

# Diagnosing Human Trafficking Victims: A Mini-Review and Perspective

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## Abstract

The global campaign against human trafficking, also known as trafficking in persons, has gained much momentum in the past two decades. Although psychiatric and physical illness sequela of human trafficking are well documented, the research community continues to struggle over such foundational questions as what specific activities or experiences count as trafficking-in-persons victimization and how best to obtain representable and generalizable data on experiences of people who are trafficked. We provide a brief review of major efforts to define trafficking in persons to establish prevalence estimates to date. We argue for consensus on key clinical and public health indicators, resembling the Diagnostic and Statistical Manual (DSM) approach to enable common and systematic knowledge building and comparability across studies.

## Why Should the Mental Health Profession Care about Human Trafficking?

It has been more than two decades since the passing of the United Nations Convention against Trafficking in Persons (also known as the Palermo Protocol)<sup>1</sup> and the U.S. Trafficking Victim Protection Act (TVPA)<sup>2</sup>. With few exceptions, countries around the world have ratified this Convention, passed domestic legislations, and established legal mechanisms to combat trafficking in persons (TIP), also known as human trafficking (HT) or modern slavery (hereafter we use trafficking-in-persons or TIP for short for consistency, for the most part).

The anti-trafficking movement has attracted tremendous attention and resources from both governmental agencies and civil societies. A study by researchers at the United Nations University found that 30 donor countries committed more than \$4 billion in efforts against human trafficking between 2000 and 2013. The US accounted for the largest funding source about 60 percent of the global total<sup>3</sup>. No one would doubt billions more must have been invested around the world to fight trafficking activities since 2013.

The negative health consequences of trafficking and exploitation experiences have been extensively documented in clinical research, not only those experienced during the trafficking victimization such as infectious diseases, toxin-exposure poisoning, musculoskeletal diseases, violence, substance abuse, and physical and reproductive injuries<sup>4,5</sup>, but also post-trafficking conditions such as neuropsychiatric sequela, including prolonged posttraumatic stress disorder and depression, and ultimately leading to premature mortality<sup>6,7,8</sup>. Along with family, community, and societal factors,

our recent scoping review of TIP risk factors points to considerable involvement of childhood traumatic events and early mental and behavioral health problems associated with TIP victimization, especially in situations involving sexual exploitation<sup>9,10</sup>.

With the increasing knowledge of the nature and scope of TIP, a public health approach has gained much urgency for a population-level assessment and improved identification of TIP survivors<sup>11,12</sup>. Such an approach widens research inquiries to a population level, thus enabling researchers to capture a wider range of lived experiences, including emotional trauma, signs and symptoms beyond disease classification. Furthermore, a population approach will amplify voices from those communities at the margins of their societies at large<sup>13</sup>. A TIP-specific public health approach should also reduce the level of stigma experienced by trafficked people<sup>14</sup> when their experiences are conceptualized as a public health problem, and not as an individual pathological or criminal behavior.

### Review Procedure

For this mini review, we kept our focus narrow and focused on identifying journal publications or study reports that clearly devoted sections towards or made deliberate efforts in operationalizing human trafficking legal frameworks and developing corresponding measurements. It should be noted that this mini review was not meant to be a comprehensive or systematic review of how human trafficking was measured in empirical research. Rather we sought to identify major empirical efforts that attempted to classify what qualify as “trafficking in persons” or “human trafficking” as opposed to labor rights violations or gender-based exploitation or violence. Our literature review data came from two primary sources: a) online research, which included accessing our university library networks to access publicly available publication globally; and b) expert knowledge by the authors and other experts with knowledge and experience on TIP measurement development, as well as historical and contemporary knowledge of psychiatric nosology development. The review presented here has been condensed to be introductory to psychiatric and mental health professionals. One obvious limitation is our exclusive reliance on English-language literature only. Such a single-language literature review would systematically exclude any similar efforts published in non-English published literature.

### Two Decades of Progress in Defining Trafficking in Persons (TIP)

Despite worldwide attention and growing anti-trafficking efforts, tremendous variations remain on estimating just how big the TIP problem is. Disagreements on TIP definitions remain a root cause of these variations in prevalence estimation. A clear “diagnostic” definition of

what constitutes human trafficking victimhood does not yet exist. Varied estimates have been circulated, which caused some to question the veracity of the claims made by a few sources of information that have come to fuel the global movement against human trafficking<sup>15,16</sup>.

