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Psychological Coercion in Human Trafficking: An Application of Biderman's Framework

Susie B. Baldwin[1], Anne E. Fehrenbacher[2], and David P. Eisenman[2]

Abstract

This study examined coercive conditions experienced by trafficked persons in the context of Biderman's theory of coercion. We conducted semi-structured interviews with 12 adult women trafficked into Los Angeles County, from 10 countries, for domestic work and/or sex work. Participants described health problems they experienced in relation to their trafficking experience and their perceptions of conditions that caused health problems. Utilizing a framework analysis approach, we analyzed themes using Biderman's framework. Participants reported experiencing the range of nonphysical coercive tactics outlined by Biderman, including isolation, monopolization of perception, induced debility or exhaustion, threats, occasional indulgences, demonstration of omnipotence, degradation, and enforcement of trivial demands. Our analysis demonstrates how these coercion tactics reinforced the submission of trafficked persons to their traffickers even in the absence of physical force or restraints. Such psychological abuse creates extreme stress that can lead to acute and chronic, physical and mental health problems.

Keywords

abuse, emotional; immigrants / migrants; marginalized populations; qualitative analysis; stress / distress; violence against women; vulnerable populations

Human trafficking is a diverse, global crime in which people exploit others for profit or benefit (United Nations, Office of Drugs and Crime, 2014). Trafficking is recognized internationally as a human rights violation (United Nations, Office of Drugs and Crime, 2014), and since the passage of the Victims of Trafficking and Violence Protection Act of 2000, U.S. law codifies it as a federal crime. The United States defines human trafficking as the use of force, fraud, coercion, deception, or abuse of power to compel a person to perform labor or services (United States Department of State, 2014).

Human trafficking is often called "modern-day slavery," but one way trafficking differs from chattel slavery is that modern victims are rarely confined to their situation with locks and chains (O'Connell Davidson, 2013). Although the trafficking experience might include the infliction of physical or sexual abuse, legal cases have established that a diverse range of nonphysical methods, including deception and psychological manipulation, play a major role in the entrapment and subjugation of trafficked persons (Kim, 2007). Although the impact of psychological abuse on health has been analyzed in studies of domestic violence and torture, the psychological coercion that frames the experience of human trafficking has rarely been examined (Amnesty International, 1975; Logan, 2007; Sackett & Saunders, 1999; Tiwari et al., 2008).

In 1957, sociologist Albert Biderman first described a framework for understanding psychological coercion in the context of confinement (Biderman, 1957). Studying interrogation techniques used to elicit false confessions from American soldiers held as prisoners during the Korean War, Biderman examined how interrogators could manipulate the behavior of prisoners without the use of physical force. He outlined eight methods of coercion used to establish compliance: isolation, monopolization of perception, induced debility or exhaustion, threats, occasional indulgences, demonstration of omnipotence, degradation, and enforcing trivial demands (Table 1). With each method of coercion, the interrogators taught

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Table 1. Biderman's Framework of Coercion (Biderman, 1957; Amnesty International, 1975).

Method of Coercion	Purpose of Tactic
Isolation	Deprives victim of all social support. Victim develops an intense concern with self. Victim becomes dependent on trafficker/abusive boss.
Monopolization of perception	Fixes victim's attention on immediate predicament. Eliminates stimuli competing with those controlled by trafficker. Frustrates action not consistent with compliance.
Induced debility and exhaustion	Weakens mental and physical ability to resist.
Threats	Cultivates anxiety and despair.
Occasional indulgences	Provides positive motivation for compliance. Hinders adjustment to deprivation.
Demonstrating omnipotence	Suggests futility of resistance.
Degradation	Makes cost of resistance more damaging to self-esteem than capitulation. Reduces victim to "animal level" concerns.
Enforcing trivial demands	Develops habits of compliance.

the prisoners how to comply without making their demands explicit or inflicting physical violence. The framework was not widely known until 2008, when a hearing by the United States Senate Armed Services Committee revealed that Biderman's principles were used as the basis for aggressive interrogation techniques used against suspected terrorists held in Guantanamo Bay.[1]

Although Biderman's framework was established more than 50 years ago, medical and public health analyses of human rights abuses rarely cite it. Two prominent exceptions are Amnesty International's 1975 Report on Torture and T. K. Logan's 2007 study on human trafficking in Kentucky (Amnesty International, 1975; Logan, 2007). In Amnesty International's Report on Torture, a chapter on medical and psychological aspects of torture describes the ways in which the eight methods of coercion outlined by Biderman are used to weaken the resistance of torture victims through stress and behavioral manipulation. Citing the Amnesty Report, Logan notes the debilitating nature of chronic stress and duress that trafficked persons often endure, both during the trafficking experience as well as long after leaving a trafficking situation.

