Crime Victimization, Health, and Female Genital Mutilation or Cutting Among Somali Women and Adolescent Girls in the United States, 2017

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Objectives. To examine if exposure to victimization (e.g., homicide, violence, sexual assault, arson, kidnapping) is related to health problems, health care access and barriers, and health needs—beyond the effects of female genital mutilation or cutting (FGM/C)—among Somali women and adolescent girls.

Methods. We collected original survey data in 2017 from 879 female Somalis in Arizona.

Results. Compared with nonvictims, victims experienced significantly more health problems, were significantly less likely to have a designated place to receive health care, and identified significantly more health care needs and barriers to health care. Victims were 4 times more likely to experience depression or trauma and more than twice as likely to experience sexual intercourse problems, pregnancy problems, and gynecological problems. Among Somalis with FGM/C, victims had a 15% higher predicted probability of pregnancy-related health problems and a 19% higher predicted probability of gynecological health problems compared with nonvictimized Somalis with FGM/C.

Conclusions. Somalis exposed to victimization have more health problems, needs, and health care barriers.

Public Health Implications. Although more than 98% of Somali women and adolescent girls have undergone FGM/C, crime victimization affects health more than FGM/C alone. (*Am J Public Health.* 2020;110:112–118. doi:10.2105/AJPH.2019.305392)

See also Young, p. 18.

Violence against women is a global and pervasive problem. Many immigrant, refugee, and asylee women, including Somali and other African women, are exposed to extreme violence throughout their lives. The very definition of a refugee is one forced to leave one's country because of persecution, war, or violence.[1] Exposure to victimization refers to experiencing or witnessing crime, which is broadly defined and encompasses any criminal act (e.g., homicide, violence, sexual assault, arson, kidnapping). Gender-based violence occurs at high levels in many immigrants' country of nationality attributable, in part, to political unrest, war crimes, and rape.[2] Among other life-threatening conflicts facing the people of Somalia,[3] Somali women and girls also face high risk of gender-based violence, including domestic violence, child abuse, involuntary family separation,[4] and female genital mutilation or cutting (FGM/C).

FGM/C has been declared by the World Health Organization as another form of gender-based violence that is deeply embedded in the sociocultural fabric of many countries, particularly across sub-Saharan Africa.[5] The practice affects up to 98% of Somali women and girls.[6] Essentially, FGM/C involves the removal of part or all of female genitalia for nonmedical reasons and the practice is widely recognized as a worldwide public health issue.[7] Women with increasing severity of FGM/C are at higher risk of obstetric and gynecologic complications[8,9] as well as depression and posttraumatic stress disorder symptoms.[10]

Despite female immigrants' high level of exposure to violence, comparatively little is known about its effects on women's and adolescent girls' health.[2] The adverse health consequences of victimization are well documented among other populations of women.[11,12] Among US women in general, victimization is associated with injury, chronic pain, sexually transmitted infection, disability, posttraumatic stress disorder, reduced quality of life, substance abuse, and even death. The public health consequences of victimization are also important given that victims and taxpayers pay more than $100 billion each year for emergency department visits, medications, and other medical and public program costs as a result of victimization.[13] However, the relationships between victimization, health, and FGM/C among immigrant populations—particularly Somali women and adolescent girls—is much less understood.

In one of the only studies of Somali refugee women exposed to extreme violence, more than three quarters of women who experienced a potentially traumatizing event met the criteria for posttraumatic stress disorder (38 of 48 women aged 17–60 years in Mogadishu, Somalia).[14] Despite Somali women's high level of exposure to violence,

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1 US-based study found that many do not seek mental health care (50%; 13 of 26 emotionally distressed women).[15] Yet the extent to which Somali women's and adolescent girls' exposure to victimization affects their health and health care access remain unanswered questions. Examining the links among victimization, health, and FGM/C among Somali women and adolescent girls may offer important insights that can assist health care practitioners aiming to improve the quality of health and health care.

There are more than 2 million Somalis displaced because of conflict.[4] Many displaced Somalis resettle in Arizona, which ranks fifth in the nation with 7431 Somalis entering the state since 1992.[16] Somalis represent a substantial group of people for whom relatively little is known empirically about women's health. The current project represents the first known large-scale comprehensive study of the connections between victimization, health, and FGM/C among Somali women and adolescent girls.

We examined 3 related research questions: is exposure to victimization related to (1) health problems, (2) health care access and barriers, and (3) unmet health care needs—even after accounting for the effects of FGM/C—among Somali women and adolescent girls? We hypothesized that victims will have significantly more health problems, less health care access and more barriers to health care, and more unmet health care needs compared with nonvictims.

METHODS

We collected original cross-sectional data from self-report surveys administered to Somali and Somali Bantu women (aged ≥ 18 years) and adolescent girls (aged 15 to < 18 years) in Phoenix and Tucson, Arizona, from February to December 2017. We implemented a combination of purposive snowball and respondent-driven sampling strategies to generate the sample.[17–19] Bilingual community mobilizers (CMs), representing both the Somali and Somali Bantu communities, completed comprehensive training on human participant protections, confidentiality, privacy, and the electronic survey instrument. The survey was forward- and back-translated by a private translation company and subsequently modified by CMs and other key Somali and Somali Bantu community informants to ensure linguistic accuracy and cultural appropriateness. Participants chose to complete the survey individually or have it read aloud by CMs in English (n = 727; 83%), Somali (n = 150; 17%), or Maay Maay (n = 2; < 1%). CMs and participants were matched by ethnicity. Self-reported FGM/C status was facilitated by visual imagery in the electronic tablets of the World Health Organization classification of FGM/C types. Consistent with previous research among communities with high prevalence of the more severe forms of FGM/C, we relied upon self-report given that pelvic examinations were not feasible in a community-based study.[19]

