Human trafficking and health: A conceptual model to inform policy, intervention and research

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ABSTRACT

Human trafficking is an international crime renowned for extreme forms of violence against women, men and children. Although trafficking-related violence has been well-documented, the health of trafficked persons has been a largely neglected topic. For people who are trafficked, health risks and consequences may begin before they are recruited into the trafficking process, continue throughout the period of exploitation and persist even after individuals are released. Policy-making, service provision and research often focus narrowly on criminal violations that occur during the period of exploitation, regularly overlooking the health implications of trafficking. Similarly, the public health sector has not yet incorporated human trafficking as a health concern. We present a conceptual model that highlights the migratory and exploitative nature of a multi-staged trafficking process, which includes: ‘recruitment’, travel-transit’, ‘exploitation’ and ‘integration’ or ‘reintegration’, and for some trafficked persons, ‘detention’ and ‘re-trafficking’ stages. Trafficked persons may suffer from physical, sexual and psychological harm, occupational hazards, legal restrictions and difficulties associated with being marginalised or stigmatised. Researchers and decision-makers will benefit from a theoretical approach that conceptualizes trafficking and health as a multi-staged process of cumulative harm. To address a health risk such as trafficking, which spans geographical boundaries and involves multiple sectors, including immigration and law enforcement, labour, social and health services, interventions must be coordinated between nations and across sectors to promote the protection and recovery of people who are trafficked.

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Introduction

Human trafficking has received considerable international recognition over the past decade. Initial anti-trafficking policies and programmes focussed on women and girls trafficked for forced sex work, but, there is now growing attention to the many, if not more, men, women and children who are exploited in various forms of labour, such as agriculture, fishing, textile and other manufacturing industries, mining, construction, domestic servitude and cleaning services, forestry, soldiers, ‘wives’ and forced begging (ILO, 2005). To date, labour trafficking and men who are trafficked have been seriously under-represented in policy-making and service allocation. With increasing attention to labour trafficking, challenging definitional questions have emerged about the distinctions between ‘human trafficking’, ‘smuggling’, ‘exploitation’, ‘slavery’ and ‘bonded labour’ (Anderson & O’Connell-Davidson, 2002; Derks, 2010), which have added complexity to decisions about programmatic aims, individual eligibility for support and data collection.

While precise statistics on human trafficking remain elusive, reports continually estimate that thousands of men, women and children are trafficked throughout the world, and that this trade reaps enormous profits for trafficking agents (Belser, 2005).

Although trafficking-related abuses have been well-documented, health is a subject that has been largely neglected in anti-trafficking work, particularly compared to activities in the fields of immigration and law enforcement (Morrison & Crosland, 2000; Salt, 2003). Similarly, the health sector has had limited engagement in trafficking dialogues and published literature on health and trafficking in persons, particularly theory, remains scant (Decker, McCauley, Phuengsamran, Janyam, & Silverman, 2010; Hossain, Zimmerman, Abas, Light, & Watts, 2010; Ostrovski et al., 2011; Tsutsumi, Izutsu, Poudyal, Kato, & Marui, 2008; Zimmerman et al., 2008).

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Anti-trafficking policy discussions have been structured primarily around what are known as the three P's -- "prevention, protection and prosecution", with a fourth 'P' recently added for "partnership" (UN, 2010). While this is a useful framework for law enforcement approaches, it neglects the fundamental migratory nature of trafficking and minimises the health sector role.

Human trafficking is a violation that occurs over multiple geographic and legal boundaries, but actions are often targeted to place of exploitation. Although law enforcement has led anti-trafficking efforts, trafficking is a fundamental matter for other sectors, such as immigration, labour and health, and development and trade. Neither multi-lateral nor cross-sector coordination are common in anti-trafficking strategies.

With no sign that human trafficking is abating, health and other policy-makers will imminently have to pose such questions as: "what is the range of health risks associated with trafficking" and "where and how can agencies intervene to protect the health of trafficked persons". To help broach these questions, we propose a conceptual model that aims to highlight the migratory and exploitative nature of the trafficking process (Gushulak & MacPherson, 2000; Zimmerman, Kiss, & Hossain, 2011).

The human trafficking process model that follows is found in migration theories that conceptualise migration as a process of movements. Simultaneously, it draws on concepts associated with exploitation, abuse and trauma to indicate the social and psychological aspects integral to trafficking (Fazel & Stein, 2002; Munro, 2008). To illustrate the health implications, the following discussion draws on examples from our European research on the health of women trafficked for sexual exploitation (Zimmerman, 2003; Zimmerman et al., 2008), from limited research with men and women trafficked for various labour sectors (Surtees, 2008), and a report from Eastern Africa, which included health consequences reported by migrant workers (Fleisher et al., 2008; Zimmerman et al., 2006) (Please see individual studies for methods and ethical approval details.)