The International Organization of Migration (IOM) Journal was among the earliest to devote a special issue that detailed the multitude of conceptual and methodological obstacles hampering research and intervention development in anti-trafficking efforts<sup>17</sup>. The lack of consistent and uniform measures in TIP research remains a major obstacle in comparative analysis and cross-regional assessment<sup>15</sup>. Two decades after the Palermo Protocol, these early conceptual and methodological challenges still remain. For example, a literature review of 94 articles<sup>18</sup> found much of the current TIP research lacks a clear conceptualization and definition of TIP, as well as evidence-informed empirical research to inform programs, practice, and policy.

Nonetheless, several major efforts endeavored to create operational indicators to guide empirical research. The International Labor Organization (ILO)<sup>19</sup> attempted to develop operational TIP indicators by using the Delphi method, essentially a consensus building exercise among selected experts; and ILO conducted two surveys in 2008 to establish a list of operational indicators of TIP victimization. Another attempt was made by IOM. Its Handbook<sup>20</sup> included a Screening Interview Form that provided a questionnaire close to a survey format, in which specific items were designed to assist service providers in screening for TIP victimization among prospective clients. The IOM Handbook interpreted TIP as “sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude, or the removal of organs”<sup>20, p21</sup> and suggested “sexual, physical, psychological” measures for entries into the TIP databases<sup>21, p59</sup>.

Several significant efforts in the U.S. also created operational indicators. For instance, Polaris Project<sup>22</sup> released the Comprehensive Human Trafficking Assessment, which contains questions for service providers to use when assessing clients for potential signs of human trafficking victimization. Zhang<sup>23</sup> developed a set of core measures in the San Diego Labor Trafficking Study by applying an incident-based measurement approach commonly found in criminal justice research (i.e., did something happen to you?) and built the TIP indicators around four major dimensions: a) actual or threats of violation in physical integrity (i.e., physical or sexual violence); b) restrictions of physical/communicative freedom; c) deceptive or fraudulent recruitment/employment practices; and, d) other abusive/unfair employment practices. These TIP operational indicators have been adapted for community-based research, including large-scale studies in North Carolina<sup>24</sup> and the Indian state of Bihar<sup>25</sup>.

The Vera Institute's Trafficking Victim Identification Tool (TVIT), another instrument suitable for community research, has been found to reliably predict victimization in sex and labor trafficking contexts<sup>26</sup>. The Adult Human Trafficking Screening Tool and Guide (AHTSTG) issued by the Administration for Children and Families (ACF), uses trauma-informed and survivor-informed practices in the screening procedure to identify potential victims of both sex and labor trafficking in healthcare and social service settings<sup>27</sup>.

### Recent Developments in TIP Measurement

**The Prevalence Reduction Innovation Forum (PRIF).** With funding from the U.S. Department of State, the Prevalence Reduction Innovation Forum (PRIF) was launched in 2020 at the University of Georgia<sup>28</sup>, which produced 39 indicators to capture a wide spectrum of rights violations for measuring TIP purposes. Later these 39 indicators were condensed to 12 key indicators<sup>29</sup>. PRIF published its Statistical Definitions to prescribe "diagnostic" criteria to qualify an interview respondent as a potential victim of trafficking, in a similar way to the diagnostic thresholds defined in the Diagnostic and Statistical Manual (DSM) series for various kinds of psychiatric conditions. It should be noted that the PRIF indicators are adaptable enough to include locally relevant TIP indicators. For example, Price et al.<sup>30</sup> derived the same PRIF criteria from existing TIP assessment instruments already validated or used widely (e.g. TVIT).

Using the PRIF 12 key indicators, six research teams are currently completing prevalence estimation studies in six countries in multiple at-risk industry sectors, including child sex trafficking in Brazil, forced labor in agriculture in Brazil, forced labor in the fishing industry in Costa Rica, domestic servitude among migrant workers in Tanzania, domestic servitude in Morocco, forced labor in brick kilns in Pakistan, and domestic servitude in Tunisia. These PRIF projects represent a rare opportunity for further refining and standardizing the TIP indicators because all teams were required to use the same 12 indicators, although their principal objective was to assess the relative robustness of different sampling strategies for prevalence estimation.

