Executive Summary: Health Impact Review of HB 1728

Preventing the sexual harassment and sexual assault of certain isolated workers
(2019 Legislative Session)

Evidence indicates that HB 1728 has the potential to reduce sexual harassment and sexual assault among certain isolated workers, which may improve health outcomes and decrease health inequities by socioeconomic status, sex, race/ethnicity, and immigration status.

BILL INFORMATION

Sponsors: Frame, Sells, Shewmake, Macri, Orwall, Gregerson, Doglio, Pellicciotti, Ormsby, Callan, Pettigrew, Fitzgibbon, Jinkins, Pollet, Valdez, Mead, Thai, Peterson, Ryu, Stanford, Ortiz-Self, Tarleton, Wylie, Goodman, Ramos, Slatter, Bergquist, Riccelli

Summary of Bill:

- Requires every hospitality, retail, behavioral health care, or custodial employer, or labor contractor who employs a custodian, security guard, hotel or motel housekeeper, or worker who spends a majority of working hours alongside two or fewer coworkers at a location that is not the employee's home to: (1) Adopt a sexual harassment policy; (2) Provide mandatory training to the managers, supervisors, and employees; (3) Provide a list of resources for the employees to use; and (4) Provide a panic button to each worker that spends most working hours alongside two or fewer coworkers at a location that is not the employee's home.
- Requires the director of the Department of Labor and Industries to establish procedures for licensing property service contractors.

HEALTH IMPACT REVIEW

Summary of Findings:
This Health Impact Review found the following evidence regarding the provisions in HB 1728:

- **A fair amount of evidence** that adopting sexual harassment policies; providing mandatory training to managers, supervisors, and employees; and providing employees a list of resources will decrease workplace sexual harassment and sexual assault for certain isolated workers.
- **It is not well researched** whether providing a panic button to each isolated worker will decrease workplace sexual harassment and sexual assault or improve health outcomes for certain isolated workers.
- **Strong evidence** that decreasing workplace sexual harassment and sexual assault will improve health outcomes.
- **Strong evidence** that improving health outcomes will impact health inequities for certain isolated workers.

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Governor's Interagency Council on Health Disparities

Health Impact Review of HB 1728

Preventing the sexual harassment and sexual assault of certain isolated workers
(2019 Legislative Session)

March 11, 2019

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Introduction and Methods

A Health Impact Review is an analysis of how a proposed legislative or budgetary change will likely impact health and health disparities in Washington State (RCW 43.20.285). For the purpose of this review 'health disparities' have been defined as the differences in disease, death, and other adverse health conditions that exist between populations (RCW 43.20.270). This document provides summaries of the evidence analyzed by State Board of Health staff during the Health Impact Review of House Bill 1728 (HB 1728).

Staff analyzed the content of HB 1728 and created a logic model depicting possible pathways leading from the provisions of the bill to health outcomes. We consulted with experts and contacted key informants about the provisions and potential impacts of the bill. We conducted an objective review of published literature for each pathway using databases including PubMed, Google Scholar, and University of Washington Libraries. More information about key informants and detailed methods are available upon request.

The following pages provide a detailed analysis of the bill including the logic model, summaries of evidence, and annotated references. The logic model is presented both in text and through a flowchart (Figure 1). The logic model includes information on the strength-of-evidence for each relationship. The strength-of-evidence has been defined using the following criteria:

- **Not well researched:** the review of literature yielded few if any studies or only yielded studies that were poorly designed or executed or had high risk of bias.
- **A fair amount of evidence:** the review of literature yielded several studies supporting the association, but a large body of evidence was not established; or the review yielded a large body of evidence but findings were inconsistent with only a slightly larger percentage of the studies supporting the association; or the research did not incorporate the most robust study designs or execution or had a higher than average risk of bias.
- **Strong evidence:** the review of literature yielded a large body of evidence on the relationship (a vast majority of which supported the association) but the body of evidence did contain some contradictory findings or studies that did not incorporate the most robust study designs or execution or had a higher than average risk of bias; or there were too few studies to reach the rigor of "very strong evidence;" or some combination of these.
- **Very strong evidence:** the review of literature yielded a very large body of robust evidence supporting the association with few if any contradictory findings. The evidence indicates that the scientific community largely accepts the existence of the association.

This review was subject to time constraints, which influenced the scope of work for this review. The annotated references are only a representation of the evidence and provide examples of current research. In some cases only a few review articles or meta-analyses are referenced. One article may cite or provide analysis of dozens of other articles. Therefore the number of references included in the bibliography does not necessarily reflect the strength-of-evidence. In addition, some articles provide evidence for more than one research question, so are referenced multiple times.

Analysis of HB 1728 and the Scientific Evidence

Summary of relevant background information

- The U.S. Equal Employment Opportunity Commission (EEOC) is responsible for enforcing federal laws that make it illegal to discriminate against a job applicant or an employee (e.g., sex, race, national origin). Additionally, it is illegal to "discriminate against a person because the person complained about discrimination, filed a charge of discrimination, or participated in an employment discrimination investigation or lawsuit."[1]
- State law (RCW Chapter 49.60) protects people in Washington from unfair and discriminatory practices. Specifically, complaints of employment discrimination are filed with the Washington State Human Rights Commission (WSHRC). The WSHRC's jurisdictional criteria include: 1) employer has at least 8 employees (does not include religious organizations) and 2) signed complaints need to be filed within 6 months of last date of alleged discrimination.[2]
- In the workplace, a harasser can be supervisor, co-worker, client, or customer.
- There are two types of sexual harassment:
    - Quid pro quo—occurs when a supervisor or manager asks for sexual favors from an employee in return for employment benefits "such as a promotion, salary increase, career development opportunities, special projects, or other [work related] benefits."[3]
    - Hostile work environment—occurs when harassment is frequent or severe enough to interfere with an employee's ability to perform their job. Behaviors can include "unwelcome, sexually suggestive or gender based comments or jokes; unwelcome and repeated requests for dates; offensive gestures; inappropriate touching; or display of pornographic materials."[3]
- In 2016, California passed AB 1978, Employment: property service workers. Among other provisions, the legislation required the Division of Labor Standards Enforcement to establish a biennial in-person sexual violence and harassment prevention training requirement for all employees (janitorial workers) and employers (any person or entity that employs at least one employee and one or more covered janitorial workers and enters into contracts, subcontracts, or franchise arrangements to provide janitorial services) by January 1, 2019.[4]
- In 2016, Seattle voters passed Initiative 124, a ballot measure regulating labor relations in the hotel industry. Among the various provisions, the ordinance required employers to provide panic buttons to hotel employees providing in-room services.[5] The American Hotel and Lodging Association (AHLA), the Seattle Hotel Association, and the Washington Hospitality Association filed a lawsuit claiming the ballot measure was too broad, and in December 2018, the Washington State Court of Appeals struck down the Seattle ordinance.[6] However, the decision has been appealed to the State Supreme Court and is still in effect as of March 2019.
- The Seattle Hotel Association and Washington Hospitality Association testified in support of HB 1728, stating the sexual harassment policy, required anti-sexual

harassment trainings, provision of employee resources, and use of employee safety devices (e.g., panic buttons) align with the AHLA's 5-Star Promise, "a pledge to provide hotel employees across the U.S. with employee safety devices (ESDs) and commit to enhanced policies, trainings and resources that together are aimed at enhancing hotel safety, including preventing and responding to sexual harassment and assault."[7]

Summary of HB 1728

- Requires every hospitality, retail, behavioral health care, or custodial employer, or labor contractor who employs a custodian, security guard, hotel or motel housekeeper, or worker who spends a majority of working hours alongside two or fewer coworkers at a location that is not the employee's home to: (1) Adopt a sexual harassment policy; (2) Provide mandatory training to the managers, supervisors, and employees; (3) Provide a list of resources for the employees to use; and (4) Provide a panic button to each worker that spends most working hours alongside two or fewer coworkers at a location that is not the employee's home.
- Requires the director of the Department of Labor and Industries to establish procedures for licensing property service contractors.

Health impact of HB 1728

Evidence indicates that HB 1728 has the potential to reduce sexual harassment and sexual assault among certain isolated workers, which may improve health outcomes and decrease health inequities by socioeconomic status, sex, race/ethnicity and immigration status.

Pathway to health impacts

The potential pathway leading from the provisions of HB 1728 to decreased health inequities are depicted in Figure 1. There is a fair amount of evidence that adopting sexual harassment policies; providing mandatory training to managers, supervisors, and employees; and providing employees a list of resources will decrease workplace sexual harassment and sexual assault for certain isolated workers.[8-17] There is strong evidence that decreasing workplace sexual harassment and sexual assault will improve health outcomes.[18-24] There is strong evidence that improving health outcomes would decrease health inequities for certain isolated workers[22,24,25] by socioeconomic status,[25-30] sex,[18,31] race/ethnicity,[10,22,24-26,29,32-34] and immigration status.[25,35-37]

It is not well researched whether providing a panic button to each isolated worker will decrease workplace sexual harassment and sexual assault or improve health outcomes for certain isolated workers. See page 14 for discussion of potential pathways related to this provision.

Due to time limitations, we only researched the most direct connections between provisions in the bill and decreased health inequities and did not explore the evidence for all possible pathways. For example, we did not evaluate potential impacts to:

- An individual's financial situation, opportunities for career advancement, or employment status,[25] which may indirectly impact health outcomes through employment and earning potential. For example, one study found that women who experienced workplace sexual

harassment were 6.5 times as likely to change jobs compared to women who did not experience harassment.[25]

- The organizations or companies stipulated in HB 1728. For example, a literature review found that workplace harassment can result in high legal costs, increased employee absences, high employee turnover, decreased productivity, and lower motivation and commitment from employees, and poorer team performance,[25] which may impact business solvency and employment opportunities.
- The organizations or companies detailed in HB 1728 related to licensing through the Washington State Department of Labor and Industries (L&I).

In addition, while most of the literature related to sexual assault and sexual harassment focuses on cisgender women and/or trans women, cisgender men, trans men, and non-binary individuals are also at risk of experiencing sexual violence. Findings in this report are limited to the study populations of published literature. To the greatest extent possible, staff attempted to specifically note populations included in the original research article.

Magnitude of impact

According to May 2017 data, the U.S. Bureau of Labor Statistics (BLS) estimates there are 19,760 security guards; 44,680 janitors and cleaners (not including maids and housekeeping cleaners); and 17,800 maids and housekeeping cleaners working in Washington State.[38] Additionally, there were an estimated 2,440 first-line supervisors of housekeeping and janitorial workers.[38]

Due to limited data on sexual harassment and sexual assault generally (e.g., underreporting, unavailable internal employer investigations data),[13] analysts were unable to identify the prevalence of workplace sexual harassment and sexual assault. However, past research has indicated that working in isolation is a risk factor for workplace rape/sexual violence.[8,10,13] Nationally, the Equal Employment Opportunity Commission (EEOC) received approximately 28,000 charges in fiscal year 2015 that alleged harassment from employees working for private employers or for state and local government employers, generally.[8] Of these, approximately 45% alleged harassment on the basis of sex. Further, an analysis of EEOC data from 2005 to 2015 found that 85,257 sexual harassment charges were filed with the EEOC over that time period, with 80% of the claims made by women.[9] By industry, the largest percentage of claims were made by individuals in the accommodation and food services industries (14.23%), followed by individuals in retail trade (13.44%), manufacturing (11.72%), health care and social assistance (11.48%), and administrative and support and waste management and remediation (6.92%).[9] Finally, an analysis of Bureau of Justice Statistics, National Crime Victimization Survey data from 2002 to 2011 found an annual average of 15,200 workplace rape/sexual assault among government employees (rate of 0.6 per 1,000 employees age 16 or older) and 28,180 among private-sector employees (rate of 0.2 per 1,000 employees age 16 or older).[39]