In our study exploring identification of trafficking survivors in Los Angeles County, we found that survivors, the majority of whom were domestic workers, universally experienced the degrading conditions described in Biderman's framework (Baldwin, Eisenman, Sayles, Chuang, & Ryan, 2011). We analyzed survivor accounts in the context of Biderman's theory of coercion to better understand the tactics traffickers used to maintain control. These tactics, through the mechanism of stress, directly placed trafficked persons at risk for acute and chronic, mental and physical health problems.

Method

Throughout this article, we use the term *victim* to refer to people who are still in a situation of trafficking and *survivor* to refer to people who are no longer in a situation of trafficking, recognizing that some survivors are revictimized. The study entailed face-to-face, in-depth, cross-sectional, semi-structured interviews (Levy & Holland, 1998; Weller, 1998) with 12 adult human trafficking survivors now residing safely in Los Angeles. We recruited all participants through the Coalition to Abolish Slavery and Trafficking (CAST), a nongovernmental organization (NGO) that provides direct services to trafficking survivors, including shelter, case management, and legal assistance. First author Baldwin, who conducted the interviews, benefited from being well known to the NGO from which survivors were recruited, ameliorating some of the barriers to trust that an unknown investigator might have faced.

We provided CAST case managers an in-service training about the study and recruited participants using a snowball sampling method through word of mouth, as well as fliers posted in English, Spanish, Russian, Korean, Thai, Tagalog, and Bahasa Indonesian at the CAST office. The study and all associated materials were approved by the Institutional Review Board of the University of California, Los Angeles.

The first author conducted all interviews between July 2007 and April 2008, utilizing professional interpreters in six languages, including Spanish, Korean, and Russian, other Asian and African languages, plus English. (To protect the identity of participants, we cannot specify all languages used during the study.) Before serving as an interpreter for the study, each interpreter received certification in the protection of human subjects through an online course offered by the University of California Los Angeles Office for the Protection of Research Subjects. In addition, the first author spoke privately with each interpreter before his or her assignment to provide an orientation to the issue of human trafficking and the potentially jarring and emotional content of the interview subject matter. We performed all interviews in

accordance with the World Health Organization's ethical and safety recommendations for interviewing trafficked women (Zimmerman & Watts, 2003).

Trafficking survivors who participated in the study received a US$25 gift card as compensation for their time. We collected demographic data describing gender (all women), age, country of origin, and language. We did not specifically ask survivors about the type of trafficking they experienced (e.g., domestic work vs. sex work), but assigned their experiences to these categories post hoc based on extensive information gathered during the interviews.

For the interviews, we followed a semi-structured, conversational protocol with open-ended questions, allowing for the spontaneous, qualitative exploration of themes (Fontana & Frey, 2005). We queried participants about health problems they experienced during their trafficking experience and their subjective perceptions of the origins of these problems; we previously published the full list of interview domains (Baldwin et al., 2011). We audiotaped discussions with participants' permission, and independent contractors translated and transcribed the tapes and digital files in a two-step process for Spanish interviews (first transcribed in Spanish and then translated to English) and in a single-step process for other languages, with only English transcribed. We assigned a participant ID number to the audio recordings and the transcripts, and destroyed the audio recordings.

We reviewed transcripts to identify major themes and performed a line-by-line review, hand coding for each major theme using a framework analysis approach (Pope, Ziebland, & Mays, 2000). The first author conducted initial coding and analyses and shared results with coinvestigators for review and discussion. The process involved grouping text together corresponding to each of the themes, using a literal pile sorting technique, and reviewing themes and text through an iterative process. We refined major themes and then established sub-themes using a method of constant comparison, breaking down higher-level themes into smaller categories or sub-themes within the framework (Strauss & Corbin, 1997). We continued interviews with survivors until saturation of themes had been achieved. For the purposes of this article, the first and second authors additionally analyzed themes and sub-themes in the context of Biderman's theory of coercion (Amnesty International, 1975; Biderman, 1957).

