

Factors Contributing to Poor Physical Health in Incarcerated Women

Holly M. Harner, PhD, MPH, WHCNP-BC
Suzanne Riley, BA

Abstract: Prisons have become the primary health care provider for some of the poorest and sickest women in the United States. By virtue of both biological sex and gender, incarcerated women have health needs different from those of their male counterparts. The purpose of this qualitative investigation was to understand better women's perceptions of how prison has affected their physical health. We conducted this investigation in a maximum-security women's prison in the United States using focus group methodology (12 focus groups, made up of 65 women). Women described several specific prison-based factors that affected their physical health: limited and complicated access to care; nutritional concerns; limited physical activity; and smoking in prison. We discuss these findings in relation to the gender-based health issues facing incarcerated women.

Key words: Women, prison, health, focus groups.

In 2010, 112,822 women were incarcerated in state (n = 99,273) or federal (n = 13,549) prisons, accounting for just over 6% of all sentenced prisoners.¹ The majority of female prisoners, many of whom were poor,² addicted to drugs and alcohol,² and victims of trauma³⁻⁵ prior to incarceration, enter prison in poor physical health. Although prison health care services are available, the medical needs of this specific population often exceed available resources.⁶ Nata Menabde of the World Health Organization (WHO)⁷ noted, "Health is a fundamental human right, especially for individuals held in the custody of the state."^[p.v] Inadequate access to health care in prison is considered a violation of a person's Eighth Amendment rights, and thus was cited as a factor influencing the Supreme Court's decision to order California to reduce the state's prison population by 30,000.⁸ In addition to limited access to care, other institutional factors, including the prison environment itself, may affect women's physical health during imprisonment. The purpose of this qualitative investigation was to understand better the factors that affected women's physical health during incarceration. We discuss our findings in relation to the gender-specific issues facing women's health during incarceration.

Characteristics of incarcerated women. The WHO asserted that "women are a spe-

HOLLY HARNER is an Assistant Professor and Director of the Master of Public Health (MPH) Program at La Salle University in Philadelphia, Pennsylvania. *SUZANNE RILEY* is a graduate student at the Philadelphia College of Osteopathic Medicine in Philadelphia, Pennsylvania. Please address correspondence to Holly Harner, La Salle University, 1900 W. Olney Avenue, Philadelphia, PA 19141.

cial group within prisons because of their sex”^{7[p.9]} In addition to biological differences (i.e., sex-based differences), there are also gender-based differences and experiences that distinguish incarcerated women from their male counterparts.⁹ While there is no single defining life experience shared by all incarcerated women, the trajectory from victimized girl to incarcerated woman has been well established in the literature.^{3-5,10,11} Women in prison describe enduring childhoods filled with victimization by parents, caregivers, and strangers.³ As young girls, many may turn to drugs and alcohol and/or run away from home to escape this early abuse.¹⁰ Once alone and on the streets, they become vulnerable to coerced or forced prostitution, which increases their risk of victimization as well as involvement in the criminal justice system.¹¹ On the link between early victimization and later criminality, Messina and Grella¹² commented, “The trauma that results from such abuse is a key contributor to adolescent conduct problems, subsequent delinquency, substance abuse, and criminality among women.”^{12[p.1842]}

Incarceration and women’s physical health. Pre-incarceration health risks, including addiction, trauma, and mental illness, contribute to incarcerated women’s poor physical health.¹² Data support that incarcerated women bear a disproportionate burden of illness, often having higher rates of physical health problems than non-incarcerated women as well as incarcerated men.¹³ Findings from the Survey of Inmates in State and Federal Correctional Facilities, 2004, suggested that just over half (57%; $n = 46,300$) of women incarcerated in state prisons reported a current medical problem, such as arthritis (25%), asthma (19%), hypertension (17%), and hepatitis (10%).¹³ About 12% described having surgery since being incarcerated, and almost half (49%) described having a dental problem since admission. Women also reported other health impairments, including problems with speech (3%), hearing (8%), vision (12%), and mobility (2%). Approximately 25% reported being injured since entering prison, including injuries resulting from accidents and fights.¹³

It is possible that the prison environment itself affects women’s physical health. Using focus groups and individual interviews, Douglas and colleagues¹⁴ examined English women’s perceptions of the impact of incarceration on health. Three key findings from their investigation inform our study. First, women described the prison environment as unclean and said that “vermin”^{14[p.751]} were present in their living, sleeping, and eating areas. Women expressed disgust with the uncleanliness and felt prison officials needed to do more to control infestations. Second, women described few opportunities to be physically active within the prison, noting that existing exercise facilities were inadequate and that opportunities to use the prison’s gym conflicted with work schedules. Last, women’s lack of exercise left them feeling “bored and aimless,”^{14[p.751]} which resulted in eating, smoking, and medication seeking.^{14[p.751]} Overeating foods high in carbohydrates coupled with limited exercise resulted in weight gain for some participants.