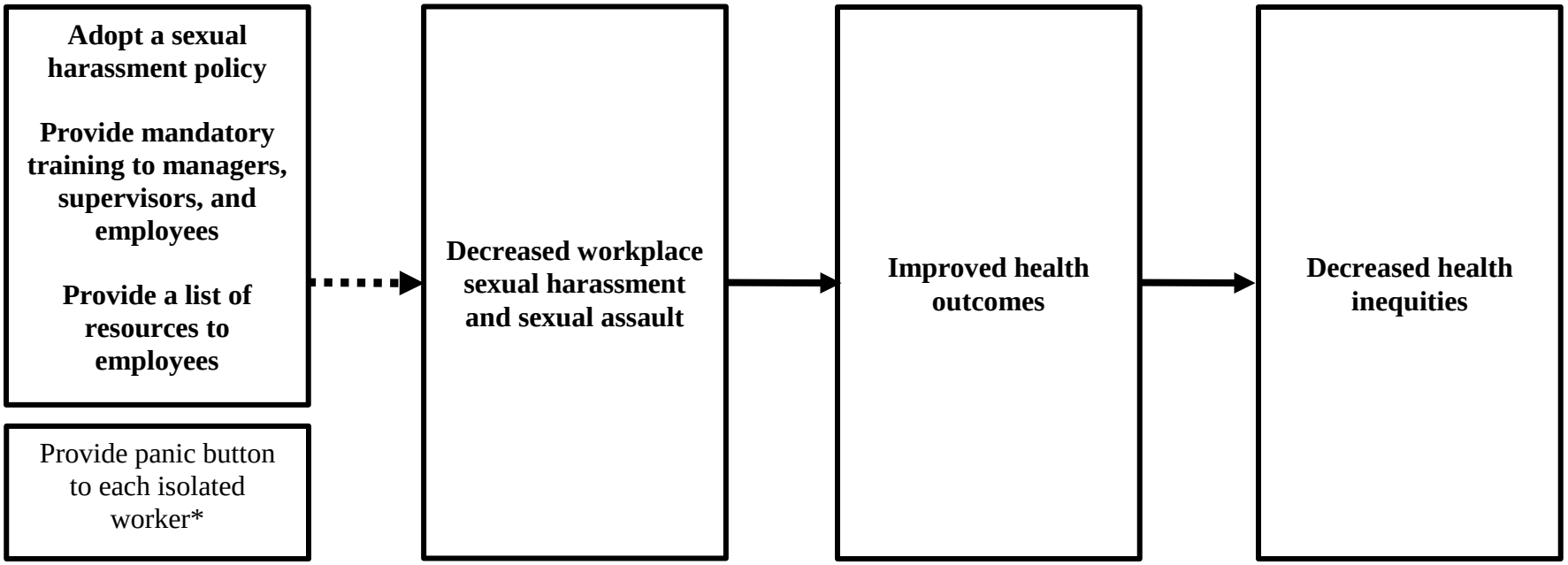
Similarly, analysts could not identify Washington-specific prevalence data on workplace sexual harassment and sexual assault among workers specified in HB 1728. However, a 2016 survey conducted among housekeeping staff working in downtown Seattle hotels found that, of respondents willing to answer questions related to sexual harassment and assault, 53% (52 of 99) reported a total of 262 incidents of sexual harassment and assault (e.g., groped or otherwise

physically harassed, received unwanted sexual comment or gesture, flashed or exposed to nudity).[11] Moreover, 47% reported hearing from friends or coworkers of similar experiences.[11] These findings are consistent with a similar survey conducted among hospitality workers in Chicago, Illinois.[12]

Analysts contacted staff at the King County Prosecuting Attorney's Office (KCPAO) and Washington State Department of Labor and Industries (L&I) to learn more about whether victims and survivors of sexual violence may report workplace sexual assaults to entities other than through their employer. A key informant at the KCPAO shared that the data system does not include a category of crime for workplace sexual assault (KCPAO, personal communication, March 2019). Anecdotally, the key informant shared the office does not see many such cases on the criminal prosecution side, and that such victimizations are underreported, especially in many immigrant communities (KCPAO, personal communication, March 2019). Analysts obtained L&I data from the Safety & Health Assessment & Research Prevention (SHARP) program through communication with Darrin Adams, SHARP's data scientist in February 2019.

> "'Assault', within the Occupational Injury and Illness Classification System used by workers' compensation, is a characterization of the events leading to injury. According to Washington Workers' Compensation data from 2007 to present, 24 claims from employees in relevant industries and occupations have been characterized as sexual assaults. However, no determination is made as to the intent of the non-claimant/alleged perpetrator, and no determination is made as to whether an actionable criminal or tort offense has occurred. Because these determinations are not germane to adjudication of the claim, elements necessary to characterize these distinctions are often absent from the administrative data. Therefore, this number is likely an undercount as some of the other assaults involving persons (N=2,975) may also be pre-cursor or unrecognized sexual assaults."

Logic Model



**See page 14 for discussion of potential pathways related to this provision.*

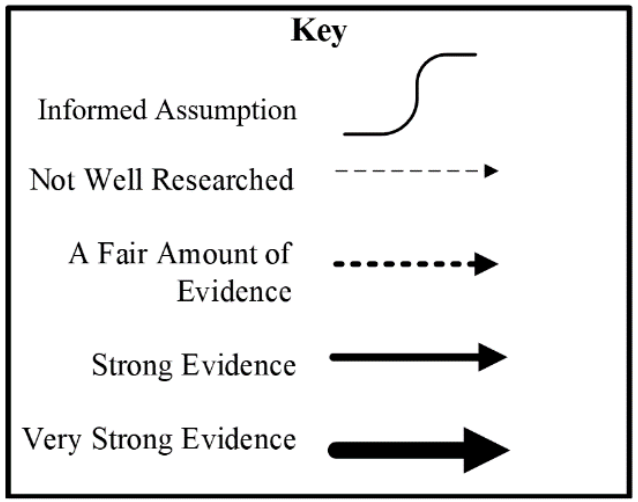


Figure 1

Preventing the sexual harassment and sexual assault of certain isolated workers

HB 1728

Summaries of Findings

Will adopting sexual harassment policies; providing mandatory training to managers, supervisors, and employees; and providing employees a list of resources decrease workplace sexual harassment and sexual assault for certain isolated workers?

There is a fair amount of evidence that adopting sexual harassment policies; providing mandatory training to managers, supervisors, and employees; and providing employees a list of resources will decrease workplace sexual harassment and sexual assault for certain isolated workers. In January 2015, the Equal Employment Opportunity Commission (EEOC) convened the Select Task Force on the Study of Harassment in the Workplace (Select Task Force) to examine the myriad and complex issues associated with harassment in the workplace.[8] Over the course of 18 months, the multidisciplinary group (i.e., representatives from academia, legal practitioners, employers and employee advocacy groups, and organized labor) conducted an extensive literature review, interviewed more than 30 witnesses, and received multiple public comments.[8]

The Select Task Force determined that although workplace harassment remains a persistent problem, "[t]he least common response to harassment is to take some formal action – either to report the harassment internally or file a formal complaint."[8] Specifically, approximately "three out of four individuals who experience harassment never talked to a supervisor, manager, or union representative about the harassing conduct."[8] Factors contributing to an individual's decision not to report or file a complaint included fear that their claim would not be believed, fear that their claim would not be acted on, fear that they would be blamed, or fear that they would experience social or professional retaliation.[8] Analysis of EEOC data from 2005 to 2015 found that 75% of sexual harassment claims filed with the EEOC included an allegation of retaliation.[9] Evidence indicates that "[t]he threat of retaliation keeps workers from reporting and increases the harassers' confidence that they will not be caught."[10] The EEOC report states "[t]he most common workplace-based responses by those who experience sex-based harassment are to avoid the harasser, deny or downplay the gravity of the situation, or attempt to ignore, forget, or endure behavior."[8]

The EEOC findings are consistent with experiences documented in surveys conducted with hotel housekeeping staff and shared by key informants in Washington State. Results of a 2016 survey of housekeeping staff in downtown Seattle hotels found that 51% of those surveyed who had experienced sexual harassment in the workplace rarely or never told their supervisors about the incident.[11] Similarly, a survey of hotel workers in Chicago found that just 1 in 3 workers who stated they had experienced incidents of sexual harassment by guests had reported it to a supervisor.[12] Respondents shared that they did not see value coming forward about the sexual harassment they experienced.[12] A key informant who experienced sexual harassment in the workplace from a supervisor explained that their coworkers would not corroborate the harassing behaviors they witnessed for fear of losing their jobs (personal communication, February 2019). Additionally, key informants shared that lack of time/space to make reports and lack of language assistance services also function as barriers to reporting incidents (Unite Here Local 8, personal communication, February 2019). In addition, results from the Chicago survey indicate that of those hospitality workers who did report sexual harassment by a guest to their manager or supervisor, "only 38% said they always felt satisfied with the response."[12]

Past research has found that organizational characteristics are predictors of sexual assault risk[13] and that "levels of influence that interact to form an individual's perception of workplace stress are largely driven by workplace policies and procedures, including interactions with co-workers and supervisors as well as general life experience with violence, abuse, and/or discrimination."[23] Similarly, the EEOC study found that "[w]orkplace culture has the greatest impact on allowing harassment to flourish, or conversely, in preventing harassment."[8] Leadership (from the top), accountability systems (i.e., meaningful, appropriate, and proportional responses), and investment of time and resources are critical to effectively handling and preventing sexual harassment.[8] Based on practical and anecdotal evidence collected from employers and trainers, the Select Task Force concluded that "training *is* an essential component of an anti-harassment effort. However, to be effective in stopping harassment, such training *cannot stand alone but rather must be part of a holistic effort*[.]"[8] Due to limited empirical evidence, authors cite the need for additional research on "what types of training are effective, and what components, beyond training, are needed to make the training itself most effective."[8]

Experience shared by practitioners indicated that compliance training for all employees is important to educate "employees about what forms of conduct are not acceptable in the workplace and about which they have the right to complain."[8] Additionally, authors recommend that trainings should not be limited to the legal definition of harassment, but "rather should also describe conduct that, *if left unchecked*, might rise to the level of illegal harassment."[8] Requiring this type of training is particularly important for middle-management and first-line supervisors so that they are able to address such conduct before it rises to the level of illegal harassment.[8]

The EEOC report included detailed recommendations related to implementing a holistic approach to preventing and appropriately addressing harassment in the workplace.[8] For example, recommendations included developing anti-harassment policies; communicating policies regularly to employees; implementing reporting systems that provide a supportive environment where employees feel safe to express their views and do not experience retaliation; and others.[8] The authors noted that better empirical evidence on the effectiveness of reporting systems is necessary. Similarly, a key informant from Unite Here Local 8, which represents about 5,000 workers in the hospitality industries of Oregon and Washington States, shared that clarifying for workers what constitutes sexual harassment and sexual assault and outlining the employers' responsibility would provide a valuable roadmap for employees (Unite Here Local 8, personal communication, February 2019). For example, "[j]ust 19% of hospitality workers surveyed [in Chicago] said they had received training from their employer on how to deal with sexual harassment by guests."[12] Moreover, it is critical that policies and investigation protocols are implemented consistently. The EEOC recommends, "[w]here harassment is found to have occurred, discipline is consistent, and does not give (or create the appearance of) undue favor to any particular employee."[8] Thus, complaints against frontline supervisors or managers should be handled with the same degree of gravity.

While slightly less generalizable, a case control study quantitatively evaluated the impact of written workplace violence policies on physical assault in educational settings in Minnesota.[14] As part of the Minnesota Educators' Study, the authors evaluated whether nine different workplace violence policies were in place before physical assault events or during the month of

the event for 372 educators who reported work-related physical assault in the past 12 months and for 1,116 educators who did not report assault.[14] While they found that the presence of all nine policies were associated with decreased physical assault, the risk of physical assault significantly decreased with the presence of policies about specifying how to report sexual harassment, verbal abuse, and threat; policies assuring confidential reporting; and policies stipulating zero tolerance for violence.[14] Although these findings may not be wholly generalizable to other occupations, they do suggest that policies addressing sexual harassment and sexual assault in the workplace may decrease the risk of workplace violence.

Assessing the effectiveness of sexual harassment policies and trainings is challenging as sexual harassment and sexual assault often go unreported. In addition, the effectiveness of the policy, training, and resources will also be impacted by implementation (e.g. level of transparency, level of engagement,[15] language access, and cultural humility), organizational and leadership attitudes,[16,17] funding,[14] and enforcement.[14] However, since developing and implementing policies, trainings, and resources to prevent or reduce workplace sexual harassment and sexual assault may shift workplace culture, there is a fair amount of evidence that these provisions may decrease workplace sexual harassment and assault for certain isolated workers.

Will decreasing workplace sexual harassment and sexual assault improve health outcomes? There is strong evidence that decreasing workplace sexual harassment and sexual assault will improve health outcomes. Sexual assault and sexual harassment can result in acute health outcomes as well as long-term physical and mental health problems.

The American College of Obstetricians and Gynecologists (ACOG) recognizes acute medical consequences of sexual assault, including injuries ranging from scratches and fractures, to head and facial trauma, lacerations, bullet wounds, and death.[18] Evidence indicates that two-thirds of victims of rape who report to the emergency department report general body trauma.[19] Victims of sexual assault are also at risk of unintended pregnancy, sexually transmitted infections (STIs), and mental health conditions.[13,18] Long-term physical health effects include chronic pelvic pain, dysmenorrhea, and sexual dysfunction.[18] Additionally, long-term psychologic and mental health concerns may include anxiety, fear, depression, self-destructive behavior, somatic symptoms, Posttraumatic Stress Disorder (PTSD), rape trauma syndrome, and substance use.[13,18] For example, one study found that sexual assault was significantly associated with greater odds of depressive symptoms, anxiety, and poor sleep, and women that experienced sexual assault had a 3-fold greater odds of a major depressive disorder compared to women who did not experience sexual assault.[20] Lastly, "long-term manifestations of sexual assault include diminished quality of life, an altered perception of one's health, decreased overall functional status, nonspecific genital symptoms, depression, chronic pelvic pain, and sexual dysfunction."[21]

In the short-term, workers that experience workplace sexual harassment may experience worse health outcomes including general poor mental health, anxiety, depression, poor self-rated health and unhealthy days, headaches, stomachaches, and disrupted sleep.[22] A nationally-representative survey of 2,151 workers aged 18 and older in the U.S. found that generalized workplace harassment, sexual harassment, and job threat/pressure were independently and significantly associated with reporting an occupational injury, illness, or assault, even after controlling for age, sex, race/ethnicity, and occupation.[23] For example, workers that experienced sexual

harassment were 1.18 times as likely to report occupational injury, illness, or assault in the past 12 months.[23]

Workplace sexual harassment may also have long-lasting physical and mental health effects. These impacts may include chronic pain, STIs, unintended pregnancies, PTSD, depression, panic, anxiety, nervousness, substance abuse, and a myriad of other conditions, many of which affect an individual's ability to work.[22] A 2019 cohort study with women aged 40 to 60 living in Pittsburgh, Pennsylvania found that workplace sexual harassment was significantly associated with greater odds of hypertension and poor sleep.[20] The increase in systolic blood pressure was clinically significant as well, resulting in a 20% increased risk for cardiovascular disease among women who had experienced workplace sexual harassment.[20]

Research has found that occupational stress generally may have multiple health impacts, including depression, anxiety, diminished mental functioning (e.g., inattentiveness, fatigue), headaches, absenteeism, and occupational injuries.[23] In addition, generalized work harassment and sexual harassment have been linked to "recipients feeling a sense of threat and insecurity in their jobs, potentially influencing their ability to function productively and safely carry out work tasks. Research suggests that harassment in the workplace represents a particularly pathogenic form of stress, as [sexual harassment and generalized work harassment] have been shown to predict negative mental health outcomes above and beyond the effects of more typically studied job stressors."[23] Overall, work-related psychosocial factors (including harassment) have been associated with increased depression, anxiety, mood disorders, psychosomatic symptoms, low self-esteem, substance use (e.g., alcohol use), and mental and psychological distress.[24] An analyses of the 2010 National Health Interview Survey found that poor mental health outcomes were significantly higher for women reporting job insecurity, workplace harassment, and work-family conflict.[24]

Overall, there is strong evidence that decreasing workplace sexual harassment and sexual assault will improve short and long-term health outcomes.

