or recruiter held your identification documents such as your passport or ID card.	44	3.66%	3.32%	1.89%	4.75%
After your shift is over, employer does not allow you to move around freely in the community.	186	15.45%	16.60%	13.92%	19.29%
(If respondent lives in employer-provided housing) not allowed to live somewhere else and keep your current job if one decided not to live in employer-provided housing.	300	24.92%	25.14%	22.03%	28.26%
Loss of freedom of movement or communication or being stranded if one quits before the contract is finished.	56	4.65%	4.23%	2.75%	5.70%

Question	Positive N*	Sample Statistics**	Population Estimation	95% Conf. Intervals	
				Lower	Upper
Employer isolated, confined, or surveilled you or threatened to do so.	22	1.83%	1.84%	0.75%	2.93%
Any of the above	*477*	*39.62%*	*39.67%*	*36.17%*	*43.18%*

*Notes: *Number of respondents identified as positive by the indicator; **Sample statistics reflect the percentage of those identified as positive of the indicator based on the total sample size (N=1,204).*

◢ ABUSIVE AND COERCIVE EMPLOYMENT PRACTICES

Table 7 presents the victimization rates for several abusive labor practices or employment tactics utilized by employers to coerce their employees to do things they did not want to, or to grossly exploit migrant workers for profits. A majority of respondents, 58.89%, reported having experienced at least one of the listed abuses at work. Specifically, the most common coercion technique reported was for an employer to inflict (or threaten to inflict) significant financial, legal and reputational costs on workers who quit before their contract was finished: 47.92% of respondents reported having experienced such abuses.

The next most common coercion tactic used by employers to compel workers to do something they did not want to was not paying workers or not allowing them to keep the money they earned (9.69%).

Less prevalent coercion tactics that respondents reported at similar rates (ranging from 4-6%) were withholding (or threatening to withhold) due wages, including overtime pay (5.82%), denouncing (or threatening to denounce) migrant workers to the authorities (5.47%), forcing workers to work for no pay/reduced pay to repay a loan to their employer or recruitment agency (4.76), or employers either convincing (or threatening to convince) other employers in their area to boycott hiring them or their family members (4.10). The abuse least frequently reported (by 1.87% of respondents) was employers manipulating (or threatening to manipulate) the amount of debt they owed to make them do something they did not want to do.

Table 7: Abusive and Coercive Employment Practices

Question	Positive N*	Sample Statistics**	Population Estimation	95% Conf. Intervals	
				Lower	Upper
Significant financial/ legal/reputational consequences if one quits before his/her contract is finished.	577	47.92%	47.54%	44.08%	50.99%
Employer unfairly withheld due wages, including overtime wages, or threatened to do so to make you do something you did not want to do.	81	6.73%	5.82%	4.13%	7.50%

Question	Positive N*	Sample Statistics**	Population Estimation	95% Conf. Intervals	
				Lower	Upper
Employer denounced you to the authorities to make you do something or threatened to do so.	79	6.56%	5.47%	3.97%	6.96%
Employer convinced other employers in your area to boycott hiring you or your family, or threatened to do so to make you do something you did not want to do.	59	4.90%	4.10%	2.80%	5.39%
Employer manipulated the amount of debt you owed, or threatened to do so to make you do something you did not want to do.	31	2.57%	1.87%	1.02%	2.73%
Forced to work for no pay or for reduced pay to repay a loan to your employer or recruitment agency.	67	5.56%	4.76%	3.21%	6.31%
Not been paid or not been allowed to keep the money you earned.	118	9.80%	9.69%	7.62%	11.76%
Any of the above	*709*	*58.89%*	*57.31%*	*53.86%*	*60.76%*
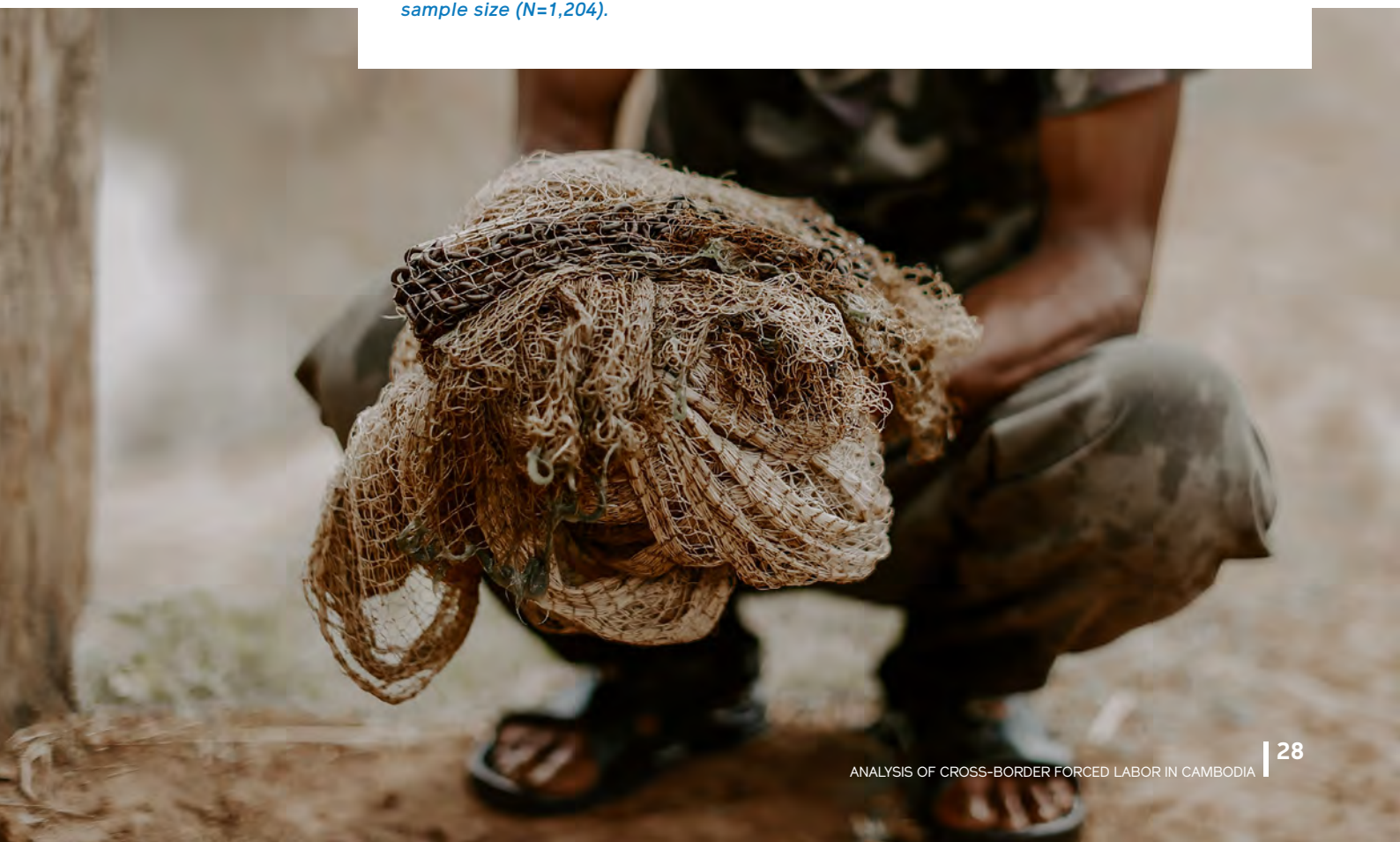
◢ DECEPTIVE/UNFAIR/UNSAFE WORK ENVIRONMENTS

Table 8 presents the victimization experiences of various types of unfair or deceptive labor practices or unsafe work environments. Because of the varied range of abuses captured in our scale, a little over a quarter of respondents, 28.22%, reported having experienced at least one of the listed abuses. The most reported abuse was respondents earning no extra pay or less than their normal rate for working overtime (8.79%). Deceptive and harmful work practices reported at similar rates included: some aspects of the job (such as duties, wages, hours, overtime pay, housing, or location) being worse than was promised by the recruiter (8.44%) and employers imposing (or threatening to impose) excessive taxes or fees on respondents to make them do something they did not want to (7.56%).