Young’s¹⁵ qualitative investigation, which focused on American women’s perceptions of health care in prison, also guided our investigation. Participants did not hold “exclusively negative or positive views”^{15[p.223]} about health care in prison. Participants described inadequate medical care, including no care, partial care, delayed care, and misdirected care. Many of the same women, however, described positive experiences with health care in prison, including care that was thorough, responsive, and immediate. Similarly, participants were able to recount experiences of non-empathetic treatment

(being lumped together, being disregarded, and abrupt treatment) as well as empathetic treatment (personal interest, respect/courtesy, listening, and answering questions).¹⁵

Summary. While available data are sparse, previous investigations suggest that incarcerated women have complex, chronic, and co-morbid physical health problems, many of which were antecedents to incarceration. It is possible that these problems may be affected by both the nature of incarceration as well as access to and use of prison health services. Our study complements and extends the work of Douglas and colleagues¹⁴ and Young.¹⁵ Specifically, using inmate focus groups, we focus broadly on American women's perceptions of factors affecting their physical health during imprisonment. We discuss our findings in relation to the gender-specific health issues facing incarcerated women.

Methods

We conducted this investigation in a maximum-security women's prison in the United States. Approximately 1,600 women were incarcerated in the study institution at the time of data collection. Data were collected *via* qualitative focus groups with volunteer participants in individual prison housing units.

Recruitment. Housing units within the prison's general population were chosen by prison administrators based on the unit's security level and the probability of women being present during the day. We did not have access to higher-security units, including the mental health unit (MHU) and the restricted housing unit (RHU). Prison administrators announced to the housing unit that health-related focus groups were being conducted and that anyone interested could go to the dayroom and ask questions. Once women arrived in the dayroom, we described the purpose of the study and explained that participation was voluntary and anonymous (in the sense that no record of the particular inmate's participation would be kept by the researchers). No incentives or payment for participation were given.

Focus groups, which were conducted in English, included between four and six women. Focus group questions were guided by the first author's previous clinical experience as a women's health nurse practitioner in a women's correctional institution. The first author's previous investigations with incarcerated women also guided the focus group questions.¹⁶⁻¹⁸ During each focus group, we asked the women "How has prison affected your physical health and mental health?" This article focuses on responses related to women's physical health. Findings related to women's mental health are available elsewhere.¹⁹ We purposely did not define the term *physical health* as we did not want to limit women's responses unduly. Women were free to discuss any side of prison life they believed affected their physical health. Open-ended probing questions were used as needed to facilitate discussion or gain clarity. The first author led the focus groups, which lasted 1.5 to 2 hours, and took notes by hand of participant responses. The second author transcribed focus group data *verbatim* using a laptop computer. Audiotaping was not permitted for security reasons. This investigation was approved by our Institutional Review Board (IRB) and the Department of Corrections' (DOC) research review panel. Focus groups were entirely voluntary and anonymous (in the sense that the researchers did not record participants' identities).

Data analysis. Hand-written focus-group notes were combined with the electronically transcribed data nightly following each focus group. Once these data were combined, we used conventional content analysis²⁰ to analyze them. We chose the method of conventional content analysis 1) because we did not want to limit our analysis to preconceived categories; and 2) because there are limited related data published on this phenomenon. First, we began our analysis by reading and rereading all of the printouts of focus group data. After immersing ourselves in the data, we identified any common broad themes related to physical health and incarceration. We then reviewed this coding and discussed and reconciled any discrepancies. We then considered our results in relation to previously published findings as well as with an intentional consideration of gender. Results of our analysis are presented below.

Results

We conducted 12 focus groups, comprising 65 women, in 2011. The average age of respondents was 43 (range 23 - 46). Most were White (62%). The most common convictions included murder (39%) and drug-related crimes (18%). Although our focus group questions were neutral in tone, using the term *physical health*, women primarily shared prison-based experiences that contributed to their *negative physical health*, including: limited and complicated access to care; nutritional concerns; limited physical activity; and smoking in prison. A review of each category follows.

Limited and complicated access to care. Limited and complicated access to care was one of the primary concerns voiced by focus groups participants. Women described four specific components of care to which they felt they had limited or complicated access: medical care, dental care, eye care/vision, and care associated with disability.