Will improving health outcomes impact health inequities for certain isolated workers?
There is strong evidence that improving health outcomes would decrease health inequities for certain isolated workers. A review of literature found that certain employment situations were associated with high rates of sexual harassment including, working for tips (including hotel housekeepers); working in isolation (including janitors, domestic care workers, hotel workers, agricultural workers); lacking legal immigration status or having only a temporary work visa; working in a male-dominated job (e.g., construction); and working in a setting with significant power differentials.[25] These workplace characteristics may contribute to underlying health disparities as disadvantaged populations are more likely to experience harassment.[22] In addition, the impact of these work-related psychosocial factors on health have been shown to differ by race/ethnicity and sex: individuals of color and women are more likely to experience negative health outcomes as a result of workplace harassment.[24]

Inequities by socioeconomic status
The occupations included in HB 1728 are predominately low-wage positions. In Washington State the annual mean wage for all occupations is $57,480.[38] Janitors and cleaners (except maids

and housekeeping cleaners) make an annual mean wage of $32,830; maids and housekeeping cleaners make an annual mean wage of $27,390; and security guards make an annual mean wage of $37,410.[38] Evidence from California indicates that while inflation-adjusted average earnings in California's private sector industries grew by 128% from 1990-2014, the janitorial services and security services industries have only grown by 6% and 18%, respectively.[10] Moreover, wages in property services have been stagnate or declining since 2000.[10]

Low-wage workers are at increased risk of sexual harassment, and lower socioeconomic position may make it more difficult for a worker to leave a job or file a complaint due to fears of job loss or retaliation.[25] In addition, hotel, hospitability, restaurant, and retail workers are more likely to depend on tips to supplement wages, which puts them at heightened risk of sexual harassment.[26] A report by the National Women's Law Center explained, "the reliance on customer tips as income forces tipped workers to tolerate sexual harassment and other inappropriate behavior from customers just to make a living, which in turn perpetuates a culture of harassment in tipped industries."[26]

A report by the U.S. Agency for Healthcare Research and Quality stated, "more than half of measures show that [low-income] households have worse care than high-income households" and that "significant disparities continue for people [with low-incomes] compared with high-income people who report they were unable to get or were delayed in getting needed medical care due to financial or insurance reasons."[27] Significant correlations exist between lower income and a number of health indicators including worse overall self-reported health, depression, asthma, arthritis, stroke, oral health, tobacco use, women's health indicators, health screening rates, physical activity, and diabetes.[28] Further, 2015 data indicate that age-adjusted death rates were higher in Washington census tracks with higher poverty rates.[29] Household income was the strongest predictor of self-reported health status in Washington in 2016, even after accounting for age, education, and race/ethnicity.[30] There is strong consensus in the scientific literature that improving health outcomes for low income populations would help decrease health disparities by income.

Inequities by sex

According to 2018 U.S. occupational data from the BLS, women accounted for 34.1% of janitors and building cleaners, 90.1% of maids and housekeeping cleaners, and 22.4% of security guards and gaming surveillance officers.[40] Overall, the majority of surveys of sex-based harassment at work have focused on harassment experienced by cisgender women.[8] However, people of all gender identities and sexual orientations are at risk of sexual harassment and sexual assault in the workplace, and trans women of color generally are at greater risk of sexual violence.

Nationally, an estimated 25% to 85% of women have experienced workplace sexual harassment[8] and 36% of women have experienced sexual assault.[20] In addition, 80% of claims filed with EEOC from 2005 to 2015 were made by women.[9] Furthermore, "research shows that when workplace power disparities are gendered (e.g., most of the support staff are women and most of the executives are men), more harassment may occur."[8] Individuals who can become pregnant are at risk of negative health outcomes associated with sexual harassment and sexual assault, including unintended pregnancy,[18] gynecological complications, cervical cancer, as well as other physical (e.g. STIs, migraines) and psychological (e.g., anxiety and depression).[31]

Inequities by race/ethnicity

While Washington specific occupation data are not available by race/ethnicity, 2018 nationwide data from the BLS indicate that Black/African American and Hispanic/Latino workers are disproportionately represented in occupations included in HB 1728 (Table 2).[40]

Table 2. Employed persons in the United States by selected occupation, race, and Hispanic or Latino ethnicity [numbers in thousands][40]

Occupation	2018				
	Total employed	Percent of total employed			
		White	Black or African American	Asian	Hispanic or Latino
Total U.S. employment, 16 years and over	155,761	78.0	12.3	6.3	17.3
Janitors and building cleaners	2,342	73.0	19.1	3.5	32.8
Maids and housekeeping cleaners	1,512	74.1	16.1	4.5	49.3*
Security guards and gaming surveillance officers	958	60.0	30.7*	3.9	16.8
NOTE: Estimates for the above race groups (White, Black or African American, and Asian) do not sum to totals because data are not presented for all races. Persons whose ethnicity is identified as Hispanic or Latino may be of any race. * Indicates practical significance[41]					

An analysis of sexual harassment claims filed with the EEOC between 2012 and 2016 found that, "women of color…are disproportionately [more] likely to experience sexual harassment at work. Out of the charges filed by women, 56 percent were filed by women of color; yet, women of color only make [up] 37 percent of women in the workforce."[26] In addition, a 2014 review of literature found that "minority and other disadvantaged workers are systematically hired into certain (usually lower power) positions."[22] The authors cite data showing that people of color and immigrants are disproportionately hired into jobs with poorer working conditions, and are therefore at higher risk for work-related injury or illness.[22] They stated, "available evidence suggests that, after controlling for differences in education and experience, African-American and Hispanic workers are consistently more likely to be employed in occupations where serious injuries and illnesses are more likely to occur."[22]

EEOC data show that Black women are more likely than any other race/ethnicity to file a claim for sexual harassment.[25,26] Black women filed sexual harassment charges at 3 times the rate of white, non-Hispanic women and were disproportionately represented in sexual harassment charges across every industry.[26] For example, Black women make up 13.6% of the accommodation and food services industry, but file 31.4% of the sexual harassment charges within that industry.[26] An analyses of the 2010 National Health Interview Survey found that poor mental health outcomes related to workplace factors were highest among non-Hispanic Black women (36%) compared to Hispanic women (34%) and white women (30%).[24]

A 2016 review of literature found that working-class Latinas in the U.S. experience mental health disparities and are at high risk for depression, anxiety, and substance use.[32] The review found that workplace sexual harassment contributes to these poor mental health outcomes as well as to poor physical and psychological health and job and life dissatisfaction.[32] Evidence indicates that the top concern of many Latina workers is "keeping their jobs, even at the expense of their health or accepting unfair treatment at work."[10] Further, related specifically to occupational hazards, they found that dangerous jobs, occupational mobility, workplace racial discrimination, sexual harassment, and external work-related factors (e.g., language access) contribute to these poor mental health outcomes.[32]

Lastly, it is well-documented that communities of color experience worse health outcomes than their counterparts for many health measures. A report by University of California Berkeley's Henderson Center for Social Justice stated that "overall, people of color rate their health status lower than Whites ([non-Hispanic]). The life expectancy at birth for African Americans is five years less than for Whites...In general, people of color report less access to health care and poorer quality health care than Whites ([non-Hispanic])."[33] In Washington, communities of color have higher rates of tobacco use, and poorer self-reported health and mental health.[29,34,42,43] In addition, data indicate black residents experience a variety of health inequities compared to other groups in the state, including higher age-adjusted death rates and shorter life expectancies at birth.[29,44-48]

Inequities by immigration status

According to the Pew Research Center, in 2014 "more than a third (35%) of the 6.7 million people in building and grounds cleaning and maintenance occupations were immigrants."[35] In addition, immigrants accounted for about half of maids and housekeeping cleaners.[35] The Institute for Women's Policy Research found that individuals who are undocumented often work in agricultural, food processing, garment, domestic work, and janitorial services occupations.[25] They explain that victims of workplace sexual harassment and sexual assault have protections against deportation, "yet many fear that reporting harassment or assault will put their immigration status at risk...Retaliation against women who speak up against workplace sexual assault may involve threats to call Immigration and Customs Enforcement or to revoke temporary work visas."[25] Immigrants may also find it difficult to understand their rights or to report an incident due to lack of language accessibility (e.g., trainings, handbooks, materials).[25]

Immigrants are more likely to experience poor reproductive health outcomes, including unintended pregnancy, unintended birth, STIs, adverse birth outcomes, and longer durations of infertility than the general population.[49-51] Individuals who are undocumented experience worse reproductive health outcomes than immigrants with legal status or the general population.[51] Individuals who are undocumented also experience higher rates of morbidity and mortality.[37] For example, individuals who are undocumented have lower immunization rates, untreated mental health issues, and are less likely to follow-up for treatment for infectious diseases, tuberculosis, and HIV/AIDS.[36]A systematic review found that individuals who are undocumented "are at highest risk of depressive symptoms and are disproportionately impacted by PTSD, anxiety, and depression when compared to other documented immigrants and citizens."[37]

Overall, there is strong evidence that improving health outcomes would decrease health inequities for certain isolated workers by socioeconomic status, sex, race/ethnicity, and immigration status.

Other considerations

We also researched the potential pathways from provisions in the bill related to providing a panic button to each isolated worker. However, it is not well-researched whether providing a panic button to each isolated worker may prevent sexual harassment and sexual assault or improve health outcomes. The impact of panic buttons on deterring sexual harassment and sexual assault or on increasing individuals' sense of safety has not been evaluated. However, anecdotal information suggests that panic buttons may increase perceived sense of safety or decrease fear.[11,12,52] For example, among Seattle hotel housekeeping staff surveyed, 95% said they would feel safer if equipped with a panic button.[11] Similarly, survey results from Chicago hotel housekeeping staff found that 96% of housekeepers said they would feel safer if equipped with a panic button.[12]

Though less generalizable, in 2016, the Indian government mandated that cell phones sold in India after 2017 include a panic button for women's safety.[53] A qualitative study with women in New Delhi, India determined that women generally felt a panic button could hypothetically act as a deterrent for a potential perpetrator of a crime.[53] However, "women's sense of safety may be deconstructed into a multitude of factors- personal, public, social, technological- that must align for this sense of [personal] safety to be preserved" and that the current panic button system in India does not address all of these factors.[53] For example, the authors cited a number of limitations to the efficacy of panic buttons, including the unreliability of accessing a mobile phone during an incident; the reactive (instead of proactive or preventive) nature of a panic button; the uncertainty of whether help would arrive every time or in time to prevent the incident; the discomfort of contacting the police (who may also be a source of harassment); and the lack of awareness and accurate knowledge about the system.[53] Contacting the police differed culturally, and the authors recommended that panic buttons be configurable so that a woman could choose whether the button contact the police or family, friends, or coworkers.[53] They noted that the panic button would not work for all users and that, "interventions like the panic button are designed for something that should not be happening in the first place and…rely on certain assumptions of how sexual assault 'typically happens.'"[53] While the findings from this study are specific to the context in New Delhi, some of the limitations may apply to workers in Washington as well.

Overall, there is not a large enough body of research to determine whether providing a panic button to each isolated worker may reduce sexual assault or sexual harassment or improve health outcomes. For this reason, this pathway was not included in the logic model on page 5.

Annotated References

1. **U.S. Equal Employment Opportunity Commission. Overview. Available at: https://www.eeoc.gov/eeoc/. Accessed.**
This webpage provides an overview of the U.S. Equal Employment Opportunity Commission (EEOC), which is responsible for enforcing federal anti-discrimination laws. "The laws apply to all types of work situations, including hiring, firing, promotions, harassment, training, wages, and benefits."

2. **Washington State Human Rights Commission. Employment | Washington State Law Against Discrimination. 2019; Available at: https://www.hum.wa.gov/employment. Accessed March, 2019.**
This Washington State Human Rights Commission webpage provides an overview of the Commission's jurisdiction, prohibited actions (i.e., discrimination and retaliation), how to file complaints, investigations, and relevant laws and regulations (RCW / WAC).