**Stages of the trafficking process**

Traditional migration theory has tended to focus on market influences on population mobility (Massey et al., 1993), often referred to simplistically as 'push' and 'pull' factors. These theories are, however, of limited value to our understanding of 'health' and migration. Drawing on previous migration models (Gushulak, 2000; Salt & Stein, 1997) and our growing understanding of human trafficking and health (Fleisher et al., 2008; Zimmerman et al., 2003), the Stages of the Human Trafficking Process model (Fig. 1) depicts trafficking as a series of event-related stages during which various risks and intervention opportunities may arise. By highlighting the diachronic (occurrences over time), synchronic (occurrences at each stage) and geographic (location-related) aspects of the process, this model points to the cumulative nature of risk. Accumulated risks include the potentially compounding harm from multiple physical or psychological hazards.

**Recruitment stage**

The Recruitment stage is the initial period in the trafficking process when individuals are vulnerable to deceptive offers to migrate for work or are abducted for the purposes of exploitation. 'Recruitment' is a fundamental concept in the United Nations definition of trafficking (UN, 2000) and has been discussed in relation to individual 'vulnerability' (Clarke, 2008). Recruiters may be individuals or agencies (e.g., travel or employment) that are formally (criminal gangs) or informally (local opportunistic agent) linked to a trafficking network. It is common for people to be recruited by someone known to them, such as a friend of the family or family members themselves, including parents (Fleisher et al., 2008; Surtees, 2008; Zimmerman et al., 2006).

At this early point in the process, an individual’s health may be influenced by various personal characteristics or exposures related to their home country, including: pre-existing conditions; history
of abuse or deprivation; social or environmental influences; health behaviours and available care (Macpherson, 2001). Notably, individuals may be recruited from locations other than a home country, including, for example, refugee camps, detention facilities and legitimate non-exploitative foreign labour settings (Nelson, Guthrie, & Coffey, 2004). Some individuals may be drugged or kidnapped, however, many more are likely to have been lured by promises of a better future (Fleisher et al., 2008).

Many exposures or events that influence health are often the same factors that contribute to an individual’s vulnerability to being recruited. Experiences such as political or economic instability, personal financial crises, environmental degradation, and history of interpersonal violence are recognised as ‘push factors’ (Wijers & Lap-Chew, 1999). In addition to contributing to an individual’s vulnerability to recruitment, abuse or family dysfunction and exposure to traumatic events often have negative impacts on health even after the disturbing episodes cease (Felitti et al., 1998), including physical sequelae (e.g., chronic pain) (Koss & Heslet, 1992) psychological reactions (e.g., anxiety, depression, hostility and self-harm) (Green et al., 2000) and risk behaviours (McNutt, Carlson, Persaud, & Postmus, 2002). For those who experienced childhood sexual abuse, the long-term health impacts include sexual and reproductive health problems, psychological disorders and self-harm, including suicide (Paolucci, Genuis, & Violato, 2001).

Data from post-trafficking assistance organisations suggest that women and children in these settings are particularly likely to have a history of abuse. For example, over half (59%) of women in post-trafficking service centres reported experiences of pre-departure physical or sexual abuse, with 15% reporting sexual abuse before the age of 15 (Zimmerman et al., 2008). Individuals may seek jobs abroad in response to a family financial or health crisis, such as a trafficked man who reported seeking overseas construction work to afford cancer-care for his mother (Surtees, 2008).

There is limited research on vulnerability to recruitment and data from post-trafficking services generally do not show clear demographic distinctions (e.g., age, education) to contribute to our understanding about who is trafficked. From a health perspective, the recruitment stage poses health influences that appear to be linked to aspects of vulnerability and to ways individuals will experience and absorb future risks.

**Travel-transit stage**

The travel-transit stage begins after an individual agrees to or is forced to depart with a trafficker (whether she or he is aware of being trafficked or not). This stage may include one or multiple points of transit and ends when the individual arrives at the location of exploitation (Fleisher et al., 2008). Although some trafficked persons may travel safely by plane or train, a great proportion of international trafficking involves immigration violations and therefore many trafficked persons will be exposed to dangerous modes of transportation, high-risk border crossings, malarial jungles, desert treks and arrest. Accounts of hazardous travel associated with smuggling and trafficking appear periodically in news accounts, such as migrants who drown at sea, suffocate in auction-like settings where prospective pimps come to select new ‘merchandise’ or are not unusual (Carrol, 2000).