Access to "medical." "Medical" (the terminology used by participants for the prison's physical health unit) was described as an overburdened and under-staffed unit where women sought care for health problems. These health problems, including gynecological, dermatological, gastrointestinal, and other assorted physical health problems, by many accounts, "never got solved." Although several women described specific health providers as helpful and compassionate, the prison medical system as a whole was described as ineffective. Women reported that symptoms were dismissed by providers who seemed "too busy" or "didn't care." Women lacked trust in providers who "never explained test results," "rushed them out the door," or attributed their symptoms to "med-seeking behavior." One woman commented, "You have to beg them to get in to see Medical. They think we are lying because we are inmates and they can ignore us."

Going to Medical was described as "always an issue," something that women had to "gear up for." Of the women who reported positive experiences with Medical, many disclosed that they rarely needed medical care and thus, had not been labeled a "troublemaker" by medical staff. Several women commented that challenging or disagreeing with a medical provider had the potential to result in disciplinary action. As one woman described it, "I went to Medical, telling them I had more than just a cold. I got yelled at, called a hypochondriac, and escorted out with the threat of [being written up for] misconduct. Later I had an asthma attack and was diagnosed with asthma."

While women were not denied health care due to lack of money, the mandatory

medical co-payments (\$5 for medical care; \$5 for prescriptions) were burdensome for many. Women did not have money for co-payments because they earned less than 50 cents/hour in their prison-based jobs (and a percentage of their pay was diverted to pay any fees and fines). Additionally, women said they felt uncomfortable asking family members to send them money from the outside. Running a negative account balance was common; one woman noted, "I am \$10.33 in the rear. I can't even buy a razor. Once your family puts money in your account, Medical automatically takes it [to recoup what is owed]." Another woman serving a life sentence expressed concern that the required co-payment fee resulted in women not seeking care, potentially exposing other women in their units to contagious illnesses:

The co-pays weed out the crap. But women won't go to Medical when things are really wrong because it blows the whole month's salary. People aren't getting what they need because they can't afford it. . . . Then they come back and share their germs with us. We all get sick.

Adding to the financial burden, women said that once they paid the co-payment, they were only permitted to address one health-related symptom during their appointment. Symptoms outside of their chief medical complaint required a new appointment, and a separate co-payment.

Participants believed that access to health care was related to their sentence length. For example, women serving longer sentences, including women serving life sentences ("lifers"), believed they were least likely to receive health-related services and were at the "bottom of the list" to receive care. As one woman said, "They don't want to waste their money on lifers." Lifers described being punished for their crime and "left to die sooner" than women serving shorter sentences. One woman serving a 10–20 year sentence commented, "You know when you coming to prison you're going to get the worst medical care. . . . But I got a 10–20 year sentence, not the death penalty."

Women serving shorter sentences also reported being encouraged by medical staff to "put off" care until they returned home. One woman commented, "I am totally disabled. I get disability. I have chronic bowel problems. I need a colonoscopy but was told that I'm not here long enough." Another woman commented, "The first thing they ask you Medical is how much time you have left. . . . If you don't have a lot of time left, they blow you off and won't take care of you. It's not worth it to them."

Several participants described being discouraged by health care providers, both implicitly and explicitly, from seeking routine health screenings, regardless of their sentence length. They postulated this was the result "too many inmates and not enough staff." Women commented that gynecological exams and Pap smears were frequently discouraged by medical staff. As one woman who declined her Pap test recounted, "They try to make you not want your Pap because there are so many people waiting. They say, 'You know, you don't really have to have a Pap, right?' They make you feel guilty if you want it." Similarly, another woman said, "Medical wants you to refuse [to decline care] because they're so busy. When I said I didn't want a Pap, the nurse told the doctor, 'At least I got you down to two [patients].'"

Access to dental care. Women expressed frustration and anger over the accessibility

and quality of prison dental care. At the time of our investigation, there were two dentists (one of whom had just recently been hired) serving a population of about 1,600 women. Even young women, unsolicited by us, opened their mouths during our focus groups to show missing, broken, and rotting teeth. As one woman described, "We got women walking around here with missing mouths [all teeth missing]." As with other health-related services, women were placed on a waiting list to be seen by the prison dentist. One woman commented, "I didn't get nothing done until last month and I have been here 21 months. My teeth are horrible. Decaying. The dentist told me, 'Unless you are doing years, wait to get your teeth done at home.'" As with medical care, the high-demand/low-resource environment resulted long waits for care.

I was addicted to crack and my teeth are really bad. Three years ago I had a gum exposed. I was scared and had a bad tooth too. I went to dental and he said, "Which issue do you want to talk about today?" He told me to pick the worst. But I'm not a dentist. I don't know which is the worst. I was crying because I couldn't afford to come back [and pay the additional co-payment]. He finally said he would patch up the one tooth and told me not to brush as hard on my gum. I have been on the list to see him again about my gums for almost two years.

Women frequently described waiting in pain to be seen by the prison dentist.