Less prevalent were reports that employers threatened to make workers' working conditions worse (4.78%). Additionally, 3.04% of respondents reported that employers made them work extra hours as punishment.

A small fraction (2.52%) of respondents reported that employers deprived migrant workers of food and water, or of sleep, to compel them to do something they did not want to. However, only 0.50% of respondents reported their employer deprived them of food or water to make them do something they did not want to do.

Reports of employers deliberately excluding (or threatened to exclude) future employment or overtime opportunities as a tactic to coerce migrant workers were found to occur similarly infrequently (2.15%). 2.00% of respondents reported they were not permitted to live in places other than employer-provided housing and endured worse living conditions than promised, such as unsafe housing, sharing a room where too many people slept in, or having no space to store personal belongings.

Table 8: Deceptive/Unfair/Unsafe Work Environment

Question	Positive N*	Sample Statistics**	Population Estimation	95% Conf. Intervals	
				Lower	Upper
Some aspect of the job situations (duties, wages, hours, overtime pay, housing, or location) was worse than was promised by the recruiter.	99	8.22%	8.44%	6.43%	10.45%
Employer threatened to make your working conditions worse to make you do something you did not want to do.	65	5.40%	4.78%	3.30%	6.26%
Employer deprived you of sleep to make you do something you did not want to do.	39	3.24%	2.52%	1.42%	3.61%
No extra pay for working overtime less than the normal rate.	122	10.13%	8.79%	6.91%	10.67%
Employer made you work extra hours as punishment.	37	3.07%	3.04%	1.81%	4.28%

Question	Positive N*	Sample Statistics**	Population Estimation	95% Conf. Intervals	
				Lower	Upper
Employer excluded you from future employment or overtime opportunities to make you do something you did not want to, or threatened to do so.	33	2.74%	2.15%	1.32%	2.98%
Employer imposed excessive taxes or fees on you to make you do something you did not want to, or threatened to do so.	88	7.31%	7.56%	5.58%	9.53%
Employer deprived you of food or water to make you do something you did not want to do.	12	1.00%	0.50%	0.18%	0.82%
(For respondents living in employer-provided housing) not permitted to live somewhere else; worse living conditions; too many people sleep in the room you sleep in; unsafe housing; no space to store personal belongings.	32	2.66%	2.00%	0.97%	3.02%
Any of the above	351	29.15%	28.22%	25.00%	31.43%

Notes: *Number of respondents identified as positive by the indicator; **Sample statistics reflect the percentage of those identified as positive of the indicator based on the total sample size (N=1,204).

◢ **EXCESSIVE COSTS TO EXIT ABUSIVE WORK ENVIRONMENT**

In our final analysis, we applied a two-step qualifying strategy, which has been used in several other studies (see Zhang et al., 2019; Vincent, Zhang, Dank, 2019), to define possible case of human trafficking or forced labor. This strategy contains two essential elements: (1) employer- initiated human rights violations and/or grossly unfair/ exploitative labor practices that are coercive in nature, and (2) inability to exit without incurring severe penalties. In other words, to qualify as a potential victim of forced labor, one must have (1) experienced some type of abuse or rights violations at a workplace or under the care of an employer; and (2) found themselves unable to exit the work environment because they fear serious repercussions, i.e., consequences of leaving the abusive workplace or exit penalty.

This two-step qualifying approach emerged from a long unresolved problem in the definition of human trafficking—whether human trafficking should be measured as an incident, such as a criminal act or event, or as a state of existence, whereby repeated and prolonged exposures to rights abuses or unfair labor practices would qualify as human trafficking. There is an ill-defined tipping point over which certain acts should be classified as human trafficking activities. There is no consensus in the research community on the specific measures for this poorly defined tipping point, or threshold.

This two-step approach offers two clear advantages: (1) improved conceptual clarity, and more importantly, (2) pragmatism for field application. To avoid the simplicity of incident-based measures, as most criminologists would approach crime statistics, as well as to bypass the messy business of trying to quantify the duration of rights violations, this two-step approach argues that the hallmark of human trafficking lies in one's inability to exit an abusive work environment (be it labor or sex) without incurring significant costs. Therefore, exit cost/penalty is an equally important element to define the threshold of forced labor.

Table 9 presents estimates for exit-cost related violations. We found that less than half of the respondents can exit their work situations freely without having to face negative consequences. 53.21% of Cambodian migrant workers reported at least one form of the excessive costs or barriers that would prevent them from leaving an unfair/abusive work situation.

The most frequently reported form of excessive costs was the inability to move away or work for someone else before the contract is finished: 39.68% of the respondents reported that they could not do so because they would have faced serious consequences, including physical/sexual violence, deprivation of food and shelter, legal actions, or loss of accrued earnings. At a similar incidence rate, 39.34% of respondents claimed they are unable to refuse work without consequences when they are expected to work. Once respondents reported having experienced some forms of abuses or unfair treatments, we asked "why did you stay at the job?" We found that only 2.09% of respondents could not afford to leave because of fears of serious consequences, such as not being able to get passport back, being denounced to authorities, forfeiting due wages, having to pay fine to employer, or their families or themselves would suffer violence by employer.

Finally, we found that a relatively smaller number of migrant workers (10.08%) were coerced into accepting their job contracts because of serious consequences if they refused.

Table 9: Excessive Costs to Exit Abusive Work Environment

Question	Positive N*	Sample Statistics**	Population Estimation	95% Conf. Intervals	
				Lower	Upper
Unable to refuse work without consequences when expected to work.	492	40.86%	39.34%	35.92%	42.76%
Unfree to move away or work for someone else without consequences.	473	39.29%	39.68%	36.22%	43.14%
Stayed at job due to incidents of intimidation or violence as means of coercion.	28	2.33%	2.09%	1.06%	3.12%
Unable to refuse the job offer without consequences.	115	9.55%	10.08%	7.86%	12.31%
Any of the above	**647**	**53.74%**	**53.21%**	**49.69%**	**56.73%**

*Notes: *Number of respondents identified as positive by the indicator; **Sample statistics reflect the percentage of those identified as positive of the indicator based on the total sample size (N=1,204).*

◢ SUMMARY OF TRAFFICKING VIOLATIONS

To summarize the different dimensions of forced labor measures presented above, we collapsed all individual measures into the 4-cateogry scale of harm, our two-step threshold, and the ILO forced labor indicators, as shown in Table 10. On the 4-category scale of harm, our study found that 13.61% of Cambodian migrant workers reported having experienced at least one of the most serious measures—violation of physical integrity. On restriction of freedom, 39.67% of respondents reported having encountered at least one of the listed violations. On abusive/coercive employment practices, we found that 57.31% of the respondents experienced abusive or coercive employment practices by their employers to do things they did not want to do. On deceptive/unfair/unsafe work environment, we found 28.22% of respondents reported having experienced at least one of the listed violations.

Considering the varied rates of trafficking violations along these four categories, we explored the proportion of our respondents who checked off every one of the four categories or having experienced the full spectrum of harms. We found that 4.27% of the Cambodian migrant worker population experienced forced labor violations on all four categories, suggesting relatively minimal overlap between all four dimensions of forced labor violations.

As for our two-step threshold scheme, we found 53.21% of respondents reported having encountered one of the excessive costs measures that prevented them from freely exiting an abusive work environment.

As shown in Table 10, using the ILO indicators, we found that 46.51% of respondents reported having experienced at least one item on the menace of penalty measures. On measures of involuntariness, we found that 60.55% of respondents experienced at least one of the listed violations. When both the menace of penalty and involuntariness were combined to qualify for the ILO definition of forced labor, we found that 39.59% of respondents would qualify as potential victims.

> When both the **menace of penalty** and **involuntariness** were combined to qualify for the **ILO** definition of forced labor, we found that 39.59% (or 4 out of ten) of respondents would qualify as potential victims.