The travel-transit stage is also the time when many trafficked persons begin to suspect or discover that they have been deceived. Psychologically, the events that signal to the individual that she or he is in danger, such as confiscation of documents, confinement or threats of rape, may be considered the ‘initial trauma’ (Brunet, Boyer, Weiss, & Marmar, 2001) in what is likely to be a future of traumatic events. One young woman from Eastern Europe explained:

*Then I entered [country] through a big field, avoiding the border point...where I met some other [Eastern European] women. During this period I saw pimps and smugglers from [country] and elsewhere coming to see the girls and buy them!* (pp. 40) (Zimmerman et al., 2003)

**Exploitation stage**

The exploitation stage is the period when individuals are in a labour or service circumstance in which their work and/or body are exploited or abused. Events that occur during the exploitation stage generally epitomise the range of abuses that are most commonly associated with human trafficking (Wijers & Lap-Chew, 1999). These may include, for example, forced labour and debt bondage, sexual abuse, physical violence, psychological coercion or abuse, deprivation and confinement and usurious financial arrangements. These abuses may be accompanied by threats against individuals and their family members.

‘Exploitation’ is a term that is fundamental to the UN definition of human trafficking. It is, however, a term that has not been well-defined—or, as noted by Munro, current conceptualisations of ‘exploitation’ are often so ‘fuzzy’ (Munro, 2008), and applied so ambiguously that the word seems to have ‘an open-textured and almost all-encompassing meaning’ (Hill, 1993). As such, it lends little to our understanding of what defines an exploitative relationship, or whether ‘exploitation’ is inevitably harmful, and how policies and programmes should respond.

Although exploitation is readily associated with harm, “harm” is not explicit in definitions of trafficking (Council of Europe, 2005). For women who are trafficked for forced sex work, reports note serious violence, such as our European study, which found high levels of physical violence (76%) sexual abuse (90%) and threats (89%) (Zimmerman et al., 2008). The consequent health problems frequently endure or worsen throughout the trafficking process.

Men and women trafficked for labour, while vulnerable to sexual abuse, are more frequently subjected to threats, physical violence and hazardous labour-related exposures. For example, in a recent operation by the UK Serious and Organised Crime Agency (SOCA), 60 trafficking victims were found to have been picking leeks for 16 h per day and living in ‘squalid conditions’ (Evening Telegraph, 2010). The survivors were found with chemical burns on their hands and arms and injuries from where the gang-masters would ram heavy farming rigs into their lower backs to encourage them to work faster. Exploitative labour circumstances are generally characterised by long working hours and exposure to a wide range of occupational hazards, such as operating heavy machinery or dangerous equipment without adequate (or any) training in a language they can understand, exposure to hazardous chemicals or bacteria, or sun or heat exposure without appropriate personal protective equipment, accompanied by financial or physical punishment for poor performance.
Importantly, however, although reported cases of trafficking often portray the most extreme examples of violence, especially in the media, coercive tactics used by traffickers may differ significantly. Some trafficked persons will suffer life-threatening violence, dangers and slave-like conditions, while others will feel enslaved as a result of threats, intimidation and menacing actions by their captors—but may not be physically assaulted. For example, one woman in our study explained:

The Madam’s partner, a big man from [country], threatened to hurt me or that he would make me ‘disappear’. I believed him, because I knew of women who were beaten and really did disappear. (pp. 52) (Zimmerman, 2003)

For individuals trafficked to locations that are culturally or linguistically different from their own, this panoply of abuses takes place in a setting where they may not speak the language, are not familiar with the customs or culture and are not aware of their legal rights. Some may not even be entirely aware of their location. This isolation and disorientation reinforce their sense of helplessness. Individuals have been known to attempt to escape or commit suicide by jumping from multi-story buildings (Zimmerman et al., 2003).

During the exploitation stage, access to health services is rare, unless an injury is severe or an illness becomes debilitating, preventing individuals from carrying out their tasks. Moreover, in some settings, if medical care is offered, it may be provided by untrained or poorly qualified individuals. One participant, who was trafficked at age 12, explained how, into her sixth month of pregnancy, she was brought for a termination:

The abortion was done illegally in terrible, unsanitary conditions. The operation was very difficult, so I was nearly dead. There was no anaesthetic. The doctor said he would inject soap water into the uterus and the foetus would go out. Then I was sent to the toilet and was told to wait ... After the abortion I felt very bad, like I would die and I was taken to the [name] hospital. (pp. 51) (Zimmerman, 2003).