My bottom wisdom teeth were coming in and I was in so much pain. It was on the weekend and they don't see dental problems on the weekend. I ate so much Tylenol my stomach was in knots. I don't think that's right with my hep C. My mouth was so swollen. When I saw dental, they said, "That's life. You're going to have to wait." No antibiotics. No nothing. It took me three months to get my wisdom teeth pulled. I never felt pain that bad. And I had a kid before.

Some women were scared to visit the dentist, in part because of his reputation for being "unprofessional." However, women also feared having their teeth unnecessarily extracted, which, according to our participants, was the treatment of choice for dental problems.

They never want to fix your teeth, only pull them. I understand the dentist is pressed for time. But we usually have more than one tooth problem. He tells you if you have two teeth bothering you, you need two sick calls. He's very disrespectful. He just cuts you off. "Shut up. I'm talking. Not you." It's just easier for them to pull teeth than actually fix problems.

Poor dental care and unnecessary extraction resulted in pain, inability to eat solid foods, and decreased self-esteem. As one woman commented, "How are we supposed to get back out there and get a job on the outside when we got 'summer teeth' [some are teeth are there; some teeth are not]?"

Eye care/vision problems. Women expressed difficulty in obtaining glasses in prison. Women who entered prison with glasses were allowed to keep their "street" glasses provided their value was less than \$80. Women in our focus groups commonly wore glasses that were taped together or missing parts. Women coped with poor vision by

borrowing glasses from their cellmates or asking other inmates to read for them. These coping behaviors, however, came with the potential for disciplinary action.

I have been seven weeks without glasses. I am wearing my celly's [cell mate]. I still can't see because it's not my prescription but she had an extra pair. We aren't supposed to do that though. But I can't see anything without them. I can't read or do my schoolwork. I have mandatory group with my sentence and if I don't do the work, then I get kicked out and given a misconduct. My celly helps me read. I can't even read my own mail. God forbid if I miss an appointment because I can't read what is posted. Once you see the eye doctor, it takes three months to get your glasses.

Women also described physical symptoms associated with poor vision.

I've been here three years and never seen the eye doctor. . . . I'm on the list. . . . So I have to wear dollar-store glasses and I get bad headaches every day. . . . I take so much Tylenol for my headaches but that's not good for my hep C. I feel like a gerbil caught in a hamster wheel.

Care of the disabled. Several women suffering from physical disabilities, including women in wheelchairs and walkers, participated in our focus groups. Focus group participants, including those who were not disabled, commented that the prison was not designed to care for the needs of disabled women. One disabled woman commented:

Don't be disabled in prison. That is the worst thing to be in prison. . . . I try to tell Medical what is wrong with me, but they don't listen. They just call me their "Problem Child." . . . This one arm and one leg are my life. If I lose them, I am lost. I'm not going to risk it by going to Medical. . . . Medical keeps telling me, "We have people worse off than you." . . . It's very scary. Some people tell me, "You think you're so special." I don't think I'm special. I feel scared. I can't fight back from this chair.

Non-disabled women were also affected by the growing number of women confined to wheelchairs as many were required to act as "pushers." As "pushers," non-disabled women were responsible for pushing women confined to wheelchairs to medication lines, meals, and other appointments. According to participants, pushers received approximately 15 minutes of training on how to push a wheelchair. For a variety of reasons, many of the "pushers" we spoke with did not want this responsibility:

I don't think that inmates should be responsible for other inmates. I am doing my own time. I have ulnar palsy but they want me to push. Some of the women in wheelchairs weigh over 200 pounds and are just nasty. If I don't push, then I will get kicked out of the program or they take away your job. You have to sign a contract. It's a lot when caring for your own self and your own medical problems and now you're responsible for other people. It should be the prison's problem. What if something happens to the other inmate [the disabled inmate]? What if she has a problem and I can't do nothing to help her?

Nutritional concerns. Although a registered dietitian planned the menu for the correctional institution, participants commented negatively on prison food: "The menu

looks good on paper, but that is not what you actually get.” Women asserted that poor nutrition contributed to their poor health.

I have aged considerably since incarceration. Our diet consists of processed meats, no fresh vegetables, and low-dairy products with no iron-enhanced food. . . . There are a lot of sick women here. A lot of obesity. You come in at 145 pounds and leave at 300 pounds. The diet is poor and there aren't good items on commissary. They are good here about fruit, like bananas, apples, and oranges. But we don't get any fresh vegetables. . . . Horticulture grows veggies and it all goes to [prison] staff. The only way we get fresh vegetables is to sneak it from horticulture.