Results

Participant Characteristics

The 12 participants, all women, were trafficked into Los Angeles County from 10 countries in Africa, Asia, Europe, North America, and South America. They all safely resided in the Los Angeles area at the time of their interviews, and their ages ranged from 22 to 63 years old. The period of trafficking ranged from several weeks to more than 7 years. Nine of the women were trafficked into domestic servitude, and three were trafficked for purposes of commercial sexual exploitation. The experience of sexual abuse was not limited to women who were trafficked for sex. Furthermore, one survivor kept as a domestic servant experienced ongoing rape as well as forced factory work, which highlights the difficulties inherent to categorizing types of trafficking.

Biderman's Domains

Isolation. Traffickers kept victims away from family and friends, depriving the women of social support. Social isolation exacerbated the power imbalance between the women and their traffickers, making victims more dependent.

> I don't know what happen with my family. I rarely spoke with my family; only in the mail, you know. And I have nobody. I have no friend. I'm not suppose to have friend.

> I wanted to call to my daughter in [foreign city], to tell her that everything is okay, that I am here, but she [the trafficker] didn't let me use the phone. I was trying to call the agency to tell them that I don't like it here, that I don't like that place. I was afraid to use the phone, because I didn't know how to delete the number afterwards, so that she can't notice that I make a call.

> I have family in [another major U.S. city] and I wanted to call them, but no access to telephone. I want to go to church. There was no church. Three years I was in lock down . . . I was like isolated. There's no police, there's no cabs, there's no bus. It's like quiet.

Domestic servants who interacted with house guests and other workers were prohibited from speaking with them. "[The handyman] was also advised that he should not be talking to me. The lady said [to him], 'I don't want you talking with the young girl. You come to do your work and then you leave.'" The women described feelings of depression at the loss of their social ties with friends and family, and general loneliness, which limited their resistance and ability to protest the conditions. "We're not supposed to talk to anybody . . . She sees you talking to somebody, she'll shout at you or call you, take you away from where you are. [You feel] depressed—you have nobody to talk to."

Monopolization of perception. Many of the women described the ways in which their traffickers limited their

exposure to and understanding of the outside world as a means of controlling them. Traffickers monopolized their attention, even when they were not physically present.

> We were not supposed to go out. She call up every two minutes, so somebody has to be there to answer the phone. After every few minutes she has to call home.

> Sometimes the middle of the night, she'll just call and ask about everybody. "Where is she, what is she doing? Did you do this, did you do this, did you do this? Did you clean here, there, there," you know?

For those in domestic servitude, many described that their perception of the world was blank outside of the home. "I don't know where I living—I know where, but I don't know what is outside look like." Even when they were allowed to go outside or away from their place of work, the women described how they were constantly watched like a child or prisoner. "When I go out, I also have to go with them, plus the children. They never let me to go with the children alone. And they used to tell me, I should not talk to other people outside." Survivors trafficked into sex work reported similar situations. "No, she would not let us go outside. If we went outside, we would just be sitting next to her, right next to her." "We didn't go out much, and when we did, when we're out, when we're on the street, they would either walk behind us or next to us, or they would be in a car."

One survivor described opportunities when she was alone in the home and could have left but was afraid that the woman of the house would call or return at any moment.

> I want to have friend, but I really don't have time. When she go out, she check me if I'm in the house. She often calls on the phone. So if I go out, I have to go back immediately. Not to stay long outside.

In this survivor's description, social isolation intersected with the perception of being constantly watched by her employer. The interaction of the coercive tactics created anxiety about leaving the house and a sense of futility about even venturing outside.

Induced debility and exhaustion. To control their victims, traffickers employed a variety of dehumanizing techniques, including deprivation of basic human needs such as food, sleep, and health care. They worked the women, day after day, for long hours. "I could not sit down. I used to finish cleaning the house, then she used to make me run with the dogs outside, all the time with the dogs. Only running, run, run, run, and I was already tired." "[I worked] twelve, fourteen [hours]. When they had a party, I went to bed at 3 a.m. [They had a party] every weekend."