3. **Sexual Harassment Law | A Guide for Employees in Washington State. Olympia, Washington: Washington State Office of the Attorney General.**
This document provides an overview of sexual harassment law. It defines sexual harassment, details requirements for employers, and provides options and resources for those who experience or observe sexual harassment to report to government agencies.

4. **Assembly Bill No. 1978 The Property Service Workers Protection Act, 1429.5 Labor Code(2016).**
This California State Legislative Information website details AB-1978, Employment: property service workers, which the governor signed into law on September 15, 2016. Among other requirements, the law creates a sexual violence and sexual harassment prevention training requirement for employers and employees that provide janitorial services (i.e., contracts, subcontracts, or franchise arrangements).

5. **Initiative 124, An act establishing minimum health and safety standards for hotel employees in the City of Seattle. . 2016.**
This City of Seattle Clerk document details Initiative 124, which required certain size hotel-employers to further protect employees against assault, sexual harassment, and injury through a variety of provisions (panic buttons [employee safety devices], protections from chemical hazards, enforcement, etc.).

6. **American Hotel & Lodging Association, Seattle Hotel Association, and Washington Hospitality Association v. City of Seattle, Unite HERE! Local 8, and Seattle Protects Women. In: I CoAD, ed. *No. 77918-4-1 Division One Published Opinion.* Vol No. 77918-4-1/4. Seattle, Washington: Washington Courts; 2018.**
This Opinion from the Court of Appeals for the State of Washington's Division 1 details why the court ruled the Seattle ordinance, Initiative 124, unconstitutional. "Because there is not rational unity between the provisions of I-124, it is impossible for the court to determine whether any provision would have received majority support if voted on separately." Thus, the opinion

concludes that "I-124 violated the single subject rule set out in RCW 35A.12.130 and article IV, section 7 of the Seattle City Charter."

7. **Hotel Industry Announces Added Safety Measures for Employees; Builds on Layers of Security Procedures [press release]. Washington, DC: American Hotel & Lodging Assocation, 6 September 2018 2018.**
This press release from the American Hotel & Lodging Association outlines the industry's 5-Star Promise, "a pledge to provide hotel employees across the U.S. with employee safety devices (ESDs) and commit to enhanced policies, trainings and resources that together are aimed at enhancing hotel safety, including preventing and responding to sexual harassment and assault." The document notes that ESDs had been deployed in New York, Washington, DC, Chicago, and Seattle. The announcement states that the Association members intend to expand implementation across the country by 2020.

8. **Feldblum C.R., Lipnic V.A. Select Task Force on the Study of Harassment in the Workplace.Washington, DC: Equal Employment Opportunity Commission;2016.**
This report from the Equal Employment Opportunity Commission's (EEOC) Select Task Force on the Study of Harassment in the Workplace ("Select Task Force") documents 18-months of work examining the myriad and complex issues associated with harassment in the workplace. Created in January 2015, the Select Task Force was comprised of 16 members from around the country (e.g., representatives from academia, legal practitioners, employers and employee advocacy groups, and organized labor). From April 2015 through June 2016, the Select Task Force held meetings (i.e., public meetings, closed work sessions, mixture of the two), received testimony from more than 30 witnesses, and received numerous public comments. The Select Task Force found that workplace harassment remains a persistent problem. Of the approximately 28,000 charges received by EEOC in fiscal year 2015 that alleged harassment from employees working for private employers or for state and local government employers, approximately 45% alleged harassment on the basis of sex. "The least common response to harassment is to take some formal action -- either to report the harassment internally or file a formal complaint." Approximately three out of four individuals who experience harassment never talked to a supervisor, manager, or union representative about the harassing conduct. Fear of disbelief of their claim, inaction on their claim, blame, or social or professional retaliation often contribute to people's decision not to report or file a complaint. "The most common workplace-based responses by those who experience sex-based harassment are to avoid the harasser, deny or downplay the gravity of the situation, or attempt to ignore, forget, or endure behavior." The study found that "[w]orkplace culture has the greatest impact on allowing harassment to flourish, or conversely, in preventing harassment." Authors discuss how leadership from the top, accountability systems (i.e., meaningful, appropriate, and proportional responses), and investment of time and resources are critical to effectively handling and preventing sexual harassment. Based on practical and anecdotal evidence collected from employers and trainers, the Select Task Force concluded that "training is an essential component of an anti-harassment effort. However, to be effective in stopping harassment, such training cannot stand alone but rather must be part of a holistic effort". Due to limited empirical evidence, authors cite the need for better empirical evidence on "what types of training are effective, and what components, beyond training, are needed to make the training itself most effective." Experience shared by practitioners indicates that compliance training for all employees is important to educate

"employees about what forms of conduct are not acceptable in the workplace and about which they have the right to complain." Authors recommend that trainings should not be limited to the legal definition of harassment, but "rather should also describe conduct that, if left unchecked, might rise to the level of illegal harassment." Additionally, middle-management and first-line supervisors require additional training to address conduct before it rises to the level of illegal harassment. Training should be conducted by qualified, live, and interactive trainers. The report includes detailed recommendations related to implementing a holistic approach to preventing and appropriately addressing harassment in the workplace. For example, anti-harassment policies should include: a clear explanation of prohibited conduct, including examples; clear protections against retaliation; a clear complaint process that provides multiple, accessible avenues of complaint; assurance the employer will protect confidentiality to the extent possible; a clear complaint process with a prompt, thorough, and impartial investigation; and assurance the "employer will take immediate and proportionate corrective action when it determines that harassment has occurred, and respond appropriately to behavior which may not be legally-actionable "harassment" but which, left unchecked, may lead to same." Policies should both be written and communicated regularly to employees. Related to reporting systems, the Select Task Force recommends: complaints be taken seriously; the system must provide timely responses and investigations; provide a supportive environment where employees feel safe to express their views and do not experience retaliation; investigators must be well-trained, objective, and neutral (particularly if investigators are internal employees); privacy of both the accuser and accused should be protected to conduct a thorough, effective investigation; and investigators should document all steps taken from point of first contact, prepare a written report using guidelines to weigh credibility, and communicate the determination to all relevant parties. However, authors note that better empirical evidence on the effectiveness of reporting systems is necessary.

9. **Frye J. Not Just the Rich and Famous: The pervasiveness of sexual harassment across industries affects all workers. Vol 5 March 20192017.**

In this report from the Center for American Progress, Frye analyzed unpublished data from the U.S. Equal Employment Opportunity Commission (EEOC) about sexual harassment charges in the private sector from 2005 to 2015. The analysis found that 85,257 sexual harassment charges were filed with the EEOC over that time period, with 80% of the claims made by women. By industry, the largest percentage of claims were made by individuals in the accommodation and food services industries (14.23%), followed by individuals in retail trade (13.44%), manufacturing (11.72%), health care and social assistance (11.48%), and administrative and support and waste management and remediation (6.92%). The Bureau of Labor Statistics shows that women represent the majority of workers in the accommodation and food services industry. Overall, the analysis found that 25% of sexual harassment charges were filed in industries with large numbers of service-sector workers. In addition, Frye analyzed data from 2016 to 2017 and found that 75% of sexual harassment charges included an allegation of retaliation. Frye noted that, “women of color, in particular, often must confront the combined impact of racial, ethnic, and gender prejudice that can result in degrading stereotypes about their sexual mores or availability and increase their risk of being harassed. Furthermore, women- particularly women of color- are more likely to work lower-wage jobs, where power imbalances are more pronounced and where fears of reprisals or losing their jobs can deter victims from coming forward.”

10. **Hinkley S., Bernhardt A., Thomason S. Race to the Bottom: How Low-Road Subcontracting Affects Working Conditions in California's Property Services Industry. University of California, Berkeley, Center for Labor Research and Education;2016.**
Hinkley et al. analyze the substantial growth of subcontracted work in California in janitorial and security services. Authors discuss how wages and working conditions of subcontracted workers in these occupations differ from other California workers. Authors note that "subcontracting can make workers particularly vulnerable to wage theft and other forms of workplace violations." While other industries have seen inflation-adjusted average earning increase dramatically since 1990 (128% among private sector industries), janitorial services and security services have only seen modest growth (6% and 18%, respectively). Authors cite evidence from the Human Rights Watch that suggest "the larger proportion of immigrant workers reduces the likelihood that workers will feel comfortable filing a complaint." The report specifically addresses sexual harassment in the workplace. Harassers may be a supervisor, co-worker, client, or customer; targets are usually women but not exclusively. Evidence indicates that sexual harassment can have long-term impacts on a survivor's mental health (e.g., substance use, depression, PTSD, suicidal behavior) and physical health (e.g., weight loss, inability to sleep).

11. **Survey of Downtown Seattle Hotel Housekeepers Reveals Frequent Sexual Harassment and Pain.Seattle, Washington: Puget Sound Sage; 26 September 2016 2016.**
This Puget Sound Sage document summarizes findings from a survey created and administered by Unite Here Local 8 members between June and July 2016. Survey respondents (N=105) consisted of a convenience sample of Unite Here Local 8 members working at 7 major hotels in downtown Seattle. Of the 99 respondents willing to answer questions regarding sexual harassment and sexual assault, 52 respondents reported a total of 262 incidents of sexual harassment and assault. Reported incidents included being cornered or blocked form exiting the room (8 incidents); groped or otherwise physically harassed (17); shown unwanted sexual content (7); received unwanted sexual comment or gesture (27); pressured for a date or sexual favors (12); flashed or exposed to nudity (175); and received comments about their body, uniform, or appearance (16). Forty-seven percent of respondents reported hearing from friends or coworkers about "being touched or groped, blocked from leaving the room, exposed to sexual content, and harassed in other ways by guests." Of those who experienced sexual harassment, 51% stated that they rarely or never tell their supervisors about the incident. In addition, "nearly all respondents (95%) reported they would feel safer if equipped with a panic button."

12. **Hands Off Pants On | Sexual Harassment in Chicago's Hospitality Industry.Chicago, Illinois: Unite Here Local 1; July 2016 2016.**
UNITE HERE Local 1, Chicago's hospitality workers union, surveyed 487 women who worked in Chicagoland hotels and casinos to understand the experiences of sexual harassment by guest among its women members. Survey results show that of 381 hotel workers in the Chicagoland area (2016), 58% respondents had experienced had been sexually harassed by a guest. Nearly 49% of housekeepers surveyed reported having had guests answer the door naked, expose themselves, or flash them. The next most commonly reported indecent behaviors by guests included: unwanted sexually suggestive looks or gestures; unwelcome sexual comment, joke, or question; and leaned over or cornered. The survey found that, "among the hotel workers surveyed who had been harassed by a guest, over half (56%) of women said they did not feel safe returning to work after the incident." Of the 459 hospitality workers surveyed, only 33%

said they told their supervisor or manager when a guest sexually harassed them. Of those who said they never or sometimes report a guest's harassment, "43% said they knew someone who reported sexual harassment and nothing changed." Others explained that the behavior is so widespread within the industry "it feels normal." However, "51% of hospitality workers surveyed reported feeling uncomfortable because of something a guest did or said." Moreover, "[j]ust 19% of hospitality workers surveyed said they had received training from their employer on how to deal with sexual harassment by guests." Of those who did report sexual harassment by a guest to their manager or supervisor, only 38% said they always felt satisfied with the response. Ninety-six percent of housekeepers surveyed said they would feel safer if they were equipped with a panic button.

13. **Garrett L.H. Sexual Assault in the Workplace.** ***Journal of American Association of Occupational Health Nurses.*** **2011;59(1):15-22.**

Garrett provides an overview and summary of sexual assault in the workplace as well as treatment protocols for occupational health nurses. She noted that the prevalence of sexual assault and violence is difficult to determine due to underreporting and under-prosecuting. She stated that, for adult women in the U.S., lifetime prevalence rates of completed rape range from 18% to 30%, yet only 14% to 18% of reported cases are ever prosecuted. She cited evidence that, "isolation of workers from fellow employees has been identified as a risk factor for workplace rape" and "characteristics of the organization are predictors of sexual assault risk." Sexual assault can result in long-term physical and mental health problems, including anxiety, fear, depression, self-destructive behavior, somatic symptoms, headache, gynecological complaints, post-traumatic stress disorder, rape trauma syndrome, pregnancy, sexually transmitted infections, substance use, irritable bowel syndrome, fatigue, and fibromyalgia. To prevent workplace sexual assault, she recommended implementing sexual harassment training and policies, including transportation policies and procedures (e.g. buddy system or safety officer transport in parking facilities), community safety programs within the work environment (e.g. proper lighting), and crime prevention programs.