The condition of the institutional kitchen (“chow hall”) and meal preparation was frequently described as “disgusting.” Women were assigned to cook and serve meals in the prison chow hall, often as what they referred to as a “punishment detail” [an undesirable prison job]. Women gave personal accounts of eating undercooked meat and spoiled food and described infestations of insects and other vermin. One participant tearfully described:

I am destitute in here and I can't afford to feed myself from commissary. You have to eat what's in front of you in chow hall. . . . I had the unbreaded fish one day and I noticed a worm was spiraling out of the fish. . . . I got sick. You're not supposed to leave the dining room but I called the officer over and showed it to him. He said, “Yea, that's a worm” and let me go back to my room. . . . If you go through things like that, you are willing to spend extra money on the commissary.

As noted, women coped by purchasing food from the prison commissary [similar to a store where items are preordered and then picked up], which generally carried nutritionally poor items (Ramen noodles, soda, nuts, pastries, cheeses, cookies, and candy). Women were angry that healthier food options, previously available on the commissary list, were removed. They postulated that healthy options were removed from the commissary list because their male counterparts did not purchase them. One woman noted, “Anything healthy on commissary, we lose. The men don't buy it. Commissary is geared to what the men buy. They used to have black beans but they took them off because the men don't buy it.” Instead, women described eating candy bars, cookies, and “Chi-Chi” [a combination of Ramen noodles, summer sausage, processed cheese, and crushed chips, which is cooked either in the inmate's trashcan or over an exposed radiator]. Women described the consequences of unhealthy eating as weight gain, decreased energy, and the exacerbation of chronic medical conditions. One woman noted, “I was in extremely good shape when I came to jail. Within the first year, I put on 60 pounds. I have bad arthritis and asthma that was better before the weight gain. But the extra weight impacts both negatively.”

Limited physical activity. Women described few consistent opportunities to be physically active in prison. Several participants reported that they had become “fat and lazy,” spending their days “lying in bed” or “watching television.” Although women identified that they had to “walk everywhere” in order to get to appointments or meals, many desired other opportunities to exercise.

I think that it is a sedentary lifestyle in here. I don't have the energy I used to have. I am not physically fit. I am not emotionally well. . . . There are not enough opportunities to be in the wellness class. They don't actively promote in-cell exercise. Women need to understand that the sedentary lifestyle in here leads to more complications down the road.

While there was a recreation department within the facility, fitness classes were reportedly scheduled during women's work hours or mandatory meetings and were frequently canceled without any reason given. One woman commented, "I don't have the activities that kept me physically active. The list here for exercise groups is hard to get on plus it interferes with other commitments." Similarly, another woman noted, "You can sign up for exercise classes if you have time for that. But the classes are always full or during work." Women who were unable to afford to purchase sneakers from the prison commissary also commented that their standard issue prison uniform shoes, referred to as "sweet potatoes" because of their brown color, were not conducive to participation in vigorous exercise.

Smoking in prison. Many women, as well as officers and health care providers, smoked cigarettes in prison. A variety of cigarettes could be purchased through the commissary, ranging from brand-name cigarettes to loose tobacco. Several participants commented that they had successfully quit smoking in their county correctional institutions, which were often tobacco-free, only to recommence once they were incarcerated in the state facility (which allowed tobacco products). While smoking was not allowed inside housing units, women still "snuck a smoke" in their cells or on the porch immediately outside their unit. This was problematic for many women, especially those who suffered from chronic medical conditions, including asthma. Women reported that they wanted to stop smoking, but did not know how to "break the habit."

Smoking is a problem in here. They got people who want to quit smoking and they can't afford it. I think they should provide people with those patches. I asked God, "Lord please help me stop and take this habit away." I know if the State took them away from me, then I know I would have to quit. . . . Smoking is harder to beat than heroin. I want to get the patches but I don't have the money. I know I haven't cared about my health in the past but I care now. I want to live, not die.

Women often described that they coped with the innumerable stressors faced in prison by smoking cigarettes. Prison was described as "the worst place on the Earth to stop smoking." Shortly before our focus groups, nicotine replacement treatment ("the patch") became available for purchase within the institution (\$187.50 for six weeks). This steep price, however, was cost-prohibitive for many participants.

Discussion

The WHO, in their Declaration on Women's Health in Prison, identified that "Some of the specific needs of women in prison should be tackled by taking advantage of the time they are in prison to provide education about preventing illness and maintaining good health."⁷[p.21] The WHO further noted that "As a result of the chaotic lifestyles of

many of the women who enter prison, their time on prison may be the first time in their life they have access to health care, social support and counseling.²⁷[p.22] While the nature of our investigation does not allow us to verify participants' reports, our data present evidence that women in prison are largely unhappy with their health care and their ability to develop and/or maintain good physical health while incarcerated. This level of unhappiness and discontent likely negatively affects their interactions with care providers and correctional professionals, and promotes an overall negative institutional milieu. In a cyclical fashion, women's unhappiness and discontent likely further contribute to their already poor physical and mental health.