To date, a large amount of prevalence data has been collected from these PRIF studies, with a total sample size in excess of 14,000 with the same set of indicators and definitional criteria. Such a large database provides tremendous statistical power in screening and testing specific items for instrument development purposes. The varied labor sectors and the diverse socio-cultural contexts across the six countries also offer an opportunity to test and develop a truly international instrument or measurement protocol for identifying potential TIP victims, how to sample different populations for TIP prevalence estimation, and how best to compare results across different regions.

**The International Classification of Diseases Version 10-U.S.** Better identification of people who have been trafficked in healthcare settings is an efficient way to provide immediate care and other longer-term assistance. With much work by human trafficking researchers in the U.S. healthcare sector, in 2018, the Center for Disease Control and Prevention added diagnostic codes for forced labor and sexual exploitation to the International Classification of Diseases version 10-U.S. (ICD-10-US), which is currently applicable only to the U.S.<sup>31</sup> A total of 16 codes cover categories of adult or child, labor or sexual exploitation, confirmed or suspected, historical or current, upon healthcare provider's examination. The available Human Trafficking ICD-10 Codes are most useful for clinicians trained to identify the signs and symptoms of human trafficking and exploitation using a screener and/or clinical inquiries.

The rapid expansion of electronic health records in high-income countries may further advance clinical care by enabling medical providers to document encounters and identify patients with a history of TIP experience. Systematic coding would enable researchers to track TIP victims longitudinally while prospectively assessing short and long-term consequences<sup>32</sup>. However, these codes are currently severely underutilized, based on the analysis of a national sample of Emergency Department encounters<sup>33</sup>, which suggests the need for medical provider training before reliable identification and monitoring become a real possibility. Along with increased training on human trafficking ICD-10 codes, informatics-driven detection of "suspicious" cases through searching other ICD-10 codes that identify conditions or past history known to be comorbid with or risk factors of TIP<sup>34</sup> could improve TIP identification rate in healthcare settings in the future.

### Historical Parallel with the Classification System Evolution in Psychiatry

The past 50 years of scientific refinement and validity assessment for psychiatric disorders exemplified in the DSM systems parallels the evolution of the TIP classification system currently underway. The National Mental Health Act of 1946 and the establishment of the US National Institute of Mental Health (NIMH) in 1949 shifted research focus from institutionalized to community populations<sup>35</sup>. After several seminal studies, the little-known Feighner Criteria<sup>36</sup>, proposed based on empirical data and Kraepelin biological origins of psychiatric disorders, laid out paths for psychiatry to develop and refine the field's diagnostic and statistical definitions of common mental disorders to the next level, resulting in the DSM-III<sup>37</sup>.

The landmark Epidemiological Catchment Area (ECA) Project conducted in 1980's was unprecedented in its cross-site coordination, allowing uniform instrumentation,

systematic population sampling and analysis developments of over 20,000 community respondents altogether<sup>38</sup>. The development of the Diagnostic Interview Schedule (DIS)<sup>39</sup>, which “translated” the medical language of DSM-III to be administered by “lay” interviewers, paved the way for later generations of population psychiatric surveys such as the National Comorbidity Study series<sup>40</sup>. During this period, cross-diagnostic integration with the ICD-10 was accomplished by cross-walking the two systems<sup>41</sup> for use in international settings.

Such a parallel evolution can be summarized in distinctive phases despite a time lag by several decades in the TIP classification system development (Table 1).

### Now What?

Drawing on lessons learned from five decades of development and refinement of psychiatric diagnostic systems, we hope to make rapid progress in developing epidemiologically and clinically valid diagnosis of human trafficking in a shorter time frame. We now wish to prescribe the next steps in developing clinical criteria for defining TIP victimization, like the DSM.

First, following the principle of parsimony, the field needs to apply rigorous methods to screen for and identify “best” indicators in the existing statistical definitions and the instruments that have been used to accumulate a large amount of survey or clinical data. The analytical methods may include, for example, Item Response Theory (IRT) analysis to identify satisfactory psychometric properties as a screening instrument<sup>42</sup> and Receiver Operating Characteristics (ROC) analysis to assess screener’s performance<sup>30</sup>. The goal is to select a set of most reliable and predictable indicators to form the basis of the diagnostic criteria for defining TIP victimization.