Table 10: Summary of Key Forced Labor Indicators

Indicator	Positive N*	Sample Statistics**	Population Estimation	95% Conf. Intervals	
				Lower	Upper
Scale of Harm (% positive)					
1. Violation of physical integrity	164	13.62%	13.61%	11.17%	16.06%
2. Restriction of freedom	477	39.62%	39.67%	36.17%	43.18%
3. Abusive/Coercive Employment Practices	709	58.89%	57.31%	53.86%	60.76%
4. Deceptive/ unfair/unsafe work environment	351	29.15%	28.22%	25.00%	31.43%
Any of the above	*59*	*4.90%*	*4.27%*	*2.84%*	*5.69%*
Two-Step Threshold (% positive)					
5. Excessive costs to exit abusive work environment	647	53.74%	53.21%	49.69%	56.73%

Any of the above	**45**	**3.74%**	**3.20%**	**1.94%**	**4.45%**
ILO Forced Labor Indicators (% positive)					
1. Menace of penalty	583	48.42%	46.51%	42.96%	50.07%
2. Involuntariness	754	62.62%	60.55%	57.05%	64.06%
ILO FL (1 menace + 1 involuntariness)	**508**	**42.19%**	**39.59%**	**36.11%**	**43.07%**

Notes: *Number of respondents identified as positive by the indicator; **Sample statistics reflect the percentage of those identified as positive of the indicator based on the total sample size (N=1,204).

Disaggregated results by key demographics

On average, male migrant workers experienced a marginally higher rate of forced labor victimization in all indicators than female migrant workers.

The results varied slightly by gender, as shown in Figure 3. On average, male migrant workers experienced a marginally higher rate of forced labor victimization in all indicators than female migrant workers. Notably, the difference was statistically significant in the most severe measure (violation of physical integrity) and the ILO forced labor measures (menace of penalty & the overall indicator). We estimated that 45.60% of male migrant workers from Cambodia were victimized through some form of forced labor abuses, as compared to the estimated rate of 36.34% among female migrant workers.

Figure 3: Key Forced Labor Indicators by Gender

ILO Indicators

Indicator	Women	Men	Overall
Menace of Penalty	42.52%	53.90%	46.51%
Involuntariness	59.06%	63.31%	60.55%
ILO FL(1 Menace+ 1involuntariness)	36.34%	45.60%	39.59%

NORC Scale of Harm

Indicator	Women	Men	Overall
Violation of physical integrity	11.30%	17.88%	13.61%
Restriction of freedom	38.69%	41.50%	39.67%
Abusive/coercive employment practice	55.74%	60.22%	57.31%
Deceptive/unfair/unsafe work environment	27.52%	29.50%	28.22%
All of the above (maximum victimization)	3.11%	6.41%	4.27%

Two-Step Threshold

Indicator	Women	Men	Overall
Excessive costs to exit abusive work environment	51.87%	55.69%	53.21%

Women   Men   Overall

We also observed variations when comparing the findings across three primary industries where Cambodian migrant labor worked. The percentage of migrant workers who qualified under the ILO definition of forced labor was the highest in the agriculture industry (43.19%). The fractions were 39.18% and 37.53% in construction and manufacturing, respectively. Additionally, on more severe forced labor measures, including violation of physical integrity and restriction of freedom, the victimization rate was also the highest among Cambodian migrant workers in the agriculture industry. On the other hand, a relatively larger proportion of the migrant labor force in the manufacturing industry encountered abusive employment practices (61.12%) or faced deceptive/unfair/unsafe work environment (30.92%), compared to those in construction (52.32%, 28.25%) and agriculture (51.58%, 25.89%).

> The percentage of migrant workers who qualified under the ILO definition of forced labor was the highest in the agriculture industry (43.19%).

Figure 4: *Key Forced Labor Indicators by Industry*

ILO Indicators

Menace of Penalty
- 44.44%
- 47.01%
- 48.34%
- 46.51%

Involuntariness
- 62.13%
- 55.56%
- 75.20%
- 60.55%

ILO FL(1 Menace+ 1involuntariness)
- 39.18%
- 37.53%
- 43.19%
- 39.59%

NORC Scale of Harm

Violation of physical integrity
- 8.58%
- 16.41%
- 18.80%
- 13.61%

Restriction of freedom
- 40.86%
- 31.33%
- 60.28%
- 39.67%

Abusive/coercive employment practice
- 52.32%
- 61.12%
- 51.58%
- 57.31%

Deceptive/unfair/unsafe work environment
- 28.25%
- 30.92%
- 25.89%
- 28.22%

All of the above (maximum victimization)
- 3.28%
- 4.44%
- 5.44%
- 4.27%

Two-Step Threshold

Excessive costs to exit abusive work environment
- 52.22%
- 57.77%
- 48.86%
- 53.21%

Legend: Construction | Manufacturing | Agriculture | Overall

The results also displayed variations across source provinces. The percentages of migrant workers from Kampong Cham and Prey Veng who qualified under the ILO definition of forced labor were the highest, at 51.34% and 51.78% respectively. Migrant workers from Banteay Meanchey and Kampong Cham reported a significantly higher rate of abusive/coercive employment practices (71.88% and 69.60%, respectively). On the other hand, migrant labor force from Siem Reap reported the highest victimization rate in the deceptive/unfair/unsafe work environment (36.00%) and were most likely to face excessive cost to exit abusive working environment (70.00%).

Figure 5: Key Forced Labor Indicators by Industry

ILO Indicators

Menace of Penalty
- 45.89%
- 51.34%
- 51.78%
- 32.55%
- 46.51%

Involuntariness
- 57.76%
- 60.39%
- 63.92%
- 59.32%
- 60.55%

ILO FL(1 Menace+ 1involuntariness)
- 39.39%
- 43.85%
- 45.05%
- 25.97%
- 39.59%

NORC Scale of Harm

Violation of physical integrity
- 11.67%
- 20.62%
- 11.34%
- 6.32%
- 13.61%

Restriction of freedom
- 33.83%
- 40.08%
- 40.78%
- 43.03%
- 39.67%

Abusive/coercive employment practice
- 71.88%
- 69.60%
- 51.02%
- 30.78%
- 57.31%

Deceptive/unfair/unsafe work environment
- 22.83%
- 27.94%
- 26.26%
- 36.00%
- 27.02%

All of the above (maximum victimization)
- 3.98%
- 6.27%
- 2.59%
- 3.18%
- 4.27%

Two-Step Threshold

Excessive costs to exit abusive work environment
- 41.99%
- 58.82%
- 40.08%
- 70.00%
- 53.21%