14. **Feda D. M., Gerberich S. G., Ryan A. D., et al. Written violence policies and risk of physical assault against Minnesota educators.** ***Journal of Public Health Policy.*** **2010;31(4):461-477.**

Feda et al. used a nested case control study to quantitatively evaluate the impact of written workplace violence policies on physical assault in educational settings in Minnesota. They noted that, "written violence policies may be an important part of preventing workplace violence." As part of the Minnesota Educators' Study, they randomly selected a cohort of 26,000 educators for participation in na screening study and identified 6.469 eligible participants. Participants in the case control study included 372 educators who reported at least one work-related physical assault event during the prior 12 months, and 1,116 educators who did not report any physical assault events (serving as controls) (response rate= 84%). They found that 97% of events were perpetrated by a student. All educators reported on whether nine different policies were in place before the event or during the month of the event, including policies that: 1) outlined violence prevention training requirements; 2) prohibited behaviors against employees; 3) prohibited behaviors against students; 4) outlined how to report sexual harassment, verbal abuse, or threats; 5) stipulated how to report physical assault; 6) provided assurance about confidential reporting; 7) outlined consequences for engaging in violence; 8) provided a zero tolerance policy; and 9)

outlined a visitor policy. While the authors found that all policies generally decrease physical assault, multivariate analyses found that risk of physical assault significantly decreased with the presence of policies about how to report sexual harassment, verbal abuse, and threat (OR= 0.53; 95% CI= 0.30-0.95); policies assuring confidential reporting (OR=0.67; 95% CI= 0.44-1.04); and policies stipulating zero tolerance for violence (OR= 0.70; 95% CI=0.47-1.04). The authors speculate that the presence of policies outlining how to report sexual harassment, verbal abuse, and threat may reduce fears that the situation may worse or continue unchanged, reducing underreporting. They did not find that policies related to training were associated with decreased risk of or increased protection from physical assault. The authors concluded, "the presence of certain workplace violence policies in the educational environment appeared to be associated with, or suggestive of, decreased risks of work-related physical assault." Their analyses did not account for enforcement or funding.

15. **Burke M.J., Sarpy S.A., Smith-Crowe K., et al. Relative Effectiveness of Worker Safety and Health Training Methods. *American Journal of Public Health.* 2006;96(2):315-324.**

Burke et al conducted a meta-analysis of studies of worker safety and health trainings to assess relative effectiveness of different methods of training. They assessed 95 quasi-experimental studies from 1971-2006 and divided the interventions into three groups by level of participant engagement: least engaging (lecture, reading and video); moderately engaging (programmed instruction and some feedback); and most engaging (behavioral modeling and hands-on). They found that increased engagement leads to greater knowledge acquisition and improved health and safety outcomes. Prior to this review, qualitative reviews had concluded that trainings do have positive effects on knowledge, behavior and practices; but hadn't pinpointed specific factors that make trainings more or less effective. Within workplace health and safety trainings there exists a variety of training methods that vary widely on level of participant engagement. The authors note that computer-based instruction is now widely used and is considered to be moderately engaging. The most engaging methods focus on stages of knowledge development and behavioral modeling. Often trainees are engaged in dialogue with trainer. The existing literature shows evidence that active approaches to learning like these are generally more effective than passive ones. The authors' findings were consistent with the expectation that more engaging training methods would lead to greater effects on knowledge acquisition: "…mean knowledge acquisition effect sizes for the least engaging, moderately engaging, and the most engaging safety training interventions… were 0.55, 0.74, and 1.46, respectively." These effects were statistically significantly different from each other. Changes in behavior had more moderate effects and the three groups' results were not statistically significantly different from each other. A few of the studies had followed up with participants to measure decay in knowledge over time; however within that pool, 7 of the studies were low engagement and only 2 were moderate or high engagement. The authors note that more research is needed to make conclusions about the decrease in effects of trainings over time. The authors make a number of suggestions of how to apply these findings to practice, including making computer-based trainings as participatory as possible, allowing modeling, feedback and dialogue where possible to enhance knowledge acquisition. As limitations, the authors note that it is possible that certain training areas are more likely to receive passive or active training methodology—for example, it's likely that routine tasks are more often taught through low-engagement methods. This pattern within the classification could obscure some of the effect of the training methodology. Additionally, it's

likely that remote and computer-based trainings have become both more common and more participatory since this review was carried out, as remote conferencing and other technologies have become more widely available. This review's classification system may not be completely generalizable to today.

16. **Cheung H.K., Goldberg C.B., King E.B., et al. Are They True to the Cause? Beliefs About Organizational and Unit Commitment to Sexual Harassment Awareness Training.** ***Group & Organization Management.*** **2017;43(4):531-560.**

Cheung et al. created a pre/posttest for participants in a sexual harassment prevention program to assess how two different attitudes toward the surrounding context (cynicism toward organizational change, and perceived ethical climate) affected their post-training knowledge of and attitudes about sexual harassment. The authors hypothesized that individual perceptions towards the organization's training context would predictors of posttest knowledge and attitudes regarding sexual harassment. These two perceptions were: cynicism toward organizational change (perception of organization's ability or true desire to change); and perceived unit ethical climate (perception of one's own unit's norms and ethics). These two perceptions were evaluated individually and together. Motivation to learn about sexual harassment was assessed as a possible mediator of the relationship. This model was grounded in the expectancy theory of change. Prior to this study, most research had been post-test only; and had focused more on changes in knowledge (what is or isn't sexual harassment) rather than changes in attitudes. Overall, little attention has been paid to contextual/environmental factors regarding training effectiveness, even though much of the literature about sexual harassment in the workplace has highlighted the importance of workplace norms and other environmental factors to the incidence of sexual harassment. Participants in the study were full-time faculty members of a mid-Atlantic metropolitan university. They participated in a test before receiving mandatory sexual harassment training; and retook the same test three months later (after the training). Posttests showed a significant gain in knowledge about sexual harassment, but no significant change in attitudes towards sexual harassment. Analysis of the different contextual variables produced mixed results. Overall, the authors conclude that authentic organizational context and ethical work unit context can help employees take the trainings more seriously—and that consideration of these multiple levels of context (organization and work unit) is necessary. Cynicism about the workplace may be related to whether the training is being given simply to comply with the law. When this belief is high, the training might be less effective. On the other hand, if the organization also implements other policies around sexual harassment, this might indicate authentic concern and desire to change, which could increase effectiveness of the training. There are a number of limitations to this study. Foremost is the question of generalizability. This study was conducted with full-time faculty at a university, and so the results may not be generalizable to other contexts. The within-unit sample sizes were small; and there was no control group. Finally, the study looked at changes in knowledge and attitudes, but not behavior. While knowledge and attitudes are important predictors, they may not be enough to actually lead to changes in behavior.

17. **Hart C.G., Crossley A.D., Correll S.J. Leader Messaging and Attitudes toward Sexual Violence.** ***Socius: Sociological Research for a Dynamic World.*** **2018;4:1-11.**

Hart et al. designed the following study to assess whether, and to what extent, leaders can shape organizational culture regarding sexual violence. They studied the impact that organizational

leaderships' stated attitudes towards sexual assault and harassment could have on the perceptions of members of that organization. They found that when leaders emphasize or downplay the importance of one of these issues, that messaging does have the power to predict how the public will subsequently rate the issue. The authors summarize existing literature that supports the view that organizations can enable or prevent sexual violence through organizational features as well as cultural ones. However, previous literature hadn't been able to show that the relationship between leadership and culture is in fact causal. This experiment tested how the presentation and messaging of information about sexual assault and harassment would shape participants' responses about the importance of these issues. The authors recruited individuals through the Amazon Mechanical Turk system. Participants were reimbursed for their participation. The authors created messages that varied on relative emphasis of importance of the issue; issue to be addresses; and use of statistics. These messages were randomly given to each participant, who then rated the importance of the issue on a 7-point Likert scale. Aside from sexual harassment and sexual assault, other issues included police violence and property theft, to test whether results were more or less amenable to leader influence depending on the relative politicization of the issue. Comparing reports from participants who read an emphasizing message to a downplaying message, the authors found a moderate effect for leader messaging on sexual assault (0.34 standard deviations) and a substantial effect for leader messaging on sexual harassment (0.51 standard deviations). This study was followed by a second study, which once again recruited participants from the same platform but excluded individuals who had already participated. Here, the authors experimented with different messaging types around sexual assault and harassment. They found that messaging using words like "alarming" made participants more likely to rate sexual assault as high-priority; meanwhile, for sexual harassment issues, some downplaying messages did lead participants to report lower importance. Messaging that stigmatized perpetrators of sexual violence led participants to support punitive action (participants who read a punitive message were 1.09 points more likely to support firing employees found guilty of sexual harassment than participants who read non-punitive messages). Overall, the authors note "the unique ability that organizations' leaders have to shape how people make sense of sexual violence," and that members of the public have views that are "remarkably malleable" and subject to fluctuate according to messaging from leaders. In fact, they speculate that the effect could actually be much stronger in members of an organization when reading messaging from one of their own leaders. Shaping a culture that problematizes and emphasizes the concern around sexual violence is one key to preventing such violence.

18. **American College of Obstetricians and Gynecologists Committee on Health Care for Underserved Women. Committee Opinion: Sexual Assault.2014 (Reaffirmed 2016).** Victims of sexual assault are at risk of unintended pregnancy, sexually transmitted infections, and mental health conditions. The American College of Obstetricians and Gynecologists (ACOG) recognize acute medical consequences of sexual assault, including injuries ranging from scratches to fractures, head and facial trauma, lacerations, bullet wounds, and death. Long-term health effects include chronic pelvic pain, dysmenorrhea, sexual dysfunction, and psychologic and mental health concerns. ACOG states that victims of sexual assault may experience rape-trauma syndrome, which includes general pain, sleeping and eating disturbances, a range of emotional reactions, flashbacks, nightmares, phobias, and somatic and gynecologic symptoms. Long-term mental health concerns may include Posttraumatic Stress Disorder (PTSD) and substance use. ACOG recommends that healthcare providers routinely

screen all women for a history of sexual assault, and healthcare providers should offer victims both emergency contraception and sexually transmitted infection prophylaxis. They write, "[e]arly identification of victims of sexual assault can lead to prevention of long-term and persistent physical and mental health consequences of abuse."

19. **Linden J. Care of the Adult Patient after Sexual Assault.** ***New England Journal of Medicine.*** **2011;365(9):834-841.**

Linden provides a case vignette for a 20 year old women presenting to the emergency department for sexual assault. Estimates suggest that only 17% to 43% of rape victims seek medical treatment after rape, and 33% of rape victims never disclose the assault to their primary care provider. Overall, two-thirds of rape victims who report to the emergency department report general body trauma, including attempted strangulation; traumatic injuries to the head, face, torso, or limbs; lacerations, abrasions, and bruises; bite marks; and penetrating injuries. Genital trauma is less reported, and anogenital injuries may not be evident after assault. Timely medical care is necessary to provide emergency contraception and prophylaxis for sexually transmitted infections, including gonorrhea, chlamydia, trichomoniasis, Hepatitis B, and HIV. Rape-related pregnancy rates are 5%, and efficacy of emergency contraception decreases after 72 hours. In addition to medical care, victims of sexual assault should also receive emotional and mental health support. Linden cites prior evidence that sexual assault survivors are at an increased lifetime risk for posttraumatic stress disorder, major depression, and contemplation or actual attempt of suicide as well as increased risk of chronic medical problems like chronic pelvic pain, fibromyalgia, and gastrointestinal disorders. All rape victims should be referred for medical follow-up and psychiatric support. The author notes that there is unclear evidence about the use of HIV-postexposure prophylaxis for rape victims as well as uncertainty about the role of different types of psychotherapy interventions. However, "limited data support a potential benefit of the early initiation of cognitive behavioral therapy, which involves education of the patient about normal reactions to assault, relaxation training, recounting of the experience, exposure to feared (but safe) stimuli, and cognitive restructuring. In one randomized trial, women who were assigned to receive early cognitive behavioral therapy after sexual assault had a significantly greater reduction in self-reported symptoms of PTSD after the intervention than did those receiving only supportive counseling." Linden notes that the Department of Justice, American College of Emergency Physicians, and the World Health Organization all have guidelines for the treatment of patients after sexual assault.

20. **Thurston R. C., Chang Y., Matthews K. A., et al. Association of Sexual Harassment and Sexual Assault With Midlife Women's Mental and Physical Health.** ***JAMA Internal Medicine.*** **2019;179(1):48-53.**

Thurston et al. conducted a prospective cohort study with women aged 40 to 60 living in Pittsburgh, Pennsylvania to determine the association between sexual harassment and sexual assault and certain health outcomes, including blood pressure, mood, depression, anxiety, and sleep. Nationally, 40% to 75% of women have experienced workplace sexual harassment and a third of women have experienced sexual assault. Of the 304 women who participated in the study, 19% (n=58) had experienced workplace sexual harassment, 22% (n=67) reported a history of sexual assault, and 10% (n=30) had experienced both. After accounting for confounding factors and compared to women who did not experience sexual harassment or sexual assault, workplace sexual harassment was significantly associated with greater odds of hypertension

(OR= 2.36; 95% CI= 1.10-5.06, p=0.03) and poor sleep (OR= 1.89, 95% CI= 1.05-3.42, p=0.03). They note that, "the magnitude of increase in [systolic blood pressure] observed in the present study associated with a history of harassment (approximately 4 mm Hg in SBP) is clinically significant (e.g., a 20% increased risk for [cardiovascular disease]}." Sexual assault was significantly associated with greater odds of depressive symptoms (OR= 2.86, CI= 1.42-5.77, p=0.003), anxiety (OR= 2.26, 95% CI= 1.26-4.06, p=0.006), and poor sleep (OR= 2.15, CI= 1.23-3.77, p=0.007). Women who experienced sexual assault had "almost 3-fold greater odds of symptoms consistent with a major depressive disorder and more than 2-fold greater odds of elevated anxiety." Both sexual harassment and sexual assault were associated with a 2-fold increase in poor sleep outcomes consistent with clinical insomnia. The authors note that high blood pressure, depressed mood, anxiety, and poor sleep are all associated with poor physical health outcomes. Study limitations included lack of multidimensional scale to measure severity of symptoms or chronic symptoms, limited representation of people of color, and inability to establish temporality. However, this is one of the first studies that evaluated exposure to sexual harassment and sexual assault with measured blood pressure (instead of only self-report) and that used fully validated mental health scales.