Survivors from different situations reported subsisting on tea, noodles, or nuts during their trafficking experience, as well as sneaking food or eating food designated for the family dog.

> I [only] drink tea, because most of the time, she never buy even bread for us—like when it's almost expired, that's when they bring the bread to us, that's hard, you can drink maybe with tea. Or sometimes we would just buy—I don't know how you call it—instant, they're like pasta, noodles, yeah [instant ramen noodles]. Sometime can buy a lot of that, just that. So it's noodles almost every single day.

> She used to buy food, but sometimes the food finish and she would not buy soon. I remember the last time . . . The girl who was responsible for the kitchen, told her we don't have food and she told her, "That's nice, we don't have food." And she took like more than two weeks for her to buy some more food for us. So sometimes you can stay without food for some time.

> When I cook, I taste, that's all. I slice the food for the dog; I also ate some. That's what I did. I never sit. And then the dog they give chicken nuggets. I also ate chicken nuggets. I sliced it and I ate some. So I did not tell them, I ate some of the food for the dog.

> She said that I can eat whatever I want, but whatever is already open. If I cook something for children, I should watch that they eat okay, that they eat everything and after that, if they leave something, I can eat it. I didn't like that, because I was cooking very small portions for children to make them fresh. She said that for a small child, for the little one, you can make a soup and you can make more than he can eat and then, you can eat it yourself, but you know, it's baby food. I was not eating anything, because everything was closed, the sausages and everything and she just left in the morning. I was eating only the nuts, different nuts, because they were open.

In some cases, women reported that they were forced to consume a substance against their will. Forced use of alcohol or drugs induces debility and lowers resistance. "[I experienced] drinking by force. She wanted me to drink with her. And I used to tell her, I don't. I've never drunk, I don't drink. But she used to want to force me."

Most survivors reported they were deprived of adequate time or space to sleep. "I have to sleep with her—I have to sleep on the floor . . . She had no compassion, the lady. I used to work six in the morning until one in the morning without a rest." "I was just sleeping in the corridor." "My work schedule, I was working like twenty-four hours—[I slept] three, four [hours], most of the time." "We can't even sleep. We eat our lunch one or two o'clock and then after that, we want to take a nap, she don't want us to take a nap."

> Working all day, then eleven p.m., I start doing laundry. She said that if I did it during the day time, it would cost a lot of money; electricity. I went to sleep at one o'clock. And then I get up at five in the morning. I had a constant headache [and was] tired.

The women reported being denied access to remedies and to timely medical care when they were sick or injured. "I get sick. No medication." "With the headaches that I told you about, sometimes I would ask for medicine or pills, and she would say, 'No, just get back to working.' And she would harshly answer me."

> She didn't [help me]. I just help myself. There's a medicine cabinet. I saw some Tylenol, I take. I used to give vitamins to the dog. Vitamin C, glucosamine, but there are other vitamins, lots of vitamins. I think, oh, it's good, too. I took the vitamins, and I didn't tell them.

> It hurt a lot, my stomach. My head hurt. My body hurt. And since I've never felt bad like this, so I told the lady I feel bad. Again, she told me, "Tomorrow I will take you," and always I would tell her this and she used to get upset. And then I couldn't tell her anything.

> After around five years I was there, I had trouble with my teeth. And I ask her to—I need go to the dentist. She never took me to the dentist. For months and months and months, I'm in pain with my teeth. She never did bring me to the dentist.

> She told us that if we're coughing or if we have the flu, she told us that because you're not taking care of yourself, you're not doing like this, if you're going to get worse in your sickness, I'm just going to bring you, she was just going to leave us in a hospital for the homeless people and we don't know that place, so we're scared.

> [I had a headache] lot of time. I think once a week. [When I] had a headache I asking for the Tylenol, and they give me the Tylenol. [It helped.] And then when still have headache I asking again . . . Sometimes the wife says, "Not too many Tylenol. It's not good." I just remembering [when in the past] I would get my own and buy myself. When I was in [other country where she worked] I have weekend off, but in USA I didn't have any weekends off.