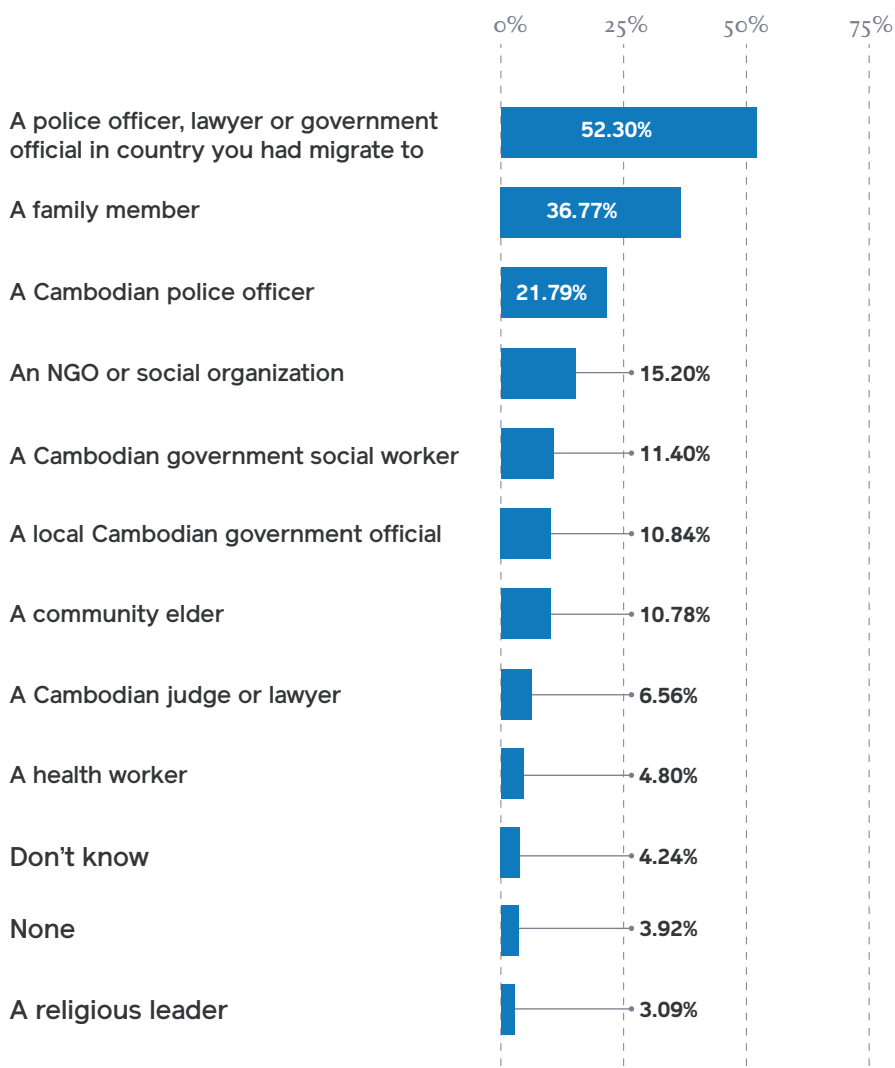Banteay Meanchey ■ Kampong Cham ■ Prey Veng ■ Siem Reap ■ Overall

INTERACTION WITH JUSTICE SYSTEM

We also explored the migrant workers' attitudes and trust in the justice system, when facing or observing abusive treatment in their workplace. We measured the trust in justice system by asking respondents a group of questions about whether they had reported any labor abuse to the authorities in the past, whether they would do so in the case of being victimized in the future, and why.

◤ HYPOTHETICAL ENGAGEMENT WITH THE JUSTICE SYSTEM

Overall, respondents demonstrated a high level of trust in the authorities when asked about a series of questions in a hypothetical scenario that they were physically harmed, restrained, or abused while working overseas. In such a circumstance, slightly more than half of respondents (52.30%) would trust police officers, lawyers, or government officials in the country they work as a source to seek help. The option was followed by a family member (36.77%), a Cambodian police officer (21.79%), and NGOs or other social organizations (15.20%).

Respondents demonstrated a high level of trust in the authorities when asked about a series of questions in a hypothetical scenario that they were physically harmed, restrained, or abused while working overseas.

Figure 6: Which of the following people would respondents trust to seek help?

A police officer, lawyer or government official in country you had migrate to	52.30%
A family member	36.77%
A Cambodian police officer	21.79%
An NGO or social organization	15.20%
A Cambodian government social worker	11.40%
A local Cambodian government official	10.84%
A community elder	10.78%
A Cambodian judge or lawyer	6.56%
A health worker	4.80%
Don't know	4.24%
None	3.92%
A religious leader	3.09%

Ninety-three percent of respondents said they would report such an incident if they became victims while working overseas. The main reasons that would prompt respondents to report the incident included: they demanded justice for their suffering (92.49%), they wanted to go home (23.86%), and they wanted to get the money due to them (21.54%).
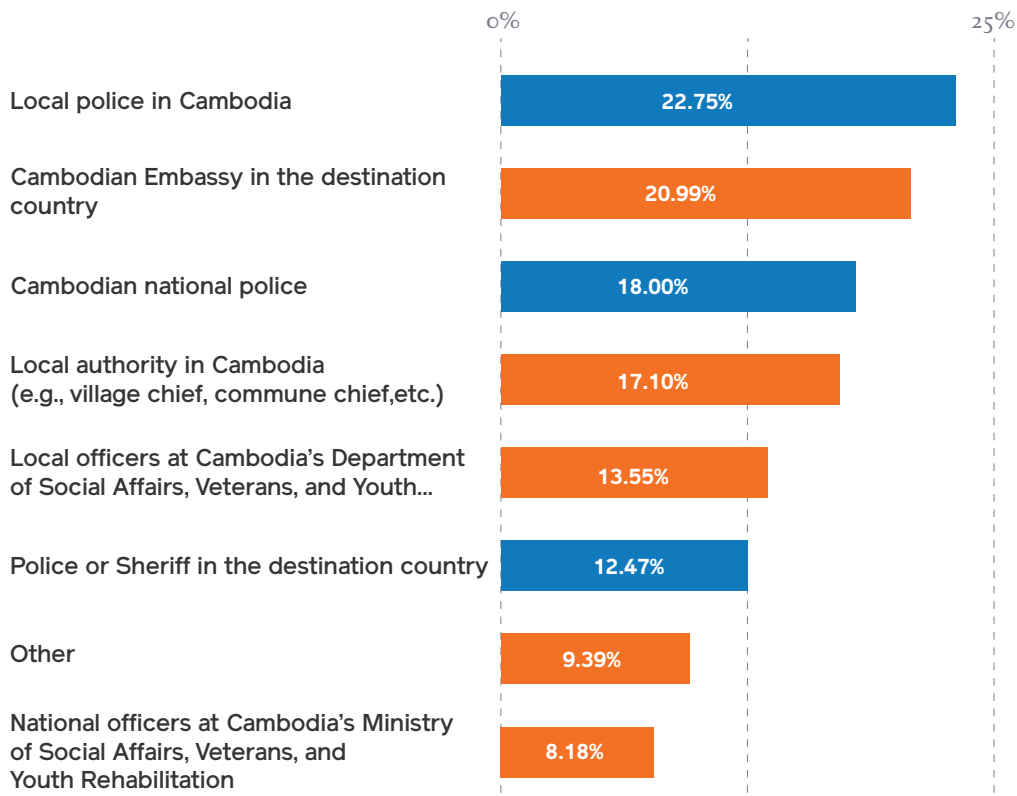
Figure 7: What would prompt you to report the violation?
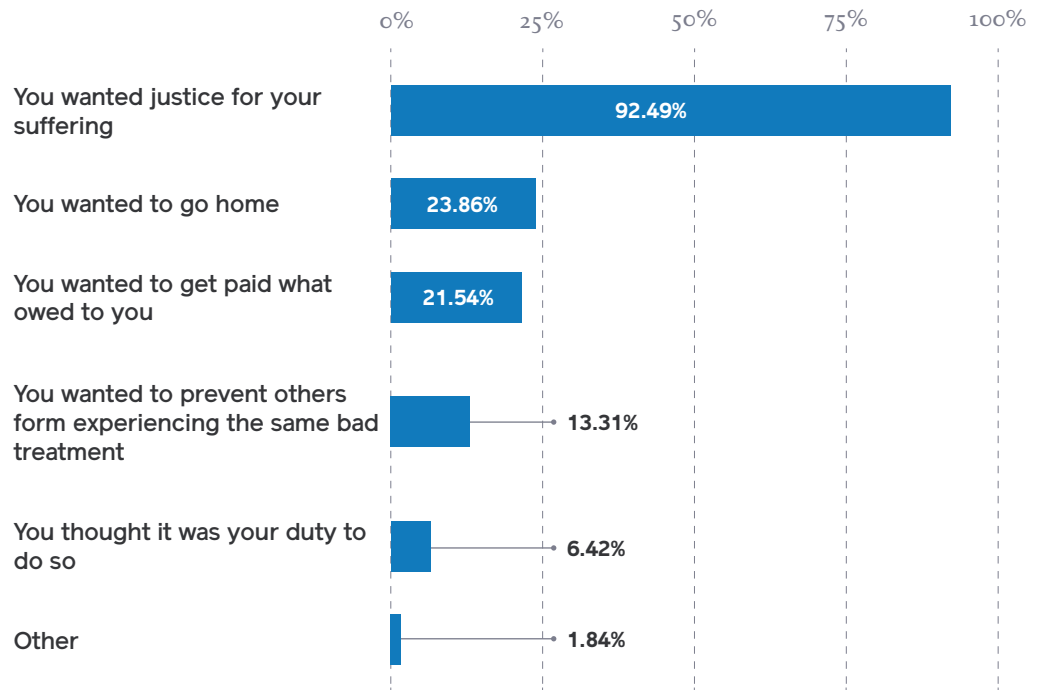
However, the fraction of respondents who expressed the willingness to report the violation could be overestimated. As noted in the limitations section, this survey was conducted with returned migrants who had been out of their previous contract either temporarily or permanently. Social desirability bias could come into play when this type of respondent said how likely they were to report an incident. Saying they will report an incident would be viewed favorably by others and is the socially desirable response. Additionally, recently returned migrants may be less concerned about the potential backlash/retaliation that may accompany reporting a forced labor violation, compared to a migrant worker currently working in a destination country at the time of the survey. Thus, recently returned migrants may be more likely to say that they would report a forced labor violation should this happen to them, since they are currently removed from any potential negative consequence of reporting.