21. **Vrees R.A. Evaluation and Management of Female Victims of Sexual Assault. *Obstetrical and Gynecological Survey.* 2017;72(1):39-53.**

Vrees outlines clinical and forensic components of the initial evaluation of victims of sexual assault, outlines counseling and treatment needs, and discusses immediate and long-term sequelae following sexual assault. She cites previous evidence showing that, "immediate consequences for survivors include physical injury, infection, unintended pregnancy, and emotional states such as hysteria, dissociation, and amnesia. Long-term outcomes include sexual dysfunction, depression, anxiety, pelvic pain, posttraumatic stress disorder, chronic headaches, and even suicide." The author notes that medical and psychological treatment and support are important following sexual assault. She writes, "in the setting of complex social issues and acute psychological ramifications, trained patient advocates and social workers provide an important immediate support role to survivors of sexual assault and can provide immediate crisis intervention, counseling and ongoing support services including legal advocacy, assistance with crime victim compensation, and long-term services." She notes that time sensitive care is required for emergency contraception, sexually transmitted disease prevention, and post assault follow-up. Nationally, the rape-related pregnancy rate for women aged 12-45 years is 5%. Medical follow-up is also required, especially as "long-term manifestations of sexual assault include diminished quality of life, an altered perception of one's health, decreased overall functional status, nonspecific genital symptoms, depression, chronic pelvic pain, and sexual dysfunction." She concludes, "this review highlights the importance of prompt medical screening and evaluation for all survivors of sexual assault, as well as coordination of follow-up care, regardless of whether forensic evidentiary evaluation occurs." Future research is needed to determine the efficacy and uptake of sexually transmitted infections prophylaxis and ongoing sexual health screening among victims and survivors of sexual assault.

22. **Okechukwu C. A., Souza K., Davis K. D., et al. Discrimination, harassment, abuse, and bullying in the workplace: contribution of workplace injustice to occupational health disparities. *Am J Ind Med.* 2014;57(5):573-586.**

In this summary paper, Okechukwu et al. outline existing research showing how institutional and interpersonal workplace injustices, including discrimination, harassment, abuse, and bullying contribute to occupational health disparities. They "theorize that mistreatment of workers in the workplace may exacerbate health disparities between groups of workers." As part of their research, the authors looked specifically at the how sexual harassment in the workplace contributes to occupational health disparities. Based on their research, they present a conceptual model suggesting that labor is stratified into hazardous positions and that individuals in the same position are differentially assigned to hazardous duties. For example, they found that "minority and other disadvantaged workers are systematically hired into certain (usually lower power) positions." They also cite data showing that people of color and immigrants are disproportionately hired into jobs with poorer working conditions, and are therefore at higher risk for work-related injury or illness. They state, "available evidence suggests that, after controlling for differences in education and experience, African-American and Hispanic workers are consistently more likely to be employed in occupations where serious injuries and illnesses are more likely to occur." Okechukwu et al. also state that workplace injustices may contribute to underlying health disparities as disadvantaged populations are more likely to experience these injustices. For example, they cite literature showing that "African-American women who did not tell others about the unfair treatment they received were four times more likely to report high blood pressure than women who told others." Overall, they found that workplace injustices have been associated with psychological and physical health, health behaviors, job outcomes, and-though not as well-researched, family well-being. Among workers that experience sexual harassment, related psychological and physical health outcomes include general poor mental health, post-traumatic stress disorder (PTSD), anxiety, depression, poor self-rated health and unhealthy days, headaches, stomachaches, and disrupted sleep. They also found that workers who witnessed sexual assault in the workplace experienced lower psychological well-being. In addition, sexual harassment can lead to unhealthy behavior changes, including heavy alcohol use, and has been associated with greater workplace absenteeism. Overall, they conclude that workplace discrimination, harassment, abuse, and bullying "are most often described as affecting workers in non-dominant and/or disadvantaged worker groups. Our review pointed out that these same worker groups often hold more hazardous jobs and have been shown to experience poorer general health."

23. **Brown L. P., Rospenda K. M., Sokas R. K., et al. Evaluating the association of workplace psychosocial stressors with occupational injury, illness, and assault.** ***Journal of Occupational and Environmental Hygiene.*** **2011;8(1):31-37.**

Brown et al. completed 2,151 surveys with workers age 18 and older in the contiguous U.S. to evaluate the relationship between occupational injuries, illness, and assaults (OIIAs) and worker exposure to generalized workplace abuse and harassment, sexual harassment, and job threat and pressure. They cite previous literature defining occupational stress and explain that, "levels of influence that interact to form an individual's perception of workplace stress are largely driven by workplace policies and procedures, including interactions with co-workers and supervisors as well as general life experience with violence, abuse, and/or discrimination." They also cite previous research showing that health impacts of occupational stress include depression, anxiety, diminished mental functioning (e.g. inattentiveness, fatigue), headaches, absenteeism, and occupational injuries. In addition, generalized work harassment and sexual harassment has been linked to "recipients feeling a sense of threat and insecurity in their jobs, potentially influencing

their ability to function productively and safety carry out work tasks. Research suggests that harassment in the workplace represents a particularly pathogenic form of stress, as [sexual harassment and generalized work harassment] have been shown to predict negative mental health outcomes above and beyond the effects of more typically studied job stressors." Brown et al. completed 2,151 surveys with workers age 18 and older in the U.S. in English and Spanish using a nationwide random-digit -dial telephone assessment from 2003 to 2004 (response rate= 52%). Survey respondents were representative of the overall U.S. working population in the same time period, and included workers from every identifiable occupational category recognized by the Bureau of Labor Statistics. Occupations were then grouped into 8 general subgroups, including management/business, professional, service, sales/office, construction/extraction, farming/fishing/forestry, production/transportation, and military. OIIA was self-reported, and generalized work harassment, sexual harassment, and job pressure and threat were measured using evidence-based instruments and scales. Of respondents, 351 reported having an OIIA in the past 12 month. Non-white Hispanics were at greatest risk of experiencing OIIA. Individuals employed in professional, service, production/transportation, sales/office, and construction/extraction jobs were also more likely to experience OIIA. Psychosocial stressors were independently and significantly associated with reporting an OIIA, even after controlling for age, sex, race/ethnicity, and occupation. Overall, they found that workers that experienced generalized workplace harassment were 1.53 times as likely (CI= 1.33-1.75; p l< 0.05) to report occupational injury, illness, and assault in the past 12 months. Workers that experienced sexual harassment were 1.18 times as likely (CI= 1.04-1.34; - <0.05) to report OIIAs in the past 12 months. Workers that experienced job threat and pressure were 1.26 times as likely (CI= 1.10-1.45; p<0.05) to report OIIAs in the past 12 months. The authors note that it is not possible to establish temporality and that, "in the scenario where occupational stressors preceded the OIIA, one could hypothesize that stress was responsible for the worker being mentally distracted, thereby causing the OIIA to happen, or that organizations that have poor interpersonal working climates have poor safety climates overall. In respect to the reverse scenario, the injured worker could perceive greater levels of harassment and job pressure and threat as a result of [their] OIIA..." They note that depression, especially among female workers, may be a mediating factor and cite previous research showing that women who reported a OIIA were significantly more likely to report pre-existing depression as compared with women who did not experience an OIIA.

24. **Mutambudzi M. Association between workplace psychosocial factors and mental health in Black, Hispanic, and White women: Cross-sectional findings from the National Health Interview Survey. *Women Health.* 2017;57(10):1129-1144.**

Mutambudzi evaluated the impacts of job insecurity, workplace harassment, and work-family conflict on self-rated mental health among non-Hispanic Black, Hispanic, and non-Hispanic white women using data from the 2010 National Health Interview Survey. Overall, work-related psychosocial factors have been "implicated in the onset and progression of chronic conditions, adverse reproductive outcomes, and poor mental health outcomes, such as depression, anxiety, psychological distress, mood disorders, and alcohol misuse." Workplace harassment has been associated with increased depression, anxiety, psychosomatic symptoms, low self-esteem, substance use, and mental distress. The impact of work-related psychosocial factors on health have been shown to differ by race and sex, and individuals of color and women are more likely to experience negative health outcomes. For example, the author cites research that, "Black

women in particular, bear a greater burden of adverse psychological demands, low control, and low work substantive complexity, and the associated subsequent negative health outcomes." This relationship was true across socioeconomic status. The author evaluated data from the 2010 National Health Interview Survey, which is a cross-sectional, household, in-person, and nationally representative survey. The 2010 survey included an Occupational Health Supplement from the National Institute for Occupational Safety and Health to collect data on occupational exposures and health outcomes. The author found that 9.6% of survey participants had experienced workplace harassment and that the prevalence of workplace harassment did not differ significantly by race/ethnicity. The survey asked about harassment generally, and did not indicate the type of harassment experienced. Poor mental health outcomes were significantly higher for women reporting job insecurity, workplace harassment, and work-family conflict and were highest among non-Hispanic Black women (36%) compared to Hispanic women (34%) and white women (30%). The author concluded that, "despite these shortcomings, this study did find prevalence of occupational psychosocial work stress and their consequences to be highest in minorities."

25. **Shaw E., Hegewisch A., Phil M., et al. Sexual Harassment and Assault at Work: Understanding the Costs-- Briefing Paper. Institute for Women's Policy Research;2018.**
The Institute for Women's Policy Research conducted a literature review to evaluate how workplace sexual harassment and sexual assault impact economic advancement and security for women and the impact this has on employers. The report also provides recommendations for preventing workplace sexual harassment. They found that employment situations associated with high rates of sexual harassment included: working for tips (including hotel housekeepers); working in isolation (including female janitors, domestic care workers, hotel workers, agricultural workers); lacking legal immigration status or having only a temporary work visa; working in a male-dominated job (e.g. construction; and working in a setting with significant power differentials. Individuals who are undocumented often work in agricultural, food processing, garment, domestic work, and janitorial services occupations. The authors explain that, "in principle, victims of sexual violence at work who bring charges have the same protection against deportation as survivors of domestic violence through U-visas. Yet, many fear that reporting harassment or assault will put their immigration status at risk...Retaliation against women who speak up against workplace sexual assault may involve threats to call Immigration and Customs Enforcement or to revoke temporary work visas." Immigrants may also find it difficult to understand their rights or to report an incident due to language barriers. The authors also noted that intersectionality may compound experiences of harassment and that "structural risk factors often intersect and are exacerbated by racism, discrimination, and harassment on the basis of age, disability, or national origin." Their review of literature also found that workplace sexual harassment and assault can impact an individual's mental and physical health, financial situation, opportunities for career advancement, and employment status. Background information in the report finds that, "Black women were the most likely of all racial and ethnic groups to have filed a sexual harassment claim (15.3 charges per 100,000 workers), and 1 in 17 sexual harassment charges filed with the EEOC also alleged racial discrimination." They also cite research showing that, "only a small number of those who experience harassment (one in ten) ever formally report incidents of harassment- let alone make a charge to the EEOC- because of lack of accessible complaints processes, simple embarrassment, or fear of retaliation. This fear is

justified: according to an analysis of EEOC data, 71 percent of charges in FY 2017 included a charge of retaliation."

26. **Rossie A., Tucker J., Patrick K. Out of the Shadows: An analysis of sexual harassment charges filed by working women. National Women's Law Center;2018.**
In this report from the National Women's Law Center, Rossie et al. obtained two datasets from the U.S. Equal Employment Opportunity Commission (EEOC) to analyze sexual harassment charges filed between 2012 and 2016. The datasets included information about claimants' sex, race/ethnicity and national origin, date of birth, industry, and company size. Their analysis found that women made the majority of claims, with the largest percentage of claims (43.9 %) made by women at companies with 15-100 employees. By industry, the largest percentage of claims (13.8%) were made by women in the accommodation and food services industry. Women make up 51.6% of the accommodation and food services industry. Hotel, hospitability, restaurant, and retail workers are more likely to depend on tips to supplement wages, which puts them at heightened risk of sexual harassment. The authors note, "the reliance on customer tips as income forces tipped workers to tolerate sexual harassment and other inappropriate behavior from customers just to make a living, which in turn perpetuates a cultural of harassment in tipped industries." Looking more specifically at sub-industry, women working at full-service restaurants accounted for half of the claims within the accommodations and food service industry and women account for 71.8% of tipped workers in the food service industry. Overall, Black women filed sexual harassment charges at 3 times the rate of white, non-Hispanic women (15.3 charges per 100,000 Black women workers compared to 4.7 chargers per white, non-Hispanic women workers). In addition, Black women were disproportionately represented in sexual harassment charges across every industry. For example, Black women make up 13.6% of the accommodation and food services industry, but file 31.4% of the sexual harassment charges. In total, "women of color- and Black women in particular- are disproportionately likely to experience sexual harassment at work. Out of the charges filed by women, 56 percent were filed by women of color; yet, women of color only make [up] 37 percent of women in the workforce."