Even when they were brought for medical care, the women reported that they were deprived of the medicine they were prescribed, were unable to follow doctor's recommendations, or follow-up with providers as directed. One survivor described the experience of a colleague:

> She just told me that they went to the doctor and then they took a lot of tests and then the doctor told her that they need to come back on that date, but [the trafficker] didn't take her back, because according to [the trafficker], she was busy and she's fine now.

> They gave her some medicine for her to buy me, for the throat, for my pain in my throat and for the fever I was told . . . She only bought me two pills. [The] prescription was for more, because it was a box, a jar. That's what I understood the doctor to say. I even heard him say you will have one in the morning and in the afternoon for two weeks. But she told me, "No, with the two pills you will get better."

> I have like really, really high temperature, and then headache. And then after two days like that, she brought me to her doctor. And then the doctor tell her that I am really, really sick; that I need to rest minimum one week. But then I only rest for two days, because she keep coming to my room, keep asking me to hurry up, get better and working. She said the house is just so messy, and she don't care about how I feel; she only care about how the house look and how messy it is or how she can cook, you know, there's no food in the house. Because I doing cooking and everything. So it was really, really, really terrible.

One survivor explained that she lost her eyeglasses en route to the United States but couldn't get them replaced. "I told her [the trafficker]; she told me that I need to earn money first, because it takes a lot of money, since I don't have insurance."

Threats. Traffickers frequently used threats to control the women, including threats of arrest or deportation, threats against family members, and threats of violence and death. "I'm stuck here and we can't do anything, because she told me that if I ran away, she said she was going to call the police and she'll tell the police that I stole something from her." "When he was shouting at me later, he said, 'I can just throw you out of America and just destroy you and your family!'"

> So we're scared and every time we see a police car, it scared us, because she said, if the police car or the police ask you where's your papers, what are you going to say? You can't tell them that you're working with me, because if they ask me, I'm going to deny you.

> Because in the agency, they told me, if you call the police, you will be deported, at once. They said, you're here illegally but now I know that I was here legally. I had rights, but I was not aware of them.

> She always threatening me, you know, the police going to arrest you because you don't have the paper. And I was scared; I don't want to go to jail. You know it's terrible in my country; with the jail is really terrible thing.

> She threatened me and my family. They told us that if we tried to escape, our families would suffer for that, would pay for that. If they ever touched my family, my mom, that's what hurts me most in the world.

> Police actually came to the house, comes to the door. Knock the door, I come out. I come to the front to open the door. The man is standing about two, three feet away from me. They ask me if everything is okay. Of course I'm going to tell them that everything is okay after he had me—had been threaten me to kill my family if I say a word.

The threats played on cultural fears and fostered anxiety and despair, weakening the ability of the women to take action to improve their circumstances.

> She used to tell me if you see somebody outside, go inside the house. They might act like police, and then they take you. Like they act like priests, but they have other motives. They are portrayed as police or priests, then they will take you away and kill you. They will do bad things. So, when you see strangers, don't approach them. Go inside. I always had that in my brain.

Occasional indulgences. By occasionally demonstrating compassion or kindness, traffickers countered their own abusive behavior and provided their victims positive motivation for compliance. Unable to know when these indulgences would be made available to them, the women lived perpetually in fear of making mistakes and with hope of pleasing their traffickers to receive an emotional or material reward.

> Because she always told me that she feel like I'm her own family, you know. Most of the time she say, "You're my family and now you're not my worker anymore." She say [that, so] I feel like that. But, then—when I ask her, she say I'm just a servant. So, she just play with my head.

> I feel happy and . . . our employer, she's showing us the good things. She don't get mad, even though we did things that she don't wanted, she's just saying, it's okay! Things like that. She was so nice, for six months.

Sometimes even basic medical needs would appear to be a gift or indulgence for the women after the deprivation they had endured. "She used to buy me pills [for the headache], and give me them to me. The ones in the little packets that they sell at the store. The two ones, the Tylenol." "Her brother, the doctor, did not know [that she was treating me badly] because in front of him the lady would treat me nice."

Demonstration of omnipotence. To keep their victims under control, traffickers claimed powerful connections to law enforcement, immigration officials, or deities and created a situation in which resistance seemed futile. "He was a witch, that's what he said. So he had me controlled by his life."