Detention stage

The detention stage applies to only a minority of trafficked persons and is a period when an individual is in the custody or detention of a state authority—or obliged to collaborate with authorities, such as under the restrictions placed on individuals who agree to cooperate with police in exchange for temporary residency (Council of Europe, 2005). While trafficked persons who are detained are proportionately small in number, this population is likely to be over-represented in research on trafficking because they are the cohort that is detected and available to be interviewed. Similarly, while a portion of trafficked persons in detention situations are identified as ‘victims’, many remain undetected. Reports suggest that trafficked persons may be detained as illegal immigrants and arrested for alleged crimes, such as prostitution or illegal entry (GAATW, 2007). Research in Israel noted, for example, that of the 1267 women held in prison and expelled for prostitution or illegal entry (GAATW, 2007). Research in Israel noted, for example, that of the 1267 women held in prison and expelled for

For many who are in official custody, health and safety risks may be significant. In some detention and prison facilities, individuals may be exposed to unhygienic conditions, poor nutrition and limited or no health care, leaving them vulnerable to deteriorating health conditions and newly acquired infections (HRW, 2008). Many experience social and legal stressors, such as stigma and discrimination or stress associated with prosecution and asylum application processes (Zimmerman, 2003).

Research indicates that individuals who are identified as victims and agree to cooperate in a criminal investigation or testify in court may have limited access to protection measures and support mechanisms (Lam & Skrivankova, 2009). While participating in a prosecution, individuals may face retaliation by traffickers and re-traumatisation while recounting past events (Pearson, 2002). This stage, while somewhat distinct by the nature of the risks and often restricted conditions, in reality, can overlap with the integration/reintegration stage—particularly for individuals who are simultaneously participating in a criminal investigation or asylum procedures while attempting to settle in a new setting or re-adjust to ‘normal’ daily activities back home.

Integration or reintegration stage

The integration or reintegration stage can best be described using an adapted definition of “integration” originally proposed by the European Council on Refugees and Exiles (ECRE) (ECRE, 2002):

Integration [and reintegration] are ‘long-term and multi-dimensional stages of either integrating into a host country [or re-integrating into a home country setting], which are not achieved until the individual becomes an active member of the economic, cultural, civil and political life of a country and perceives that he or she has oriented and is accepted’.

There are important similarities between ‘integration’ and ‘reintegration’, such as stigma, risk of re-trafficking, enduring psychological sequelae and difficulty accessing services (Zimmerman, 2003). In migration theory, ‘reintegration’ is often referred to as the ‘return’ stage (Gushulak, 2000).

Few trafficked persons will enter this stage without some health needs. For example, 57% of women and adolescents arriving at a post-trafficking service centre reported more than 12 poor physical health symptoms, including headaches (82%), fatigue (81%), dizzy spells (70%), vaginal discharge (70%) and back pain (68%) and extremely high symptom levels for depression, anxiety and Post-traumatic Stress Disorder (Zimmerman et al., 2008).

Individuals trying to integrate into destination settings are likely to encounter barriers to care and stressors similar to those experienced by refugees and asylum-seekers. Research consistently indicates that refugees encounter high levels of social exclusion, discrimination and poor access to health services that negatively impact on health (Steel et al., 2006). Individuals who do not wish to return to their country of origin are also likely to suffer consequences of legal insecurity, including limited entitlements (Burnett & Peel, 2001).

Those who return home commonly go back to the same difficult conditions they left (e.g., unemployment, family strife), albeit often with worse health problems—and generally with less ability to pay for care. Whether remaining in a destination setting or returning home, safety concerns may persist (e.g., from traffickers, re-trafficking) (Zimmerman, 2003; Zimmerman et al., 2006).

Re-trafficking

Little is known about the numbers or types of individuals who are re-trafficked. Factors contributing to vulnerability to re-trafficking are estimated to be many of the same problematic employment and financial situations that encouraged individuals to accept the offers of recruiters in the first place (Jobe, 2008). It is not unusual for individuals to be left even more vulnerable after a trafficking experience, while others may consider themselves ‘all the wiser’ for their experience and in a better position to make a more informed second migration attempt. A few may become recruiters themselves.

From a health perspective, re-trafficking fits within the evidence that shows past experiences of abuse increase future risk.
behaviours (Green et al., 2000). For example, it has been suggested that young persons are more vulnerable to re-trafficking, especially within the two years following a trafficking experience (Jobe, 2008). Some have explained that the risk of re-trafficking is a further reason for States to ensure that victims receive appropriate financial compensation and other support (Lam & Skrivankova, 2009).

By depicting the stages of the trafficking process, this conceptual model delineates different risk contexts, suggests the cumulative nature of risk, and indicates potential intervention points. Table 1 complements the trafficking process model by outlining the types of health risks and consequences that individuals might encounter within a human trafficking journey.