These respondents were then followed up to identify the agencies to which they would report the accident, a range of 12% to 23% of respondents mentioned the variety of authorities in both Cambodia and the destination countries. The wide distribution of selected answers might reflect a lack of clear roadmap of reporting potential abuses among migrant workers.

Figure 8 data:

Agency	Percentage
Local police in Cambodia	22.75%
Cambodian Embassy in the destination country	20.99%
Cambodian national police	18.00%
Local authority in Cambodia (e.g., village chief, commune chief, etc.)	17.10%
Local officers at Cambodia's Department of Social Affairs, Veterans, and Youth…	13.55%
Police or Sheriff in the destination country	12.47%
Other	9.39%
National officers at Cambodia's Ministry of Social Affairs, Veterans, and Youth Rehabilitation	8.18%

Additionally, only a small fraction of these identified agencies were actual law enforcement agencies – the local or national police in the source and destination countries (marked blue in the figure above). Other agencies, such as the Embassy, village chief, and officers at the Department of Social Affairs, Veterans, and Youth Rehabilitation in Cambodia, were not established by law to receive labor complaints related to abuses happening in the destination country. They might still accept the complaints but would need to refer them to law enforcement to address these cases. In this sense, when we further evaluated the "appropriateness" of these authorities, less than half of the respondents who would report the accident (44.13%) correctly identified the agency that would most effectively accept and investigate potential abuses, i.e., police or sheriff in the destination country. This knowledge gap may pose barriers to migrant workers effectively engaging with the justice system to get their rights protected in the future.
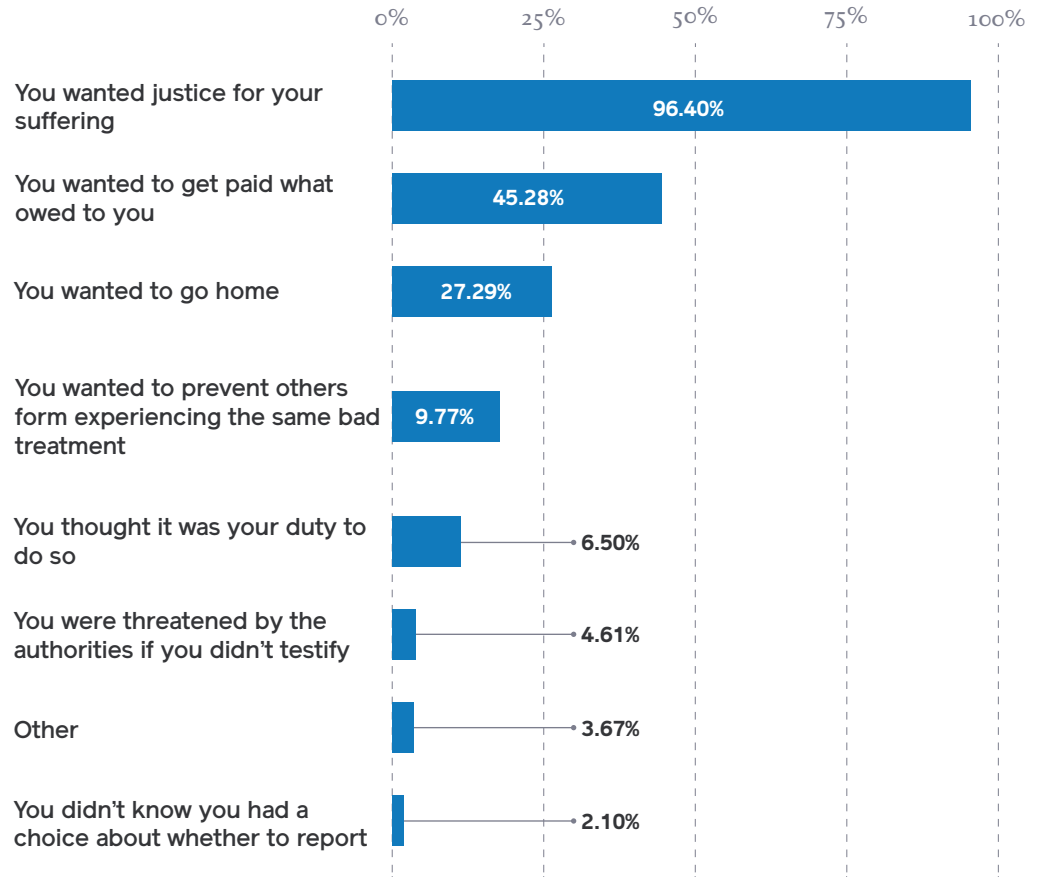
> This knowledge gap may pose barriers to migrant workers effectively engaging with the justice system to get their rights protected in the future.

◢ PAST EXPERIENCE WITH JUSTICE SYSTEM

Ten percent of the study participants reported having experienced or observed unfair or illegal treatment from employers or recruiters. Nearly all these respondents (98.35%) reported their harmful treatment to the authorities. Among them, 96.40% reported the experience because they wanted justice for their suffering, 45.28% wanted to get paid what was owed to them, and 27.29% wanted to leave the abusive workplace and return home. The findings were consistent with what we found in the hypothetical scenario.

Figure 9: *Reasons why respondents decided to report these experiences*

However, it is noteworthy that the fraction of self-reported victimization of 10.02% was significantly lower than the estimates we provided above (39.59%, under the ILO Forced Labor definition). The large discrepancy might be because that a large proportion of respondents were unaware that their rights had already been violated even when they faced abusive treatment. The respondents who chose to report were more likely to suffer the most severe abuses; thus, they were more motivated to report the incidents. Therefore, this survey question could potentially overestimate the reporting rate.

The explanation was corroborated by the inadequate awareness or perception regarding their rights among Cambodian migrant workers. Slightly over 50% of respondents had never heard about their rights or laws in the destination country before their departure. 18.96% of respondents also reported being cheated out of a lot of money by an employer or recruiter during their previous migrations.

Self-reported victimization was significantly lower than the forced labor estimates provided above. The large discrepancy might be because that a large proportion of respondents were unaware that their rights had already been violated even when they faced abusive treatment.

4. CONCLUSION AND RECOMMENDATIONS

▎ CONCLUSION

As shown in the above description of the findings, the ILO indicator, NORC scale of harm, and NORC's two-step threshold revealed a prevalent pattern of forced labor violations among the population of interest. There were a few variations in the extensiveness of the forced labor violations among the respondents. Using the ILO forced labor indicators (a combination of the menace of penalty and involuntariness violations), we estimated that every four in 10 migrant workers from Cambodia were likely to experience both violations at least once during their work in destination countries. Using NORC's measurement, the estimated victimization rates in any of the listed violations in our scale of harm ranged from 13.61% in the most severe type (violation of physical integrity) to 57.31% in a moderate kind of violation (abusive/coercive employment practices). On excessive exit costs, we estimated that 53.21% of Cambodian migrant workers encountered one of the measured abuses and were unable to quit because of fears of serious consequences. The consequences included confiscation of one's accrued earnings, valuables, identification documents, deliberate efforts to ruin someone's reputation, or threats to call in the authorities, etc. The results showed some variations in the gender of migrant workers, the industry where they were employed, and the province where they were from.