> I used to think that she could put cameras; that is why I did not watch a lot of television. She had me very intimidated and I was very afraid because she always used to speak about the power that she has here. At the house she used to have me [believe] that the cops were looking at me. When she used to travel she used to leave me alone and then she used to say, "When you go outside they will let me know. And in the back there was another officer and he too is taking care of me. And if you use my phone it is being tapped by the officer."

> She said, "You can't run away and you can't transfer to other person. If you want to work for anybody you need to finish first your ten years for me and then after ten years, you can go home. But you can't transfer because I'm the one who bring you here, so I'm the one going to bring you back to [home country]."

Such tactics created paranoia and fear in the women, making them doubt their own sense of reality and sanity, as well as demonstrating that they were not in control of their own fate.

Degradation. Another powerful psychological tactic traffickers used to control the women's behavior was degradation, in which the victims were insulted and humiliated, denied privacy and dignity, and reduced to animal level concerns without power or control over their lives. "It was very painful, because he was treating me like a dog, saying the words you say to a dog . . . Always there was someone in the house insulting me, like I'm not a human being." "She scolded me. Reprimanded me."

> Sometimes we had miserable headaches—when we used to have headaches or stomach aches, they used to tell us, "It doesn't matter, you need to work like that. She humiliated us . . . to have sex when we were on our periods. And this had never happened to me."

> The most I dreaded is washing the window, because I afraid of height. The wall is window of [glass]. And she want me to clean all the way to the top and it's just the scariest thing for me. Most of the time, I was crying because I'm afraid of height, you know? I have no choice, you know?

Degradation tactics also included physical and sexual humiliation and assault. "She pulled my hair and spank my head. I even cut my hair by myself so that there's nothing to hold, because she will pull my hair. I cut it short, short, short, so she will not hold it."

> My boss, she always abused us, especially, every single day and sometimes she does things like, you know, throwing cloths at your face, spilling food or milk on the floor and tells you to clean. She pushes, she hits.

> And then I have to, when she take a shower, I had to rub her body with the scrubber. And then after she shower, I have to

> put the lotion in her body, you know, it's just ridiculous; I never see in my life like that, you know? I massaged too. But then I put lotion in her body, just weird. Because she was there standing or laying in the bed naked, you know. And I just, awkward, and feel no comfortable, and I was like, oh my God, what happened?

> They said, "If you do just a massage you're not going to be able to pay your debt off. So and then also we'll have to send you to another state. And so you pretty much do need to engage in sex." And so I had no choice at that point.

These degrading conditions made the cost of resistance appear more damaging to the women than giving into the demands of their traffickers. Degradation, often combined with other forms of coercion, exacerbated the already vulnerable position of the women by harming their sense of self-worth and demonstrating that the traffickers had the ability to carry out their threats.

Enforcing trivial demands. By focusing on petty concerns, traffickers developed habits of compliance among their victims and kept them entrenched in the situation.

> I have a work schedule from five-thirty to ten-thirty. She required me to be accomplishment. So I tried to submit her my daily accomplishment. This is what I did today. But she didn't like it. She wants that I have to give her the specific every hour. It took me a while to [do it] you know? Every hour. She's around, why she asked me what I did?

> And she's always asking me to do everything. Even when she's sitting in the kitchen, she's still screaming for me to get her water. And if she's screaming my name, if I didn't answer right away, if I can't hear right away, she's like angry and just calling me name and everything.

In addition to maintaining conformity, enforcing trivial demands instilled a need for perfection, leading to stress and anxiety for the women. This tactic was particularly detrimental in light of the debilitating circumstances of their work, as even small tasks could be difficult to complete without error while lacking sleep, food, and social support.

> So I have to clean the wall, or the—clean the doorknob, everything. And the dog is always running around. I have cleaned already this area, you know, the dirt mark. So although I look around, my eyes, my mind, all things around, I can't see the dirt . . . but she's trying to look for [it]. "Come here, on the side, there's a streak." It's very hard. I clean it very well. I go around and I cannot see any dirt.

> Her house is in the next door, so anytime she can go there [and say], "Oh you're not cleaning, you're doing like this, like that, like that." So, sometimes it's so straining in your physical, you're so tired and then you're tired in your mind and then emotionally.