**Trafficking-related abuses and potential health consequences**

Table 1 draws on literature on occupational health, domestic and sexual violence, migration and torture (Basoglu, 1992; Campbell et al., 2002; Golding, Cooper, & George, 1997; Ward, Day, & Weber, 1999). As trafficking is a relatively new subject area for the field of public health, the table offers examples of exposures and potential health consequences to highlight the range of policy areas that are relevant to trafficked people’s health, to illustrate health service issues, for example, in a medical history-taking or clinical assessment, and to suggest risks, symptoms or conditions for research. It is important to note that children and adolescents may be at higher risk of longer term physical and psychological harm from trafficking-related exposures because of their early developmental stage (Fazel & Stein, 2002).

**Psychological abuse**

Mental health is perhaps the most dominant health dimension in trafficking cases because of the profound psychological damage caused by (often chronic) traumatic events and the common somatic complaints that frequently translate into physical pain or dysfunction. An individual’s psychological responses are very often correlated with many—if not each—of the other risk categories (Table 1). For example, depression is frequently detected among those who are sexually abused, drug addicted, socially marginalised or with insecure immigration status (Silove et al., 2006). Women trafficked for forced sex work show high levels of post-trauma reactions, including PTSD and depression, anxiety and hostility which is associated with physical injury, trafficking conditions, (such as a longer time period and restricted freedom), and a short time period out of the trafficking situation (Hossain et al., 2010). Mental health symptoms found among these women are similar to those documented for individuals exposed to repetitive trauma or chronic abuse (Krakow et al., 2000). Less documented are aspects of post-trafficking ‘hostility’ and ‘aggression’. Both our European study and an Eastern Africa multi-country study identified high levels of hostility. The study found that one-quarter of participants with high hostility levels reported ‘turning violent’ (Fleisher et al., 2008).

**Physical abuse**

Physical violence is the most recognised and documented feature of human trafficking perhaps because this, along with sexual violence, is the most convincing evidence of a crime. For example, 57% of women interviewed in post-trafficking service centres in Europe reported sustaining a physical injury associated with the trafficking experience. One woman explained:

*I was beaten in the abdomen and head, but never in the face because they didn’t want to ruin the merchandise. Sometimes I was kicked in the stomach and in the legs. (pp. 46)* (Zimmerman, 2003)

Women described physical violence that ranged from slaps, punches and beatings to more severe forms of torture, including cigarette burns and ice baths. Less is known about the prevalence of physical violence experienced by labour migrants (Fleisher et al., 2008).

**Sexual abuse**

Sexual and reproductive health risk are among the most commonly reported health problems among individuals who are sexually abused and exploited (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006; Leserman, Li, Drossman, & Hu, 1998), whether or not they are forced into prostitution. Among the women in our European study, over half (58%) reported a gynaecological infection diagnosis (Zimmerman et al., 2008).

**Forced or coerced use of drugs or alcohol**

“Forced or coerced use of drugs and alcohol” is not uncommon among individuals trafficked for forced sex work (Cwikel, Itan, & Chudakov, 2003). Little is known about coerced drug use for other groups of trafficked persons. Drug or alcohol addiction can be used as a means of controlling individuals. Coerced alcohol use is a particular feature of women trafficked to Japan and Kosovo, where women are obliged to encourage men to buy them drinks (IOM, 2002). Women in our European study reported drinking to keep themselves warm on the streets in winter, for example. Drug and alcohol use are sometimes negative coping behaviours during or following a trafficking experience. Research in Eastern Africa noted that up to one-fifth of the participants reported substance abuse (Fleisher et al., 2008).

**Social restrictions and emotional manipulation**

“Social restrictions and emotional manipulation” are powerful ways to isolate individuals (Johnson, 1995). Social restrictions in trafficking situations can be extreme. For example, in our European study, 76% of women reported that they were “never” free to go where they wanted or to do as they wished (10% said “seldom”) (Zimmerman et al., 2008). Several of the women who reported they were ‘sometimes’ free to do as they wished, stipulated that this was only if they were accompanied by minders.

**Economic exploitation and debt bondage**

“Economic exploitation and debt bondage” are closely associated with labour exploitation and often seen as the defining feature of a trafficking situation. Trafficked persons rarely have control over what they earn and are frequently subjected to deceptive accounting practices andurious repayment obligations, such as housing, food, clothing and inflated debts related to travel costs. Individuals may be financially penalised for perceived misdeeds, tardiness or non-compliance (Belser, de Cock, & Mehran, 2005).

**Legal insecurity**

“Legal insecurity” applies particularly to individuals trafficked internationally or those forced to undertake illegal activities. It is common for traffickers to confiscate official documents (e.g., passport, tickets), leaving individuals unable to travel legally and
## Table 1

Abuse, health risks, and potential health consequences associated with human trafficking.