Social-family networks are the most frequent recruitment channel among Cambodian migrant workers, with two-thirds of the respondents obtaining their job through family or friends in the destination country. Another 11.21% of the respondents gained employment via government-registered recruitment agencies. Rarely, respondents got their job via private recruitment agencies that were not registered with the government (2.82%).

Cambodian migrant workers also bore financial burdens to finance their migration and employment overseas. More than half of the respondents had to take out a loan to pay recruitment fees and other expenses to secure their employment abroad. The average amount of loans taken was 3,666,827 KHR (approximately $890 USD). The amount ranged from a low of 30,000 KHR (about $7 USD) to a high of 120,000,000 KHR KHR (about $29,268 USD), suggesting a wide variation in personal circumstances. As for the source of loans, friends and family members represented the largest lending source (40.95%), followed by banks (30.76%) and employers (18.09%). The financial distress caused by the loan as well as the potential overlap between recruiters, employers, and lenders could exacerbate the vulnerability of Cambodian migrant workers.

The study participants showed a high level of trust in the justice system in their destination and home countries. Nearly 94% of respondents said they would report a hypothetical forced labor abuse to the authorities. While this figure reveals a high willingness to report, it does not necessarily imply that nearly all migrant workers will effectively report (or even attempt to report) abuses they encounter. First, in a follow-up question, less than half of the respondents who were willing to report (44.13%) correctly identified the appropriate reporting authority. Additionally, several biases could come into play when respondents answer questions regarding hypothetical behaviors. The sample of recently returned migrants may overestimate their willingness to report abuses because they are physically and mentally removed from their previous contract; in other words, it may be "easy for them to say" they would report an abuse.

Second, respondents may claim they would report the abuse if they believe the enumerator will approve of that answer (social desirability bias). Moving past the hypothetical scenario, of the 10.02% of respondents who reported actually having experienced or observed unfair/illegal treatment from employers, 98.35% said they reported these violations to the authorities. The disparity between the self-reported victimization rate (10.02%) and the victimization rate we estimated using the ILO indicators (39.59%) suggests that some moderate forced labor violations may go unrecognized and unreported. In other words, those who acknowledged that they experienced or witnessed abusive treatment were more likely to fall under more severe categories of violations and be more motivated to report the crimes.

▌ RECOMMENDATIONS

◢ INTERVENTIONS FOCUSED ON HIDDEN VULNERABILITY OF RECRUITMENT CHAIN OF ACQUAINTANCE

While many programs combatting labor trafficking focus on the license and competency of recruitment agencies or brokers, our data suggest hidden vulnerability that may associate with the network of acquaintance (family and friends).

For Cambodian migrant workers, the most prevalent recruitment channel is through family or friends' ties in the destination country. This informal channel could be a double-edged sword. For one thing, this provides a convenient and relatively credible source for many job seekers in their search for overseas employment. For another, such a channel could lead migrant workers to lower their level of scrutiny and caution when exploring job options and deciding to accept an offer. While many programs combatting labor trafficking focus on the license and competency of recruitment agencies or brokers, our data suggest hidden vulnerability that may associate with the network of acquaintance. Additionally, family and friends also serve as primary lenders to migrant worker in financing their migration costs. The potential overlapping of recruiter and lender would further complicate the migrant workers' vulnerable status.

◢ AWARENESS BUILDING AMONG MIGRANT WORKER COMM UNITIES REGARDING RIGHTS OR LAWS

Our data reveal inadequate awareness within migrant worker communities regarding the living and employment rights and legal protections they are entitled to. The information gap increases their vulnerability to unsafe migration and abusive work environments. Therefore, enhancing awareness of potential migrant workers prior to their departure is critical. For example, government agencies and social organizations can launch education campaigns and outreach efforts to these migrant workers on employment, contracts, potential risks involved, types of common exploitation and abuses, and practical knowledge or practices on protecting their rights and seeking assistance within Cambodia as well as in the destination country. The campaign or training contents can be further tailored to destination country-, gender-, or industry-specific. As more migrant workers from Cambodia become familiar with these internationally recognized employment rights and benefits, collective awareness will also lead to collective action to improve the situation in general.

◢ CLEAR GUIDANCE ON RESOURCES, LEGAL SERVICES, AND REPORTING MECHANISM

Clear policy guidance and reporting mechanism must be provided so migrant workers know exactly which institution(s) has jurisdiction in certain circumstances.

Respondents show a high level of trust in the justice system when it comes to reporting harmful work practices or environments. Despite the great willingness to seek help from these authorities, it is not yet clear to these migrant workers which pathways, agencies, and/or procedures are most appropriate to report potential violations and seek legal support. Clear policy guidance and reporting mechanism must be provided so migrant workers know exactly which institution(s) has jurisdiction in certain circumstances. Additionally, relevant agencies and organizations can sort available supporting resources and legal services, as well as information about rescue venues in case of emergency, and make this information readily available to migrant workers as part of their pre-departure orientation package.

◢ CLOSE INSPECTION OF RECRUITMENT AGENTS & EXPANSION OF ACCESS TO AFFORDABLE LOANS

More than half of the respondents had to take out a loan to fund their journey. The high costs of migration, either in the form of recruitment fees or other expenses, is an area that requires greater government attention and intervention. On one hand, the Cambodian government needs to closely inspect the various recruitment agents' services and implement strict acts or regulations to deter irregular rent-seeking behavior and excessive fee structures. On the other hand, government institutions and communities can work with financial institutions to provide affordable loans and payment schedules to migrant workers with credible histories. The availability of lower-interest loans and sustainable payment plans would largely protect migrant workers from usurious charges from private lenders or debt traps, which increase their vulnerability to forced labor violations.

> The high costs of migration, either in the form of recruitment fees or other expenses, is an area that requires greater government attention and intervention.

ANNEXES

I ANNEX I. SAMPLING PROCEDURES AND POPULATION ESTIMATIONS

▲ TARGET VERSUS ACTUAL SAMPLE

In total, data collectors identified a total of 1,468 eligible respondents across 414 villages. Of these, 1,204 were interviewed. Table 11 provides a breakdown of the number of eligible and sampled community members by district, as well as the number of communes and villages from which data were collected. (Communes and villages that were visited but from which no eligible community members were identified were not included in the counts.)

Table 11: Eligible and Sampled Community Members by District

District	Number Communes	Number Villages	Number Eligibles	Number Samples
Banteay Meanchey				
Malai	3	7	40	36
Mongkol Borei	3	6	36	52
Ou Chrov	3	8	39	53
Paoy Paet	3	7	36	39
Phnum Srok	3	6	39	47
Preah Netr Preah	3	7	36	48
Serei Saophoan	3	8	42	49
Svay Chek	3	9	36	49
Kampong Cham				
Batheay	5	13	40	40
Kampong Cham	3	9	23	23
Kampong Siem	6	17	41	37
Kang Meas	6	20	37	37
Kaoh Soutin	6	15	39	36
Prey Chhor	4	17	44	40
Srey Santhor	7	20	39	37
Stueng Trang	5	17	38	38
Chamkar Leu (Alternate)	1	3	13	13
Prey Veng				
Kamchay Mear	3	13	63	39
Kampong Trabaek	5	16	38	36
Kanhchiech	3	12	49	42
Me Sang	3	15	44	37
Peam Ro	5	10	32	26
Prey Veng	4	10	38	24
Pur Rieng	4	12	59	36
Sithor Kandal	5	15	41	35
Peam Chor (Alternate)	3	5	27	25