27. **Quality Agency for Healthcare Research and. 2016 National Healthcare Quality and Disparities Report.Rockville, MD: U.S. Department of Health and Human Services;2017.**
The National Healthcare Quality and Disparities Report is mandated by Congress and has been published every year since 2003. The intent of the report is to summarize the quality of healthcare received by people in the United States, and to identify disparities in care and access to care by priority populations. It evaluates quality of healthcare in six core areas: person-centered care, patient safety, healthy living, effective treatment, care coordination, and care affordability. The report uses four main measures for access to care: having health insurance, having a usual source of care, encountering difficulties when seeking care, and receiving care as soon as wanted. Over time, the report has found disparities in access to care based on race and ethnicity, socioeconomic status, age, sex, disability status, sexual orientation, gender identity, and residential location. The 2016 report concluded that, while disparities in health insurance status decreased since 2014, about 70% of care affordability measures have not changed since 2010 and disparities in care persisted for poor and uninsured populations in all priority areas. The report stated, "poor people experienced worse access to care compared with high income people for all access measures except one" and "more than half of measures show that poor and low-income households have worse care than high-income households." Further, the report concluded

that "significant disparities continue for poor people compared with high-income people who report they were unable to get or were delayed in getting need medical care due to financial or insurance reasons."

28. **Centers for Disease Control and Prevention. Behavioral Risk Factor Surveillance System Prevalence And Trends Data: Washington-2014. 2014; Available at: http://apps.nccd.cdc.gov/brfss/page.asp?cat=XX&yr=2014&state=WA#XX. Accessed August 16, 2016.**
Behavioral Risk Factor Surveillance System (BRFSS) 2014 data from Washington state show significant correlations between lower income and a number of health indicators including: worse overall self-reported health, depression, asthma, arthritis, stroke, oral health, tobacco use, women's health indicators, health screening rates, physical activity, and diabetes.

29. **Poel A. Health of Washington State Report: Mortality and Life Expectancy. Data Update 2015. Washington State Department of Health;2015.**
Poel presents Washington state data on mortality and life expectancy. The data show that age-adjusted death rates were higher in Washington census tracks with higher poverty rates. The state data also show that American Indian/Alaska Natives, Native Hawaiian/Other Pacific Islanders, and black residents had the highest age-adjusted death rate and shortest life expectancy at birth compared to other groups in the state. Children 1-4 and 5-14 experience the lowest mortality rates, with no difference between sexes. However, in each of the remaining age groups, death rates among men are higher than death rates for women, including among those aged 85 or older.

30. **Serafin M. Health of Washington State Report: Self-reported Health Status. Data Update 2016. Washington State Department of Health;2016.**
Serafin presents data from Washington state on self-reported health status. The data show that after accounting for age, education, race and ethnicity, household income was a strong predictor of self-reported health status. Health status varied by race and ethnicity, with close to 20% of Native Hawaiian/Other Pacific Islander reporting fair or poor health.

31. **Centers for Disease Control and Prevention. Violence Prevention | Consequences. 2018; Available at: https://www.cdc.gov/violenceprevention/sexualviolence/consequences.html. Accessed March, 2019.**
This Centers for Disease Control and Prevention webpage details health consequences associated with sexual violence including physical health outcomes, psychological health outcomes, social, and health risk behaviors.

32. **Hsieh Y. C., Apostolopoulos Y., Hatzudis K., et al. Social, Occupational, and Spatial Exposures and Mental Health Disparities of Working-Class Latinas in the US. *Journal of Immigrant Minority Health.* 2016;18(3):589-599.**
Hsieh et al. conducted a review of literature published between 2000 and 2013 investigating mental health disparities for working-class Latinas. They included 73 articles in their review. Evidence indicates that Latinos are at higher risk for depression, anxiety, and substance use and that "mental health is a fast-growing concern among Latinos, particularly Latina immigrants, who often experience gender-specific issues such as domestic violence, rape, and sexual abuse."

In addition, "the Latino community experiences poverty, discrimination, and underutilization of medical services at higher rates than any other racial or ethnic group." Hsieh et al. summarize the occupational, social, and spatial exposures and hazards that have an adverse impact on the mental health of Latinas in the U.S. Related specifically to occupational hazards, they found that dangerous jobs, occupational mobility, workplace racial discrimination, sexual harassment, and external work-related factors (e.g. language barriers) contribute to poor mental health outcomes. Sexual harassment contributed to poor physical and psychological health, and job and life dissatisfaction. The authors did not provide the total number of articles for each topic.

33. **The Henderson Center for Social Justice Berkeley Law. Equal opportunity: The Evidence- a summary of key ideas , current research, and relevant information for those who aim to promote and protect equal opportunity. University of California Berkeley;2012.**
University of California Berkeley's Henderson Center for Social Justice provided an overview and history of equal opportunity efforts in the U.S. They use the term "equal opportunity" to include both affirmative action and equal opportunity efforts. Affirmative action and equal opportunity programs began as a result of the Kennedy Administration's Executive Order 10925, which required government contractors to "take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin." This report summarizes information related to contracting, education, wealth, homeownership, and other factors. It stated that "overall, people of color rate their health status lower than Whites ([non-Hispanic]). The life expectancy at birth for African Americans is five years less than for Whites...In general, people of color report less access to health care and poorer quality health care than Whites ([non-Hispanic])." The report found that, "although the effect of [state affirmative action] bans are complicated to assess, there is a recurring pattern of decreased diversity." The report presents some research on Washington State. For contracting, transportation contracts awarded to minority-owned and women-owned businesses increased under affirmative action and decreased sharply after I-200 passed in 1998. Similarly, applications and enrollment by people of color decreased at University of Washington, and to a lesser degree at other public universities. For public employment, the authors note that, "in Washington, the diversity of state employees before and after the passage of the anti-equal opportunity Initiative 200 in 1998 has not been tracked." They noted that Washington State began tracking this information in 2006, and that the current state workforce is similar in diversity to the private sector, though people of color were slightly less represented.

34. **Christensen Trevor, Weisser Justin. Health of Washington State Report: Tobacco Use. Washington State Department of Health;2015.**
Christensen et al. report Washington state Behavioral Risk Factor Surveillance System (BRFSS) data from 2012 to 2014 indicate that prevalence of smoking decreases as income and levels of education increase. Further, American Indians and Alaska Natives (AI/AN) and Native Hawaiian/Other Pacific Islander populations have significantly higher smoking rates than white, black, Hispanic, and Asian populations.

35. **Pew Research Center. Immigrants don't make up a majority of workers in any U.S. industry. 2017; Available at: http://www.pewresearch.org/fact-tank/2017/03/16/immigrants-dont-make-up-a-majority-of-workers-in-any-u-s-industry/. Accessed February, 2019.**

In this article from Pew Research Center, Desilver differentiates between the facts that 1) immigrants are more likely than U.S.-born workers to be employed in a number of specific jobs, and 2) there are not major U.S. industries in which immigrants outnumber the U.S.-born. According to a Pew Research Center analysis of government data, immigrants made up 17.1% of the total U.S. workforce in 2014 (27.6 million workers out of 161.4 million). The article details which industries, occupation groups, and detailed occupations had the highest proportion of immigrant workers (both lawful and undocumented) in 2014.

36. **Hacker K., Anies M., Folb B. L., et al. Barriers to health care for undocumented immigrants: a literature review.** ***Risk Management and Healthcare Policy.*** **2015;8:175-183.**
Hacker et al. completed a literature review of 66 articles published in the 10 years prior to this review to examine barriers to accessing health care for undocumented immigrants, and identifying strategies to address these barriers. Articles in the review included research from multiple countries, including the United States. Policy barriers to accessing health care included health insurance laws and documentation requirements to get services. Health system barriers included constraints related to work conflicts and transportation, constraints related to lack of translation services and culturally competent care, discrimination in the clinic environment, and complex paperwork or registration systems to receive care. Individual level barriers included fear of deportation, stigma, shame about seeking services, lack of social capital, lack of financial capital to pay for services, limited health literacy or knowledge about the health care system, limited English proficiency, and cultural differences. Overall, the largest barrier identified through the review was "national policies excluding undocumented immigrants from receiving health care" with the majority of policies restricting access to health insurance. The authors state, "because insurance was generally required for affordable care or required to receive services at all, these laws effectively barred access to care [for undocumented immigrants]." The authors identified five categories of recommendations: 1. Change policies; 2. Extend insurance options; 3. Expand the safety net; 4. Train providers; 5. Educate undocumented immigrants on navigating the health care system. Specific to changing policy, recommendations include expanding health care access regardless of immigration or citizenship status, giving full rights to health care for all immigrants, and delaying deportation until care is completed. Recommendations related to insurance included allowing all immigrants access to a state funded health plan, providing insurance to all workers regardless of immigration status, providing a limited insurance option to preventive care or by disease, and offering sliding-scale payment systems. Safety net recommendations included expanding the capacity of clinics (e.g. federally qualified health centers, public hospitals, community health centers, state and local public health clinics) to provide care to immigrants through additional state support, and providing health education in alternative settings (e.g. faith-based organizations). Training recommendations included educating providers to understand the specific medical needs of immigrant communities, to use interpretation services, and to understand immigration laws. Health literacy recommendations included educating immigrants about the health care system and their right to health care as well as connecting immigrants with "culturally appropriate navigators in health care environments" to help navigate services. The authors note that an important limitation is that, "many of the recommendations we have identified in the reviewed articles have not been tested so it is difficult to ascertain whether or not they would be deemed successful."

37. **Martinez O., Wu E., Sandfort T., et al. Evaluating the impact of immigration policies on health status among undocumented immigrants: a systematic review. *J Immigr Minor Health.* 2015;17(3):947-970.**
Martinez et al. completed a literature review of 40 articles published between 1990 and 2012 to determine how immigration laws impact access to health services and health outcomes for undocumented immigrants. The review included research from multiple countries, including the United States. Thirty articles were related to access to health services. The authors noted barriers including policies that limit or restrict access to insurance or care, financial barriers and cost of care, complex administrative procedures to apply for care, fear of deportation or legal action, harassment and discrimination from providers, institutionalized discrimination, cultural differences, language barriers, low health literacy and knowledge of the health care system, presence of police checkpoints at health departments, identification requirements to receive care, and criminalization of undocumented status. Specific to the Affordable Care Act, the authors note, "healthcare safety net hospitals and clinics, which are the main providers of health care and services for undocumented immigrants, might face funding and reimbursement challenges by [Affordable Care Act], making it impossible to continue providing services to undocumented immigrants. [Affordable Care Act's] exclusion and denial of participation of undocumented immigrants may lead to further marginalization of undocumented immigrants and alienation from health services..." The authors also noted recommendations from the literature. They recommend revising national policies to extend access to comprehensive primary care (including preventive care like vaccinations and infectious disease screening), prenatal care, and chronic disease management to decrease risk to public health and reduce the cost of emergency care. They recommend developing culturally and linguistically appropriate programs and training providers in cultural competency, linguistic competency, and cultural diversity. They also recommend that health care providers develop relationships and referral systems with community organizations to connect immigrants with information about their rights, citizenship pathways, and educational opportunities. Lastly, they recommend developing new support strategies for safety-net health care facilities (e.g. federally qualified health centers, community health centers).

38. **May 2017 State Occupational Employment and Wage Estimates | Washington. In: U.S. Department of Labor BoLS, ed. Washington, DC2017.**
This U.S. Bureau of Labor Statistics webpage provides occupational employment and wage estimates for Washington State. The estimates are calculated with data collected from employers in all industry sectors in metropolitan and nonmetropolitan areas in Washington. The dataset is based on the Occupational Employment Statistics (OES) survey, a semiannual survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the U.S. In Washington State the annual mean wage for all occupations is $57,480. Janitors and cleaners (except maids and housekeeping cleaners) make an annual mean wage of $32,830; maids and housekeeping cleaners make an annual mean wage of $27,390; and security guards make an annual mean wage of $37,410.

39. **Harrell Erika. Workplace Violence Against Government Employees, 1994-2011.Washington, DC: U.S. Department of Justice; April 2013 2013.**
This Bureau of Justice Statistics (BJS) report assesses trends in workplace violence against local, county, state, and federal government employees compared to trends in the private-sector. "The

estimates of nonfatal violent victimization [including rape/sexual assault] in the workplace against government employees are based on data from the [BJS's National Crime Victimization Survey (NCVS), which collects information on nonfatal crimes against persons age 12 or older, reported and not reported to the police, from a nationally representative sample of U.S. households." According to the report, from 2002 to 2011 there was an average of 15,200 workplace rape/sexual assaults among governmental workers (ages 16 years and older) and 28,180 among private-sector employees (for rates of 0.6 and 0.2, respectively).

40. **Household Data Annual Averages | 11. Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity. In: U.S. Department of Labor BoLS, ed2018.**
This Bureau of Labor Statistics webpage presents labor force statistics from the current population survey. The table presents 2018 data.

41. **Libero Frank de. Statistical analysis. 2019.**
An omnibus chi-squared test might show statistically significant associations between Black/African American, Asian, and Hispanic/Latino ethnicity when compared to occupation has statistical significance. Because of potential confounding between race and ethnicity, we are unable to do a cell by cell comparison to determine which specific associations are statistically significant.