<table>
<thead>
<tr>
<th>Examples of forms of abuse or risk</th>
<th>Examples of potential health consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Psychological abuses</strong></td>
<td><strong>Mental health</strong></td>
</tr>
<tr>
<td>Intimidation of individuals and threats against loved ones, threats with weapons</td>
<td>Suicidal ideation, self-harm, suicide</td>
</tr>
<tr>
<td>Lies, deception, blackmail to coerce individuals to remain and discourage seeking help from authorities</td>
<td>Post-trauma symptoms and syndromes, (Post-Traumatic Stress Disorder, depression)</td>
</tr>
<tr>
<td>Unsafe, unpredictable, uncontrollable events and environment isolation and forced dependency (see “social restrictions” below)</td>
<td>Somatic complaints and immune suppression, sleep disturbances, frequent nightmares, Memory loss, dissociation and cognition problems</td>
</tr>
<tr>
<td><strong>Physical abuses</strong></td>
<td><strong>Physical health</strong></td>
</tr>
<tr>
<td>Murder, torture (cigarette burns, suspension), physical attacks with or without weapon</td>
<td>Death, acute injuries or chronic physical pain (contusions, head/neck trauma, musculoskeletal damage)</td>
</tr>
<tr>
<td>Deprivation (sleep, food, light, basic necessities)</td>
<td>Physical disabilities (nerve or bone damage, dental problems)</td>
</tr>
<tr>
<td>Confinement, physical restraint (rope, chain)</td>
<td>Fatigue, exhaustion, poor nutrition, malnutrition, starvation, pesticide poisoning, asthma</td>
</tr>
<tr>
<td>Withholding medical or other essential care</td>
<td>Deterioration of pre-existing conditions leading to disability or death</td>
</tr>
<tr>
<td><strong>Sexual abuses</strong></td>
<td><strong>Sexual and reproductive health</strong></td>
</tr>
<tr>
<td>Forced and coerced sex (vaginal, anal and gang rape)</td>
<td>Sexually transmitted infections, including HIV/AIDS, and related complications</td>
</tr>
<tr>
<td>Forced prostitution or sexual exploitation (no control of number, type of clients)</td>
<td>Reproductive or sexual health complications (urinary tract or kidney infections)</td>
</tr>
<tr>
<td>Limited access to sexual or reproductive health products and care (condoms, family planning)</td>
<td>Acute or chronic pain during sex, tearing and other damage to vaginal tract or anus</td>
</tr>
<tr>
<td>Sexual humiliation, forced nakedness, forced pornography</td>
<td>unwanted pregnancy, forced or unsafe termination of pregnancy, complications from unsafe terminations</td>
</tr>
<tr>
<td>Coerced misuse of oral contraceptives or other contraceptive methods</td>
<td><strong>Substance use or misuse</strong></td>
</tr>
<tr>
<td>Forced and coerced substance use</td>
<td>Drug or alcohol addiction, overuse, self-harm, Participation in high-risk activities (unprotected sex, dangerous labour crime)</td>
</tr>
<tr>
<td>Non-consensual administering and coercive use of alcohol, drugs or other substance in order to: Abduct, rape, prostitute individuals</td>
<td>Needle-introduced infection (HIV, hepatitis B/C), brain or liver damage</td>
</tr>
<tr>
<td>Control activities, coerce compliance, decrease self-protection, prevent escape</td>
<td>Sleep problems (insomnia, lethargy), negative coping behaviours, smoking, risk-taking, isolation</td>
</tr>
<tr>
<td>Impose long work hours or greater productivity</td>
<td><strong>Social health consequences of social abuses</strong></td>
</tr>
<tr>
<td>Social restrictions and manipulation</td>
<td>Feelings of isolation, loneliness, helplessness</td>
</tr>
<tr>
<td>Restriction of movement and activities (confinement, surveillance, scheduling)</td>
<td>Shame, guilt, loss of self-esteem, Stigma and discrimination</td>
</tr>
<tr>