Discussion

For health professionals to effectively serve survivors of human trafficking, it is essential that we understand psychological coercion and appreciate its potential effects on our patients' health. All of the survivors we interviewed reported experiencing many nonphysical coercive tactics at the hands of their traffickers. By examining the role of psychological coercion in human trafficking through the lens of Biderman's framework, we gain insight into the chronic stress experienced by victims, allowing for a better understanding of how trafficking limits victims' social and personal coping resources and contributes to acute and chronic health problems (Pearlin, Menaghan, Lieberman, & Mullan, 1981).

Traffickers, as described by our participants, typically employed multiple coercive tactics to deprive the women of their dignity and autonomy and render them dependent. These experiences of psychological abuse, sometimes in combination with physical and sexual violence, subjected victims to extreme stress. Stress refers to the arousal of physiologic responses to environmental demands or pressures that exceed an individual's ability to adapt and absence of the means to obtain sought-after ends (Aneshensel & Mitchell, 2014; Gale Encyclopedia of Medicine, 2008). Mediated through key regulatory systems of the body including the nervous system, immune system, and the endocrine hypothalamic-pituitary-adrenocortical (HPA) axis, stress induces physiologic changes that can manifest as mental and physical health problems (Hori, Ozeki, & Teraishi, 2010; McEwen, Eiland, Hunter, & Miller, 2012; Segerstrom & Miller, 2004). Stress proliferation, in which primary stressors lead to a cascade of secondary stressors (Pearlin, Aneshensel, & Leblanc, 1997), further overwhelms the ability to meet physical and cognitive demands and reduces coping ability.

As studies from around the world have increasingly documented during the last decade, the traumas of forced labor are associated with mental and physical, acute and chronic, health effects (Cwikel, Chudakov, Paikin, Agmom, & Belmaker, 2004; Hossain, Zimmerman, Abas, Light, & Watts, 2010; Oram, Stöckl, Busza, Howard, & Zimmerman, 2012; Silverman et al., 2008; Tsutsumi, Izutsu, Poudyal, Kato, & Marui, 2008; Zimmerman et al., 2008; Zimmerman et al., 2006). Although most studies have focused on survivors of sex trafficking, emerging data, including our own, demonstrate a preponderance of health effects among survivors of trafficking in many other industries (Baldwin & Fehrenbacher, 2014; Turner-Moss, Zimmerman, Howard, & Oram, 2014).

In some cases, the nonphysical tactics of coercion described by survivors in our sample could lead directly to health problems observed in survivors. For example, the poor access to nutritional foods described by the women could result in iron deficiency anemia, vitamin deficiency, or low serum protein levels. Aside from physical nutritional deficits, deprivation of food causes psychological change (Hinkle, 1961; Polivy, 1996). Initial stages of hunger trigger emotional lability and irritability, whereas prolonged hunger is associated with profound apathy (Hinkle, 1961), which would serve to weaken victims' resistance to the dehumanizing conditions in which they were kept.

Another commonly experienced nonphysical coercive tactic, sleep deprivation, is known to affect mental health. In particular, partial sleep deprivation, when a person sleeps less than 5 hours per night, is associated with impaired mood and cognitive functioning, as well as motor functioning (Pilcher & Huffcutt, 1996). Recent research suggests that sleep deprivation plays a causal role in the development of normal and, possibly, pathological fear by increasing the susceptibility of the sympathetic nervous system to stressful experiences (Peters et al., 2014).

Our analysis does not enable us to causally link psychological coercion to physical or mental health outcomes or disentangle the effects of psychological coercion from other forms of abuse. However, utilization of the Biderman theory allows for a better understanding of how coercion perpetuates the submission of human trafficking victims to their traffickers in the absence of confinement. Structures of coercion and fear become psychological boundaries that shape the relationship between the trafficker and the trafficked person, keeping victims mired in their situations even without physical restraint. It is often difficult for health professionals, as well as the lay public, to understand why trafficked persons do not escape (Shared Hope International, 2014) or express a desire for assistance when encountering law enforcement, health care providers, or other authorities.

Exploration of the tactics of psychological coercion thus allows for a more nuanced and complex appreciation of the trauma experienced during human trafficking, breaking down the false dichotomy between freedom and captivity. Traffickers maintained control over their victims by creating a psychological "captive environment" similar to that experienced by those who are physically imprisoned against their will (Biderman, 1957). Even without locks and chains, trafficked persons are trapped.