Because of this confounding, we focused on practical significance. In Table 3 we use Pearson residuals ([Observed – Expected] / √ [Expected]). Using 2018 Bureau of Labor Statistics data, practical significance indicates that Black/African Americans were over-represented among people employed as security guards and gaming surveillance officers in the U.S. in 2018 (see Table 3). Conversely, Hispanic/Latino individuals were disproportionately over-represented among those working as maids and housekeeping cleaners in the U.S. in 2018 (see Table 3).

Table 3. Practical significance between selected occupation and race/ethnicity by cell (Cell entries are Pearson residuals)

Occupation	Black/African American	Asians	Hispanic/Latino
Janitors and building cleaners	-3	-12	6
Maids and housekeeping cleaners	-202	-6	157
Security guards and gaming surveillance officers	300	28	-239

42. **Health of Washington State: Mental Health. Washington State Department of Health;2008.**
Washington Behavioral Risk Factor Surveillance System (BRFSS) data from 2004-2006 indicate that American Indians/Alaska Natives and non-Hispanic Black individuals reported significantly higher rates of poor mental health compared to other groups. These relationships persisted after adjusting for additional factors such as age, income, and education. Washington BRFSS data also show an association between lower annual household income and poor mental health, a

relationship that was also shown with education. It is well understood that mental health is also closely related to other areas such as employment opportunities, physical health, and substance abuse. This report also highlights a Washington State study from 2002 that reveal that 16% of individuals in the state who were receiving publicly funded mental health services had at least one felony conviction, a rate over twice that of the general population.

43. **VanEenwyk J. Health of Washington State Report: Socioeconomic Position in Washington. Washington State Department of Health;2016.**
VanEenwyk presents data about socioeconomic position in Washington State including differences within the state as well as statewide differences compared to national data. Data indicate that compared to the United States as a whole, fewer Washington residents are living in poverty and a higher percentage of residents ages 25 and older have college degrees. However, these economic resources are not evenly distributed among all Washington residents. Females in Washington were more likely to be living in poverty than males and were also more likely to have lower wages. Further, American Indian and Alaska Native, Hispanic, and black residents had higher percentages of living in poverty and lower median household incomes compared to other groups. Data also indicated that counties in eastern Washington were more likely to have high poverty rates and high rates of unemployment than counties in western Washington.

44. **Kemple Angela. Health of Washington State Report: Coronary Heart Disease.Tumwater, Washington: Washington State Department of Health; 17 February 2016 2016.**
Kemple presents data from Washington regarding coronary heart disease in the state. Washington data from the Behavioral Risk Factor Surveillance System (BRFSS) from 2012-2014 combined, age-adjusted coronary heart disease death rates were 1.7 times higher for Washington residents in census tracts where less than 15% of the population were college graduates compared to rates in census tracts where 45% or more of the population were college graduates. Further, BRFSS data also show that age-adjusted diabetes prevalence is highest among Native Hawaiians and Other Pacific Islanders, American Indian/Alaska Native, and Blacks. The numbers and rates of coronary heart disease deaths in Washington increase with age. In each age group, men have higher rates than women

45. **Health Washington State Department of. 2018 Washington State Health Assessment. March 2018 2018.**
The *State Health Assessment* provides an overview of health and well-being of Washington residents. It outlines the changing population trends --increasing in number, becoming more racially and ethnically diverse, and aging. It also discusses disparate health outcomes experienced by various populations within Washington.

46. **Prather Cynthia, Fuller Taleria R., Marshall Khiya J., et al. The Impact of Racism on the Sexual and Reproductive Health of African American Women. *Journal of Womens Health (Larchmt)*. 2016;25(7):664-671.**
Prather et al. use the socioecological model to describe racism and its effect on African American women's sexual and reproductive health. Authors examine the historical context of racism (e.g., medical experimentation) as well as institutional racism (society), personally mediated racism (neighborhood/community), and internalized racism (family/interpersonal

supports and individual). Authors concluded, "[i]n both historical and contemporary contexts, race-based mistreatment has been shown to place African American women at increased risk for HIV/STIs, pregnancy-related complications, and early mortality."

47. **Eichelberger K.Y., Doll K., Ekpo G.E., et al. Black Lives Matter: Claiming a Space for Evidence-Based Outrage in Obstetrics and Gynecology. *American Journal of Public Health.* 2016;106(10):1771-1772.**
This American Journal of Public Health Perspective article provides an overview of why the authors believe the phrase "Black Lives Matter" should inform obstetric and gynecological care.

48. **Kemple Angela. Health of Washington State Report: Stroke.Tumwater, Washington: Washington State Department of Health;2016.**
Kemple presents data from Washington regarding stroke in the state. Washington data from the Behavioral Risk Factor Surveillance System (BRFSS) from 2012-2014 show that among adults, the percentage of persons with stroke increased as household income decreased. This relationship was also true for education. Further, BRFSS data also show that age-adjusted diabetes prevalence is highest among those who are black and American Indian/Alaska Native. The rate for Native Hawaiian and other Pacific Islander residents is also high (81 deaths per 100,000 people), but subject to greater random variation than rates for other groups because of small numbers. Men ages 45–74 have higher stroke death rates than women, and women ages 85 and older have higher stroke death rates than men.

49. **Dehlendorf C., Rodriguez M. I., Levy K., et al. Disparities in family planning. *American Journal of Obestrics & Gynecology.* 2010;202(3):214-220.**
Dehlendorf et al. provide a descriptive summary of reproductive health disparities by race/ethnicity and socioeconomic status, and the barriers women of color and women of low socioeconomic status experience in accessing family planning services. They present background information that minority women and those with lower socioeconomic status are more likely to experience poor reproductive health outcomes, including unintended pregnancy, unintended births, abortions, and teen pregnancies. They also state that low socioeconomic status has also been associated with earlier initiation of sexual intercourse, and adolescent pregnancy and childbirth, and state that "undesired or mistimed pregnancies...significantly impact the course of a woman's life, and disparities in the ability to plan pregnancies as desired can contribute to the cycle of disadvantage experienced by vulnerable populations." Delendorf et al. present the barriers to accessing family planning services using a framework developed by Kilbourne 2006 to examine barriers related to patient preferences and behaviors, health care system factors, and provider-related factors. Patient preferences and behaviors include barriers such as health literacy; education level; culturally-based myths and misinformation; historical trauma and discrimination; cultural and familial differences in communication, attitudes, and practices related to reproductive health; and culturally and linguistically appropriate care and services. Health care system factors include, changes in federal and state legislation and funding (including Title X, Medicaid expansion and the Hyde Amendment), insurance status, insurance coverage of contraception, and cost of care (e.g. abortions). Dehlendorf et al. also state that "immigrants often face unique challenges accessing family planning services due to language and insurance coverage barriers." Immigrants also face barriers due to legislative changes and the Personal Responsibility and Work Opportunity Act of 1996 which, "restricted legal

immigrants' access to publically financed health care for their first 5 years of residence." Dehlendorf et al. explain that immigrants are only eligible for "Emergency Medicaid" which only covers acute illnesses and obstetric delivery, not preventive services like contraception. Provider-related barriers to care include provider biases and discrimination. Dehlendorf et al. also present five potential solutions to reduce disparities in access to care: 1. Provide universal coverage for contraceptive methods (similar to the Family PACT program in California); 2. Provide public funding for abortion services; 3. Increase training related to abortions in obstetrics and gynecology and family medicine residency programs; 4. Provide information about birth control options in ways that are culturally and linguistically appropriate; and 5. Train providers to provide quality and patient-centered family planning care to all women.

50. **Mehta P. K., Saia K., Mody D., et al. Learning from UJAMBO: Perspectives on Gynecologic Care in African Immigrant and Refugee Women in Boston, Massachusetts. *Journal of Immigrant Minority Health.* 2018;20(2):380-387.**
Mehta et al. analyzed results from 6 focus groups completed with 31 Congolese and Somali female immigrants in Boston, Massachusetts to understand access to and use of gynecological services. They identified a number of barriers to accessing reproductive health care, including fear of stigma (that seeking care means sexual promiscuity), concerns about privacy and sexual modesty, fear of discrimination, prior experiences with sexual trauma or violence, lack of providers who understand female circumcision/genital cutting, lack of partner support, lack of financial resources and cost of care, lack of insurance, attitudes and beliefs (including cultural beliefs about when to see a doctor and what constituted pain/discomfort), and environmental constraints (e.g. transportation, cultural limitations on mobility, lack of childcare). Recommendations to improve access include training providers in culturally humble communication and culturally-appropriate and trauma informed care, including understanding of female circumcision/genital cutting; providing health education about preventive care in community-based and religious settings; and developing peer support programs to reduce social stigma.

51. **Munro K., Jarvis C., Munoz M., et al. Undocumented pregnant women: What does the literature tell us? *Journal of Immigrant and Minority Health.* 2013;15:281-291.**
Munro et al. completed a literature review of 23 articles published between 1987 and 2010 evaluating access to prenatal and obstetric health services for undocumented pregnant migrants. The authors define migrants as, "individuals who...choose to leave their home countries and establish themselves either permanently or temporarily in another country." Based on their review, the authors found that pregnant undocumented migrants were more likely to be young, unmarried, engaged in low-income domestic work, and have unintended pregnancies. They were also less likely to access prenatal care than documented migrant women and women in the general population. Reasons for not seeking care were related to lack of legal residency status, lack of health insurance, cost of care, fear of deportation, and confusion about healthcare policies. The authors did not consider strength of study design or quality of research as inclusion criteria for the literature review. In addition, articles included research completed in the United States, Canada, and Europe. Therefore, articles may be of varying quality and lower generalizability.

52. **McMullen K.D., Kane L.T. Better Safe Than Sorry: Panic Buttons as a Security Measure in an Academic Medical Library. *Public Services Quarterly*. 2009;4(4):391-396.**
McMullen and Kane detailed the conditions surrounding the installation of panic buttons in the USC School of Medicine Library. They noted that certain factors entailed risk for patrons and employees of the library: public access (in this case, particularly access of patients from the psychiatric unit); 24/7 access (which many medical students take advantage of to study late); and scheduling of a single staffer after hours at the circulation desk (most often female). Security guards are employed during night hours and they patrol the library but may not be immediately on hand in case of an incident. In response to these potential risks the library installed four panic buttons to ensure safety of staff and students during all hours. Two were stationary and two were portable, to be carried by staffers when making rounds to close the library. The panic buttons are silent, and dispatched to campus police as well as VA police (who are in closer proximity). The panic buttons are only one part of a larger plan to ensure library security. Other steps include installation of camera surveillance; personal safety training; hiring of an additional staff member to increase after-hours personnel to two; and a comprehensive disaster plan.

53. **Karusala N., Kumar N. Women's Safety in Public Spaces. Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems - CHI '17; May 6-11, 2017, 2017; Denver, Colorado.**
In 2016, the Indian government mandated that cell phones sold in India after 2017 must include a panic button for women's safety. Kurusala and Kumar evaluated how the panic button impacted women's perceived safety in public spaces in New Delhi, India. The authors defined personal safety as, "a state in which one is protected from or need not feel compelled to think of ways in which to protect oneself from immediate threats to the individual person, such as people who seem to or actually have the intent to harm one's physical or mental well-being." They completed 17 semi-structured interviews and 30 in-depth surveys using the same set of questions to elucidate women's opinions of the panic button and experiences of personal safety. All interviews were conducted with women between 21 and 33 years of age living, working, and/or studying in New Delhi. Surveys were completed with women and men between 18 to 64 years of age living in India. The majority of respondents to both the interviews and surveys were of middle to upper socioeconomic status. They found that "women's sense of safety may be deconstructed into a multitude of factors- personal, public, social, technological- that must align for this sense of safety to be preserved." They also note that technological designs (like a panic button) will not work for all users. Interviewees felt that the panic button could act as a deterrent "if the perpetrator of a crime knew there could be consequences or at least complications in the process of committing a crime" as a result of a panic button. Based on previous research, the authors explained that, "the desire to contact police also differed by culture. In one study, women in the U.S. preferred contacting the police, while women in India preferred contacting their social circle." Interviewees further explained that "the panic button...would only work if there was an efficient and reliable police system in the back end (which they agreed was absent). They were unsure of whether or not there would be response if someone pressed the button...if there was a response, it was not certain if police would arrive on time or if they would further harass the person in need of help. Participants said that police officers could themselves be the source of harassment..." Overall, the authors stated that, "hypothetically, a panic button should be able to utilize law and order to prevent instances of sexual assault in public spaces. However, the mandate will likely be ineffective in doing so because it does little to interact with and even

misunderstands the power that the factors we mentioned above have on women's safety." They state that panic buttons have a number of limitations, including inaccessibility of mobile phones (e.g. phones may not be accessible during an emergency situation, or may be taken away by perpetrator); timeliness of a panic button (i.e., too late in the timeline of an attack, reactive instead of proactive); discomfort contacting police; lack of infrastructural support (e.g. police may not arrive every time); and lack of awareness about panic button. The authors make several recommendations to improve and redesign the panic button. First, they recommend that, rather than use mobile phones, "a standalone wearable device, a device that connects to one's phone like a smart watch, or an add-on to an accessory could be methods of ensuring the panic button is almost always reachable." In addition, they recommend allowing the panic button to be configurable so that a women could choose to contact the police or a social network. They also noted that, "interventions like the panic button are designed for something that should not be happening in the first place and that they rely on certain assumptions of how sexual assault 'typically happens.'"