<td>Restriction of interpersonal contact (friends, family, ethnic or religious community)</td>
<td>Mistrust of others, social withdrawal, difficulty developing healthy relationships</td>
</tr>
<tr>
<td>Favouritism or perquisites to cause divisiveness between co-workers</td>
<td>Re-trafficking, re-entry into high-risk conditions</td>
</tr>
<tr>
<td>Denial or control of access to information, health and other services</td>
<td><strong>Finance-related problems</strong></td>
</tr>
<tr>
<td>Economic exploitation and debt-bondage</td>
<td>Inability to afford basic hygiene, nutrition, safe housing, medical care</td>
</tr>
<tr>
<td>Indentured servitude resulting from inflated debt, resale of individuals or debt</td>
<td>Heightened vulnerability to infections, work-related injuries</td>
</tr>
<tr>
<td>Usurious charges/deceptive accounting (travel documents, housing, food, clothing, condoms, health care)</td>
<td>Dangerous self-medication or foregoing of medication</td>
</tr>
<tr>
<td>Money-related punishment (physical or financial) for perceived misbehaviour, escape attempts</td>
<td>Rejection by family for not sending or returning with money</td>
</tr>
<tr>
<td>Overwork to meet payment demands</td>
<td><strong>Legal and security problems</strong></td>
</tr>
<tr>
<td>Legal insecurity</td>
<td>Acceptance of dangerous travel and work conditions and obedience to traffickers/employers</td>
</tr>
<tr>
<td>Confiscation of passports, travel and other vital documents</td>
<td>Arrest, detention, long periods in immigration detention centres or prisons; unacceptable, unsafe detention conditions</td>
</tr>
<tr>
<td>Threats to expose individuals’ illegal status to authorities</td>
<td>Difficulty obtaining or denial of health treatment from public clinics and other medical services</td>
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<tr>
<td>Concealment of individual’s legal status from the individual</td>
<td>Traumatic reactions resulting from interrogation or participation in a criminal investigation or asylum proceeding</td>
</tr>
<tr>
<td>Fears that health providers will require identity documents or will report to authorities</td>
<td>Unsafe deportation or return, risk of re-trafficking and retribution</td>
</tr>
<tr>
<td>Restrictive immigration employment laws</td>
<td><strong>Occupational injuries and disease</strong></td>
</tr>
<tr>
<td><strong>Occupational hazard and abusive working and living conditions</strong></td>
<td><strong>Exhaustion and poor nutrition</strong></td>
</tr>
<tr>
<td>Abusive work hours, practices</td>
<td>Bacterial and other infections; parasites, communicable diseases</td>
</tr>
<tr>
<td>Dangerous work and living conditions (including unhygienic, overcrowded or poorly ventilated spaces)</td>
<td>Dermatological infections, chemical burns, rash</td>
</tr>
<tr>
<td>Poor equipment or machinery training and language barriers</td>
<td>Injury, including limb amputation, abrasions, lacerations</td>
</tr>
<tr>
<td>No personal protective equipment</td>
<td>Repetitive motion syndromes</td>
</tr>
<tr>
<td>Repetitive work motions, without break</td>
<td>Musculoskeletal injury</td>
</tr>
<tr>
<td>Work-related penalties and punishment</td>
<td>Hypothermia, heat exhaustion, dehydration, starvation</td>
</tr>
<tr>
<td>Exposure to harsh environmental conditions (heat, cold, ocean-water)</td>
<td><strong>Physical and emotional costs</strong></td>
</tr>
</tbody>
</table>
fearing that they will be detained for immigration crimes, e.g., possessing false documents, illegal border crossing. The term “legal insecurity” may also pertain to the stress felt by those who are out of the trafficking situation and awaiting decisions on an asylum application.