Although several women reported that their physical health had improved during imprisonment, generally as a result of access to previously unavailable care (especially hepatitis C treatment and care of relatively rare medical conditions), focus group participants generally described prison as an environment with few resources to promote health. Specifically, most women described factors that contributed to negative physical health during incarceration, including limited and complicated access to care, nutritional concerns, limited physical activity, and smoking in prison. Our findings support previous investigations^{14,15} and contribute to a broader understanding of how incarceration affects women's physical health. Three health concerns voiced by incarcerated women contribute new information to the existing literature on the gender-specific health concerns of women in prison and warrant further discussion: problems with dental care, tobacco use in prison, and disability in prison.

Gender, prison, and dental care. Poor dental health has been linked to a variety of medical conditions.²¹ Recently, Bose and Jenner²² determined that incarcerated individuals have "significantly greater oral health needs"^[p.147] than their non-incarcerated counterparts. Although several factors might contribute to incarcerated women's poor dental health (addiction, tobacco use, and lack of dental care prior to incarceration), it is possible that previous exposure to victimization might play a role in how incarcerated women experience prison-based dental care. Multiple investigations have supported a link between past sexual trauma and negative experiences with dental care.²³⁻²⁶ Although we did not ask participants about past trauma, other investigations, as noted, have found that a large percentage of incarcerated women have experienced past victimization.

Trauma survivors are more likely to report negative dental experiences, including dental fear.²⁴ The intimate nature of dental examinations, including being placed in a horizontal position, being left alone with a more powerful individual, having instruments inserted into the oral cavity, and anticipating pain may replicate past traumatic experiences.²⁶ This may be especially true for survivors who have experienced forced oral sexual penetration.²⁴ Trauma survivors may be fearful about dental appointments, thus foregoing routine dental care.²⁴

Although focus group participants described specific characteristics of dental care that most Americans would find intolerable (unnecessary extraction and unprofessional behavior), it is possible that past trauma exposure affected women's perceptions and utilization of prison-based dental care. While it is important for correctional institutions to have an adequate number of dental health professionals to meet the needs of this vulnerable population,²² it is also vital for these professionals to understand the possible link between trauma and dental fear among incarcerated survivors. Incarcer-

ated women themselves should also understand this link because it might provide an important context for exploring past and current dental fears.

Gender and tobacco use in prison. Despite evidence that links tobacco use to illness and premature death,²⁷ some correctional institutions permit prisoners to smoke cigarettes. Although some women expressed interest in smoking cessation, access to smoking cessation programs and nicotine replacement treatment was limited. Banning smoking in prison is controversial because not only are inmates and prisons officials addicted to tobacco, but cigarettes also have a black market value in the prison's underground economy, and may be traded for goods and services in lieu of money.²⁸ Furthermore, banning smoking in prison is not the same as helping prisoners to quit smoking. Without intervention, many will recommence use once released.²⁸

Incarcerated women's high rates of mental illness, including unresolved posttraumatic stress disorder (PTSD), suggest that smoking during incarceration might also have a gendered motivation. Data support the claim that there are disproportionately high rates of cigarette smoking among trauma survivors.^{29,30} Using a representative sample of 4,075 adults, Hapke and colleagues³⁰ identified that people who had been raped, sexually abused, seriously physically threatened, and exposed to a serious accident had higher rates of smoking and nicotine dependence than people not exposed to trauma^[p.845] Participants suffering from PTSD were also more likely to smoke and had lower quit rates and remission from nicotine dependence. Investigators found that the associations of smoking and nicotine dependence with trauma and PTSD were clearer in women than in men.^[p.845]

In an environment that has scarce mental health resources, it is possible that incarcerated women may attempt to cope with trauma symptoms as well as other mental health problems and stressors by smoking. Additionally, unhealthy diets and limited opportunities to exercise may also make women less inclined to stop smoking out of fear of weight gain. Cropsey, Eldridge, and Ladner³¹ argued that smoking cessation programs in prisons improve women's health and reduce medical costs associated with tobacco-related illnesses. While only one woman in our study described successfully using nicotine replacement treatment, Cropsey and colleagues³¹ reported that women in a prison-based pharmacologic and behavioral smoking cessation intervention had quit rates similar to participants in community-based smoking cessation programs. Given the health implications for incarcerated women smokers and other prisoners exposed to second-hand and third-hand smoke, evidence-based smoking cessation programs have the potential to greatly improve women's health behind bars. Noting the link between past trauma and smoking, effective programs should be comprehensive in nature, addressing both tobacco addiction and co-morbid PTSD.³⁰