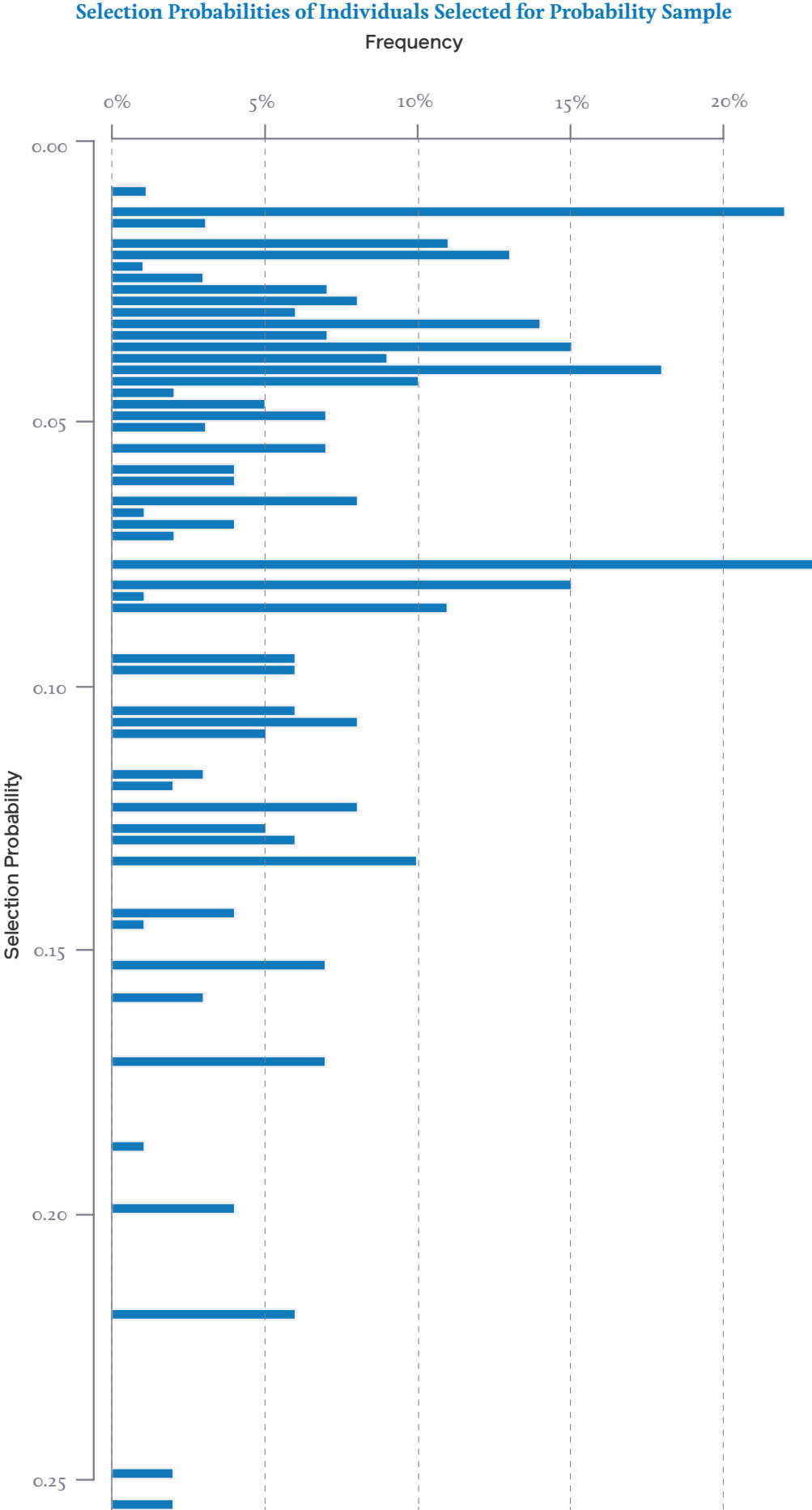| Siem Reap				
Angkor Thum	4	9	54	36
Chi Kraeng	3	13	49	36
Kralanh	3	8	46	39
Prasat Bakong	7	20	41	33
Siem Reap	6	21	40	38
Soutr Nikom	3	10	46	38
Svay Leu	4	14	40	25
Banteay Srei (Alternate)	3	8	16	14
Srei Snam (Alternate)	1	1	5	5

◢ SAMPLING WEIGHTING PROCEDURES

Sample weighting is a statistical procedure used to balance sample weights to known population counts/totals. Through sample weighting, many common limitations encountered with the sampling design, such as under or over-represented subpopulations in the sample, can be addressed/adjusted. This document provides a summary of the sample weighting procedure applied to the IJM Cambodia Study.

The sampling design was based on a multistage approach and was applied independently to each of the four Cambodian provinces of Banteay Meanchey, Kampong Cham, Prey Veng, and Siem Reap. The design started with selecting a subset of regions within each province, some with certainty and the others completely at random. Within each region, a set of villages were selected completely at random. The field team would visit each selected village and engage the village leaders, inquiring if they were aware of recently returned migrant workers. The team would record a list of such individuals with their contact information, and then randomly select a subset of the list to visit for interview purposes. Additionally, the field team would find individuals off the list through referrals or site visits, and select a subset of such individuals at random for interview purposes. For cases when the sample quota was not reached at the village and/or region level, the field team would visit nearby villages and/or regions and repeat the sampling procedure.

Sampling resulted in a final sample of size 1,204. A total of 347 individuals were selected by applying the probability sampling design, i.e., through visiting the selected villages within selected regions and recruiting directly from the list obtained from the village leaders. Figure 10 presents a histogram of the selection probabilities for these respondents, hereafter referred to as the probability sample.

Figure 10: Final/pseudo selection probabilities for all sample respondents.

Selection Probabilities of Individuals Selected for Probability Sample
Frequency

ANALYSIS OF CROSS-BORDER FORCED LABOR IN CAMBODIA

Sample matching typically refers to a statistical procedure that assigns sample weights to a nonprobability sample based on the observations made from a reference or probability sample (Elliot and Valliant, 2017). Sample matching is commonly used to formally incorporate the nonprobability sample into the inference procedure in such a manner that it reduces selection biases that commonly occur with nonprobability samples. This estimation procedure uses a predictive mean matching (PMM) procedure to impute "pseudo weights" for the nonprobability sample. PMM is based on forming a set of candidate donors whose demographic profile is close, based on a prechosen metric, to that for the respondent whose weight needs to be imputed. The 'mice' package (van Buuren, and Groothuis-Oudshoorn, 2011) in the R programming language offers a set of user-friendly PMM-based functions which are used to assist with imputing the pseudo weights.

A candidate set of covariates are explored for use in the PMM procedure, namely, province of residence, gender, education level, age, probability of selection based on village leaders/augmented list, and forced labor indicator. These covariates are used as the main effects parameters in a beta regression model where the selection probability serves as the dependent variable. It was found that the province, gender, probability of selection based on village leaders/augmented list were all significant. Hence, these variables in combination with the forced labor indicator variable were used for the PMM imputation algorithm.

The PMM model was applied individually to each of the 857 nonprobability sample respondents. Figure 11 presents a histogram of the final and pseudo/imputed selection probabilities for both the probability and nonprobability sample respondents.