**High risk, abusive working conditions**

“High risk, abusive working and living conditions” are widespread among migrants who are trafficked for low-skill labour. However, it is precisely these difficult conditions that highlight the challenges in distinguishing trafficking from “labour exploitation”. Those who are trafficked for agricultural labour, for example, are likely to encounter hazards such as: sun exposure, musculoskeletal disorders from repetitive stooping or heavy lifting and pesticide poisoning from prolonged exposure to treated crops or water (Ahonen, Benavides, & Benach, 2007; Stellman, 1998). In manufacturing or factory settings, there are often risks of respiratory, bacterial and skin infections (IOM, 2009). For trafficked persons, poor working conditions are often accompanied by overcrowded or unhygienic living conditions (Anderson & Rogaly, 2005).

Underlying each of these risk categories is the difficulty of being a member of a marginalised group, such as migrants, ethnic minorities or socially stigmatised populations (e.g., sex workers, street beggars). Problems associated with discrimination or stigma may include little or no access to health and support services, isolation and alienation and depression (Khoser, 2000).

While Table 1 attempts to delineate categories of exposure and outcome, in fact, the risks and health consequences associated with trafficking are not always so distinct; more often, they are interlinked.

**Lessons learned from other vulnerable populations**

As the conceptual model described in this paper has built on theory and examples from fields linked to human trafficking, similarly, when strategising to address the risks and potential care needs for trafficked persons, it is useful to draw on interventions that have proven effective with other vulnerable and hard-to-reach populations. Fig. 2, Learning from interventions for other vulnerable populations. depicts the position of trafficked persons at the centre of similarly abused or marginalised groups to suggest that responses to trafficked persons’ needs will benefit from lessons learned from programmes for victims—survivors of torture or abuse, irregular migrants and refugees, low-wage labourers and, in the case of women trafficked for sexual exploitation, from activities targeted to support sex workers.

**Discussion**

Human trafficking is a form of violence that poses numerous and sometimes life-threatening health risks. These risks are frequently similar to those associated with types of abuse, exploitation and situations of extreme vulnerability (Ahonen et al., 2007; Campbell et al., 2002; Silove et al., 2006). The trafficking process model described in this paper attempts to lay out some fundamental concepts and terminology that may be useful to policy-making, programming and research. It is worth noting that this model may also be informative for assistance to exploited workers. The model suggests that intervention strategies recognise the distinct stages of the trafficking process, while simultaneously spanning across the trafficking process. For example, vulnerability to recruitment in a place of origin is influenced by immigration and labour regulations in destination settings, just as effective reintroduction into a home setting and re-trafficking may be associated with removal procedures, criminal prosecution and victim compensation in a destination location.

In addition to suggesting the interconnections along the trafficking process, this model also highlights potential intervention points, for example, primary prevention activities that might take place at the pre-departure or transit stages, where it may be possible to alert migrating persons (e.g., via leaflets, video clips; well-informed staff at travel agencies and border crossings) not only to trafficking risks, but also to possible health hazards (e.g., labour-related toxins, STIs), protection options (e.g., personal protective equipment, condoms), signs and symptoms of ill-health and service entitlements and resources available in destination locations. There are currently a few examples of insurance and information schemes in countries with high migrant labourer numbers aimed to protect the health and rights of their country’s migrant workers (Phillippines: Senate and House of Representatives, 1995). Although many trafficked persons will have limited or no control over their safety, reports suggest a portion may have some freedoms (Anderson & Rogaly, 2005). If migrating individuals are informed of potential health hazards, prevention options and given signals for when medical care is needed, they may be able to make more informed choices about their health.

There are a number of health domains to consider when allocating resources and delivering services, as suggested in Table 1. For decision-makers, these domains indicate types of service professionals that might be needed within a ‘National Referral Mechanism’ (NRM), which is a referral strategy implemented in a number of European countries to meet the multi-faceted needs of trafficking victims (OSCE, 2007). However, to date, the health sector is often left out of formal NRM structures. Health sector representatives and practitioners are rarely involved in NRM-budgeting or service planning. Simultaneously, there are few health practitioners who are trained to provide appropriate and safe care for trafficking survivors, in the same way that certain practitioners have been prepared to respond to survivors of rape or domestic violence or treat refugee populations. Programme planners will need to recognise the migration- and abuse-related aspects of human trafficking. Medical history-taking, for example, should be designed...
to explore exposures throughout the various stages of an individual’s journey.

Research is an area that can benefit from a conceptual approach that is operationalisable. To date, research on trafficking has focussed primarily on documenting events during the “exploitation” stage, and is frequently limited to describing sexual exploitation, especially HIV-risk (Beyrer, 2003). For research on health and trafficking, it is useful to adopt a comprehensive view of risk and health outcomes. Mental health and post-trafficking reactions are commonly mentioned in descriptions of trafficked persons, yet there is very little systematically collected data on a full range of mental health risks and psychological morbidity patterns (Hossain et al., 2010; Ostrovschi et al., 2011). Similarly, and equally problematic, there are currently no intervention trials to explore potentially effective mental health care strategies that could be implemented during the integration or reintegration stage, especially for low resource settings.

The inclusion of human trafficking as a public health concern is in nascent stages. The public health community can readily build on knowledge from related fields, such as services for violence survivors, refugees, migrant labourers and migrant sex workers. Like migrant labourers and sex workers, trafficked persons may be highly mobile, socially marginalised, have unauthorised legal status or be unclear about their rights and therefore have difficulty accessing services. Trafficked persons may need health and protection measures from perpetrators, including concealed housing, similar to options available to domestic violence victims—survivors (UK Department of Health, 2005).

In conclusion, the primary reason we object to human trafficking is because it harms people—and yet, health is an aspect of trafficking that has generally been neglected. The trafficking process is embedded with abuses and forms of exploitation that covert and menacing, the trafficking process nonetheless poses various health protection opportunities. To be effective, solutions must incorporate actions from various sectors, especially the health sector, but also immigration, labour and trade. Efforts must be coordinated through multi-lateral and bi-lateral actions, rather than operating as isolated national policies in order to make necessary advances in the protection and recovery of trafficked persons.

References