Gender and disability in prison. The aging of the prison population is a growing concern for state correctional facilities.³² Given their pre-incarceration risk factors, including addiction and limited access to health care, prisoners may have physiologic ages that are 10–15 years older than their chronological ages.³² Prison health care systems are hardly designed to meet the gender-specific needs of women, much less the needs of aging women.³³ In one study, geriatric female prisoners reported high rates of impaired mobility (28%), vision (58%), and hearing (52%).³⁴ Functional impairment, including difficulty with activities of daily living (ADLs; such as bathing, eating, using

the toilet) and prison ADLs (PADLs; such as standing for head count, climbing to a top bunk, getting to the dining hall) also increased as women aged in prison. Poor functional status was associated with adverse experiences including frequent falls, depression, feeling unsafe, and physical abuse by other prisoners.^{34,25}

Reviere and Young³³ identified that the health needs of older incarcerated women “challenge the traditional prison health care system designed for young, healthy men.”^[p.64] Indeed, women in our study identified that only a few prison housing units could accommodate women with wheelchairs and walkers. Mirroring common gendered role expectations seen outside of prison, non-disabled women were expected to act as caretakers, specifically “pushers,” for inmates confined to wheelchairs. Although women reported that this role was once a voluntary “detail” [a prison job with pay], at the time of this investigation, women were expected to be “pushers” without any compensation. Participants also reported that they could be removed from groups and other programs if they refused.

Limitations. Our focus groups included a non-random sample of volunteers who self-selected to participate. It is possible that women with largely negative health-related experiences in prison were more inclined to participate than women without similar experiences, thus skewing our data negatively. Additionally, because our research findings were based solely on participant reports, we are unable to evaluate the accuracy of the events disclosed. Alternatively, it is possible that women who were too sick or who suffered from physical disabilities were physically unable to participate in our groups. Our findings also represent only a snapshot in time at one prison in the United States and may not be generalizable to other incarcerated women elsewhere. Future research, with incarcerated women as well as prison health care providers and other prison professionals should be conducted.

Conclusion. Incarcerated women, many of whom will be released back to their communities, suffer from significant physical health problems. Our findings reflect the fact that correctional institutions often have inadequate resources to provide care to the growing population of sick and aging female inmates. Other contextual factors within the institution also have the potential to contribute to inmate health. Incarcerated women deserve timely, evidence-based, and respectful health care in prison. A gender-based understanding of women’s health provides an important context for addressing the needs of this vulnerable population.

Notes

1. Guerino P, Harrison PM, Sabol WJ. Prisoners in 2010. Washington, DC: U.S. Department of Justice/Bureau of Justice Statistics, 2012 Sep. Available at: <http://bjs.ojp.usdoj.gov/content/pub/pdf/p10.pdf>.
2. Greenfeld LA, Snell TL. Women offenders. Washington, DC: U.S. Department of Justice/Office of Justice Programs, 2000 Oct. Available at: <http://bjs.ojp.usdoj.gov/content/pub/pdf/wo.pdf>.
3. Browne A, Miller B, Maguin E. Prevalence and severity of lifetime physical and sexual victimization among incarcerated women. *Int J Law Psychiatry*. 1999 May-Aug;22(3-4):301-22.
4. Maeve MK. Speaking unavoidable truths: understanding early childhood sexual and