Second, we need to construct a DSM-like manual to accompany the resulting instrument. Researchers can analyze risk factors and comorbid conditions that are likely common across countries, using existing datasets, such as the one by the six PRIF teams. Dissemination and

implementation will be imperative during this process to promote its worldwide adoption by the wider HT research community. Activities may involve holding public events and symposia across disciplines. Participation and active feedback from people with lived experience as subject matter experts and equal partners, including decision-making ability, are critical in producing a manual for content validity and cultural inclusiveness, and enhancing a trauma-informed approach<sup>43</sup>.

Third, we need to expand the resulting DSM-like manual with common typologies used in the HT research community and integrate other existing or developing diagnostic systems into the manual. Several unresolved areas include: a) reclassifying the HT typology because the current typology reflects a mixture of legal frameworks (labor vs sex trafficking), human body parts exploitation (e.g., organ trafficking), industry sectors (e.g., domestic servitude) including informal economic activities such as forced begging<sup>44</sup>; b) identifying exclusion criteria for abuse and exploitation that are not human trafficking; c) integrating other clinical coding systems such as those of ICD-10; and d) developing a higher level axis-based system that distinguishes fundamental principles of economic exploitation. As empirical databases increase in number and sizes, including the combined PRIF database, analyses aided by advanced machine learning<sup>45</sup> may provide further insights to empirically derive the organization of the TIP classification system, although currently applied mostly to online advertisements.

Fourth, while a DSM-like manual is being developed, specific planning is needed for educating and training current and future medical and social service professionals. Massive educational efforts have been accumulated by dedicated anti-trafficking experts in healthcare and social service organizations, sometimes in collaboration with US government offices specialized in responding to human trafficking. Toolkits to utilize this DSM-like manual can be included in some governmental guidelines and protocol development<sup>46,47</sup>, and in the human trafficking response

**Table 1:** Historical Parallel of Classification System Evolution between TIP Definitions and Psychiatric Phenotypes

Phases	TIP definitions and indicators	Psychiatric symptoms and diagnosis
Paradigm setters	UN Palermo Protocol (2000) US Trafficking Victim Protection Act (TVPA, 2000)	National Mental Health Act (1946) National Institute for Mental Health (NIMH, 1949)
Early trailblazers	International Organization of Migration (2005) International Labor Organization (ILO, 2009) San Diego Labor Trafficking Study (2012)	Feighner Criteria (1972)
Recent developments and scaling up	PRIF Statistical Definitions (2020) US Department of State PRIF Six Country Project (ongoing) International Classification of Diseases version 10-US Human Trafficking Codes (2018)	Diagnostic and Statistical Manual (DSM)-III (1980) Epidemiological Catchment Area (ECA) (e.g., 1985) The Composite International Diagnostic Interview (1988)
Further progress	TIP clinical diagnosis validation International adoption of uniform TIP clinical diagnoses	Research Domain Criteria (RDoC) Short screener development Cross-cultural and situational adaptations



toolkits and education materials developed by healthcare advocacy organizations<sup>48,49</sup>. To make such a manual for wide and sustainable use, educational and training institutions providing the existing infrastructure in healthcare and social service organizations will need to be involved in the early stage of the manual development.

A multitude of challenges confront the TIP research community, from developing field methods and gaining access to the target population, to developing and deploying evidence-based intervention programs. However, the challenge of developing valid and reliable criteria to define what is or is not human trafficking activities needs to be tackled systematically soon. Until clinician's "gold" standards are established, having an agreed-upon set of criteria to define human trafficking will greatly facilitate our future efforts in prevalence estimation, standards of care for trafficked people, and program evaluation of response and care.

## Conclusion

The inability of the HT research community to arrive at consistent measures or definitional indicators of TIP violations has remained a pressing issue in defining and measuring the prevalence of the problem, whether for advocacy purposes or for impact assessment. While we acknowledge the complex social and behavioral nuances involved in human trafficking activities, there are enough commonalities in human experiences to allow us to recognize some basic thresholds of human rights, the violation of which should be considered unacceptable.

The above parallel classification system developed in two different fields points to the possibility that we can shorten the path towards establishing validated and reproducible indicators and definitions of human trafficking. It is time for the TIP research field to consider the development and adoption of common "diagnostic" rules akin to the DSM approach, which mental health service providers and researchers alike have refined and perfected over several generations. Compared to classifying various types of mental health problems, we believe it is much easier to agree on fundamental human rights to decent work and transactional conditions.

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SXZ and RKP had co-written an earlier white paper; and they co-wrote this manuscript. SXZ and RKP both reviewed and approved the final version of this manuscript.

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