U.S. law has recognized the nonphysical aspects of coercion in forced labor and human trafficking cases since 1984 (*United States v. Mussry*); lawmakers and courts have categorized nonovert means of forced labor as "psychological coercion." Application of this term encompasses a vast range of abuses that trafficking survivors report, including poor working conditions, cultural isolation, and threats to family members (Kim, 2007), all of which align with Biderman's framework. A newer legal paradigm, "situational coercion," posits that many trafficked workers comply with abusive conditions because of circumstances that render them vulnerable to exploitation, such as poverty and undocumented immigration status (Kim, 2011).

One limitation of the Biderman framework is that it does not specifically consider the role of physical or sexual violence, versus the threat of violence, or address the synergistic effects of psychological coercion combined with physical and/or sexual abuse. Trafficked persons, along with survivors of other forms of violence, are at high risk for acute and chronic health problems including depression, anxiety, post-traumatic stress disorder, insomnia, headaches, gastrointestinal problems, back pain, pelvic pain, and myriad other issues (Campbell & Lewandowski, 1997; Hossain et al., 2010; McCauley et al., 1995; Zimmerman et al., 2008), but the role that nonphysical coercion plays in creating and contributing to these problems remains unclear. As noted above, the connection between psychological coercion and health, like the link between physical or sexual violence and health, is complex and likely mediated by multiple physiological and psychological systems.

As an exploratory, qualitative project, this study has a number of limitations. The small sample size and recruitment of survivors through one NGO, in one metropolitan area, means that the information provided by survivors might not represent the full range of experiences of trafficking survivors in the United States. The circumstances and personal characteristics of women who successfully leave a situation of trafficking and subsequently connect with support services likely vary from those of individuals who remain under the control of traffickers, those who escape but remain socially isolated or unable to access services, and those who choose not to pursue aftercare services.

Because rapport was easily established with each participant, and many personal stories shared, at the time of data collection we did not identify a need for more than one interview session per participant. However, in rereviewing transcripts for this manuscript, we came across an instance where a survivor became upset about abuse she experienced and said she could not talk about it "today." It is possible that a second interview with this survivor would have yielded additional important information about her experience. In addition, we recognize that the women's ages, time spent in trafficking, type of trafficking, and length of time receiving post-trafficking services could all influence their experiences and their perceptions, but the small sample size of our study

precluded such analyses. We focused instead on the commonality of identified themes and sub-themes.

This study targeted only women who were trafficked, so it does not address the data gap on the effects of trafficking on men. In addition, we interviewed only adult survivors of international trafficking. Though some had been trafficked as minors, our findings might not apply to adolescents or children trafficked to or within the United States. Notably, however, advocates who work with commercially sexually exploited children (CSEC) in the United States have referenced Biderman's domains in their training materials (Girls Educational and Mentoring Services & Motivating, Inspiring, Supporting, and Serving Sexually Exploited Youth [GEMS & MISSSEY], 2014).

Nonetheless, this study provides qualitative data from a sample consisting largely of women trafficked into domestic servitude, a population for whom few published data exist. The study also provides a framework for connecting domains of psychological coercion commonly experienced in situations of human trafficking with dominant stress theories from the medical, public health, and sociological fields, such as the stress process model (Pearlin et al., 1981). By conceptualizing psychological coercion as a multi-faceted combination of tactics used to deplete an individual's personal and social resources to cope with stress, we provide a framework for understanding how stress proliferation operates in the context of human trafficking, leading to chronic health problems for trafficking survivors.

Perhaps most significantly, understanding the Biderman theory of coercion and its application to human trafficking can foster a better understanding among health professionals and the public about the complex trauma of human trafficking. This should enhance our collective response and improve our ability to more effectively support survivors in medical and mental health care settings. Ultimately, an appreciation of the tactics traffickers use to control victims will allow us to design better and more informed therapeutic approaches to address survivors' physical and psychological responses to coercion.

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Note

1. Many argued that the interrogation methods described in the Navy memo released at the hearing amounted to torture and were an ironic affront to the lifelong work of Albert Biderman, who had routinely argued that coercive interrogation was an "abominable outrage" (Shane, 2008) that was likely to elicit false information and that undermined respect for truth and human dignity.

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