- physical violence among women in prison. *Issues Ment Health Nurs*. 2000 Jul–Aug; 21(5):473–98.
5. McDaniels-Wilson C, Belknap J. The extensive sexual violation and sexual abuse histories of incarcerated women. *Violence Against Women*. 2008 Oct;14(10):1090–127.
 6. Anderson TL. Issues in the availability of health care for women in prison. In: Sharp SF, ed. *The incarcerated woman: rehabilitative programming in women's prisons*. Upper Saddle River, NJ: Prentice Hall, 2002.
 7. World Health Organization/United Nations Office on Drugs and Crime. *Women's health in prison: correcting gender inequity in prison health*. Copenhagen, Denmark: World Health Organization/United Nations Office of Drugs and crime, 2009. Available at: http://www.euro.who.int/__data/assets/pdf_file/0004/76513/E92347.pdf.
 8. Supreme Court of the United States. *Brown, Governor of California, et al. v. Plata et al: appeal from the United States District Courts for the Eastern and Northern Districts of California*. Washington, DC: Supreme Court of the United States, 2011. Available at: <http://www.supremecourt.gov/opinions/10pdf/09-1233.pdf>.
 9. Bloom B, Owen B, Covington S, et al. *Gender-responsive strategies: research, practice, and guiding principles for women offenders*. Washington, DC: U.S. Department of Justice/National Institute of Corrections, 2002 Oct. Available at: <http://static.nicic.gov/Library/018017.pdf>.
 10. DeHart DD. Pathways to prison: impact of victimization in the lives of incarcerated women. *Violence Against Women*. 2008 Dec;14(12):1362–81.
 11. Gilfus ME. From victims to survivors to offenders: women's routes of entry and immersion into street crime. *Women and Criminal Justice*. 1992;4(1):63–89.
 12. Messina N, Grella C. Childhood trauma and women's health outcomes in a California prison population. *Am J Public Health*. 2006 Oct;96(10):1842–8.
 13. Maruschak L. *Medical Problems of Prisoners*. Washington, DC: U.S. Department of Justice/Office of Justice Programs/Bureau of Justice Statistics, 2008 Apr. Available at: <http://bjs.ojp.usdoj.gov/content/pub/pdf/mpp.pdf>.
 14. Douglas N, Plugge E, Fitzpatrick R. The impact of imprisonment on health: what do women prisoners say? *J Epidemiol Community Health*. 2009 Sep;63(9):749–54.
 15. Young DS. Women's perceptions of health care in prison. *Health Care Women Int*. 2000 Apr–May;21(3):219–34.
 16. Harner HM, Hanlon AL, Garfinkel M. Effect of Iyengar yoga on the mental health of incarcerated women: a feasibility study. *Nurs Res*. 2010 Nov–Dec;59(6):389–99.
 17. Harner HM. Relationships between incarcerated women. *Moving beyond stereotypes*. *J Psychosoc Nurs Ment Health Serv*. 2004 Jan;42(1):38–46.
 18. Harner HM, Hentz PM, Evangelista MC. Grief interrupted: the experience of loss among incarcerated women. *Qual Health Res*. 2011 Apr;21(4):454–64. Epub 2010 Jun 25.
 19. Harner HM, Riley S. The impact of incarceration on women's mental health: responses from women in a maximum security prison. *Qual Health Res*. 2013 Jan;23(1):26–42. Epub 2012 Oct 3.
 20. Hsieh HF, Shannon SE. Three approaches to qualitative content analysis. *Qual Health Res*. 2005;15(9):1277–88.
 21. Slavkin HC, Baum BJ. Relationship of dental and oral pathology to systemic illness. *JAMA*. 2000 Sep;284(10):1215–7.
 22. Bose A, Jenner T. *Dental health in prisons*. IN: Moller L, Stover H, Jurgens R, et al. (Eds.). *Health in prisons: A WHO guide to the essentials in prison health*. Copenhagen,

- Denmark: The Regional Office for Europe of the World Health Organization, 2007. Available at: http://www.euro.who.int/__data/assets/pdf_file/0009/99018/E90174.pdf.
23. Walker EA, Milgrom PM, Weinstein P, et al. Assessing abuse and neglect and dental fear in women. *J Am Dent Assoc.* 1996 Apr;127(4):485–90.
 24. Willumsen T. Dental fear in sexually abused women. *Eur J Oral Sci.* 2001 Oct;109(5):291–6.
 25. Willumsen T. The impact of childhood sexual abuse on dental fear. *Community Dent Oral Epidemiol.* 2004 Feb;32(1):73–9.
 26. Stalker CA, Russell BD, Teram E, et al. Providing dental care to survivors of childhood sexual abuse: treatment considerations for the practitioner. *J Am Dent Assoc.* 2005 Sep;136(9):1277–81.
 27. Office of the Surgeon General/Office on Smoking and Health. The health consequences of smoking: a report of the Surgeon General. Atlanta, GA: Centers for Disease Control and Prevention, 2004.
 28. Butler T, Richmond R, Belcher J, et al. Should smoking be banned in prisons? *Tob Control.* 2007 Oct;16(5):291–3.
 29. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) study. *Am J Prev Med.* 1998 May;14(4):245–58.
 30. Hapke U, Schumann A, Rumpf HJ, et al. Association of smoking and nicotine dependence with trauma and posttraumatic stress disorder in a general population sample. *J Nerv Ment Dis.* 2005 Dec;193(12):843–6.
 31. Cropsey K, Eldridge GD, Ladner T. Smoking among female prisoners: an ignored public health epidemic. *Addict Behav.* 2004 Feb;29(2):425–31.
 32. Mitka M. Aging prisoners stressing health care system. *JAMA.* 2004 Jul;292(4):423–4.
 33. Reviere R, Young VD. Aging behind bars: health care for older female inmates. *J Women Aging.* 2004;16(1–2):55–69.
 34. Williams BA, Lindquist K, Sudore RL, et al. Being old and doing time: functional impairment and adverse experiences of geriatric female prisoners. *J Am Geriatr Soc.* 2006 Apr;54(4):702–7.