Figure 11: *Reasons why respondents decided to report these experiences*

Final/Pseudo Selection Probabilities

ANALYSIS OF CROSS-BORDER FORCED LABOR IN CAMBODIA
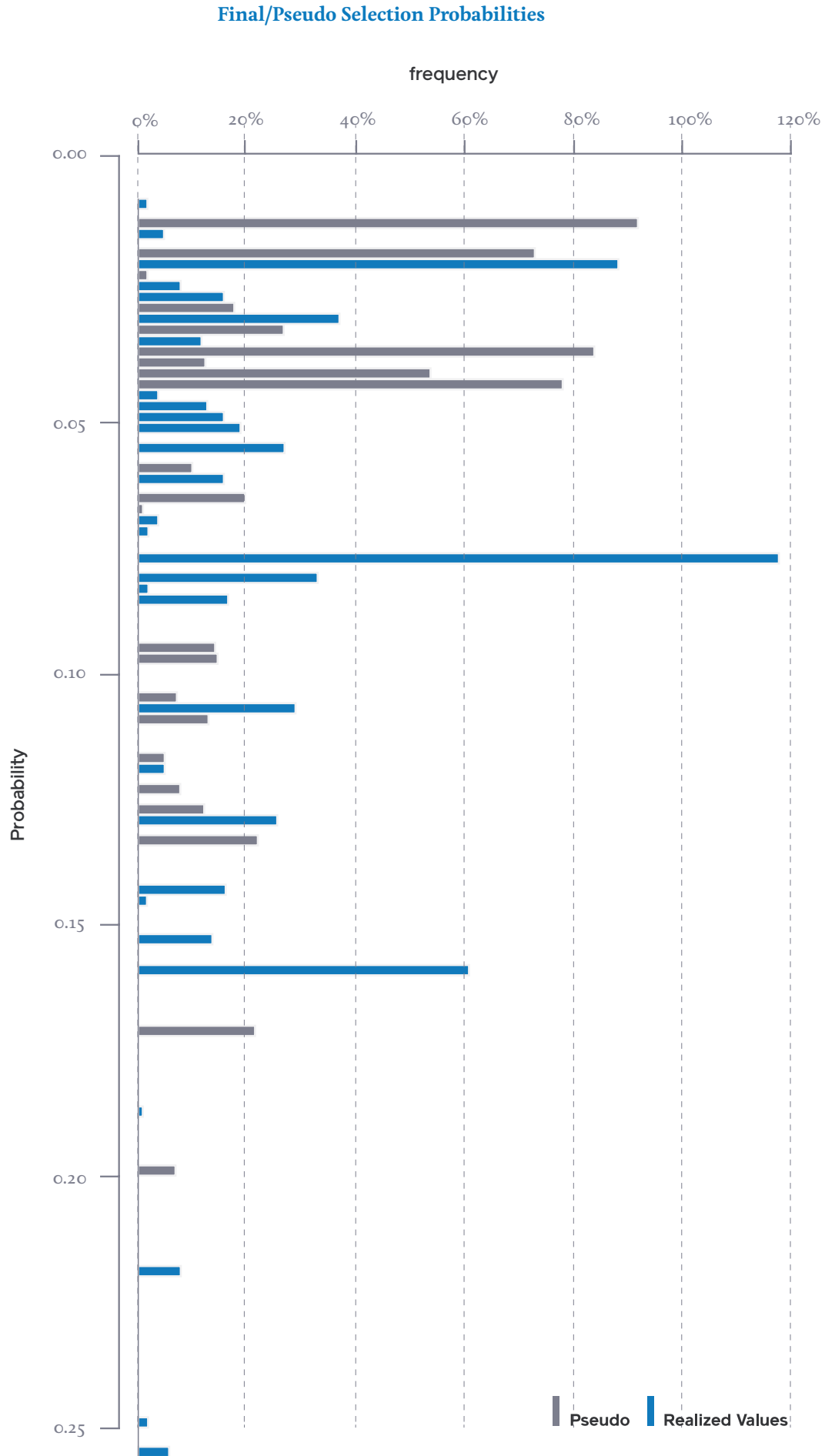
Sample weighting started with assigning base weights as the inverse of the selection probabilities and applying a dampening factor of 0.75 to the nonprobability respondents. The dampening factor was used to increase the contribution of the probability sample to the estimation procedure since the probability sample was significantly smaller than the nonprobability sample, and hence to protect against any biases that may result from incorporating information from the nonprobability sample into the estimation procedure. Figure 12 presents a histogram of the base weights. It was found that none of the weights were extreme in that they did not exceed five times the average weight. Hence, sample weight trimming was not required, and the base weights were taken to be the final sample weights.

Figure 12: *Base/final weights for sample respondents.*

Base Sample Weights for Cambodia Sample

frequency

Weights
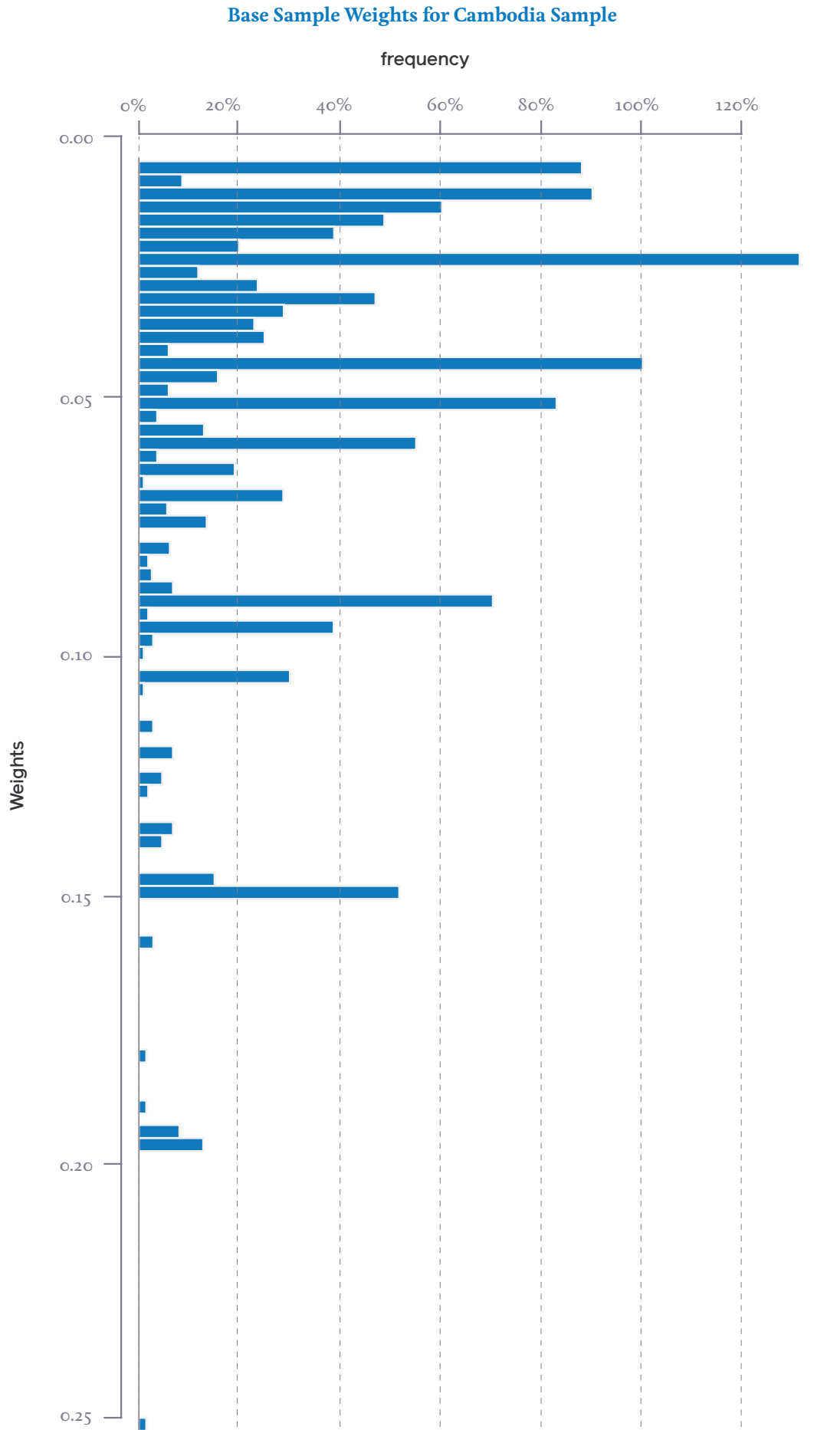
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Endnotes

1. *For more extensive discussion on the purpose and objectives of formative assessment in the context of network-based prevalence research, see: World Health Organization (2013). Introduction to HIV/AIDS and sexually transmitted infection surveillance: Module 4: Introduction to respondent-driven sampling (No. WHO-EM/STD/134/E). Retrieved from https://apps.who.int/iris/handle/10665/116864*

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