Participants

The sample consisted of 879 Somali women and adolescent girls between the ages of 15 and 90 years who had resettled to the United States (see age distribution in Figure A, available as a supplement to the online version of this article at http://www.ajph.org). The sample was ethnically diverse, including Somali (n = 579; 68%), Somali Bantu (n = 225; 26%), and other ethnicities (n = 52; 6%). About half of the sample were single or never married (n = 366; 42%). The average participant was high-school educated, although one quarter of the sample had never attended school (n = 217; 25%). Participants had resided in the United States between less than 1 year and 47 years, with an average of 8.65 years (SD = 6.85). Most of the participants had FGM/C (n = 687; 79%).

Measures

Participants were asked if they had experienced a series of health problems across 4 dimensions for which separate scales were created: sexual intercourse ($\alpha = 0.847$), pregnancy ($\alpha = 0.674$), depression or trauma ($\alpha = 0.622$), and gynecologic health ($\alpha = 0.729$). Responses were dichotomized into either yes (= 1) or no, unsure, or not applicable (= 0). See Table A (available as a supplement to the online version of this article at http://www.ajph.org) for scale items for all measures.

We examined 2 dichotomous measures separately to gauge participants' access to health care services: (1) ever received a Papanicolaou (Pap) test (yes = 1; no and unsure = 0) and (2) have a designated place to receive health care.

Participants were asked to select all barriers to health care experienced in the past 12 months and we summed items to create an additive index ($\alpha = 0.618$).

Participants were asked if they needed 14 types of health care services that they were not currently receiving, which we summed to create an additive index ($\alpha = 0.789$).

In consultation with CMs, we assessed exposure to victimization with a list of culturally specific violent events, including looting or burning of home or property, abandoned or thrown out by family, abducted, sexual violence, attacked with a weapon, or witnessing murder ($\alpha = 0.784$). We dichotomized response options such that 1 = victim and 0 = nonvictim.

Participants were shown visual images of FGM/C and asked if they had been circumcised. Unsure participants (n = 18) were recoded as missing.

Control variables included women's age (continuous), single marital status (= 1; married, divorced, living common law, separated and widowed were collapsed = 0), education (higher scores = higher education), and years in the United States (continuous).

Statistical Analyses

We estimated a series of logistic regression and negative binomial models to understand the relationships between victimization, health, and FGM/C. Because engaging in sexual intercourse before marriage is a cultural taboo in Somalia, we restricted models examining sexual intercourse and pregnancy-related problems to nonsingle women only (n = 499). We estimated the model predicting ever receiving a Pap test among women aged 21 years and older because the standard of care is to perform Pap tests among adult women in this age range (n = 669). We estimated all other models among the full sample (n = 879). We estimated negative binomial regression models for the dependent variables comprising overdispersed count data (e.g., barriers to health care and unmet health care needs).[20] Results are presented controlling for demographic characteristics and relevant dependent variables from other models. Because Somali

Bantu women may be even more marginalized than ethnically Somali women, Tables B through J (available as supplements to the online version of this article at http://www.ajph.org) present models separately among these ethnic groups.

RESULTS

The following presents participants' health problems, health care access and barriers, and unmet health care needs.

Health Problems

Nearly one quarter of the Somali women and adolescent girls were exposed to victimization (n = 194; 22%; Table 1). The full sample reported experiencing health complications pertaining to gynecologic health (n = 165; 24%), sexual intercourse (n = 136; 18%), pregnancy (n = 102; 15%), and depression or trauma (n = 55; 7%). Exposure to victimization was significantly associated with all health problems, including sexual intercourse problems among nonsingle women (model 1), pregnancy problems among nonsingle women (model 2), depression or trauma among the full sample (model 3), and gynecological problems among the full sample (model 4). Notably, FGM/C was also significantly associated with health problems across all models (Table 2).

Given that both victimization and FGM/C emerged as statistically significant, coefficient comparisons and predicted probabilities are presented to further test our hypotheses. Coefficient comparisons were nonsignificant across models 1 through 4, indicating that the strength of victimization and FGM/C were not significantly different from one another in terms of their association with health problems ($z = -1.12$, -1.40, -1.14, and -1.87, respectively). In other words, victimization and FGM/C are both key for understanding Somali women's and adolescent girls' health problems. Among those with FGM/C, victims had a 15% higher predicted probability of pregnancy-related health problems and a 19% higher predicted probability of gynecological health problems compared with nonvictims ($P < .05$). We observed no significant victimization differences for participants without FGM/C in terms of predicted probabilities for obstetric or gynecological health problems. Predicted probabilities could not be estimated for sexual intercourse problems or depression or trauma mental health given insufficient variation among interaction terms. Health problems for victims versus nonvictims among participants with and without FGM/C are presented in Figures B and C (available as supplements to the online version of this article at http://www.ajph.org).

Health Care Access and Barriers

Among nonsingle adult women, exposure to victimization was not significantly associated with having had a Pap test, whereas FGM/C was significant (model 1, Table 3). We observed no significant victimization differences for participants with or without

TABLE 1—Sample Descriptives Among the Full Sample (n = 879), Victims (n = 194), and Nonvictims (n = 685): Arizona, 2017

	All Women, No. (%) or Mean ±SD	Victims, No. (%) or Mean ±SD	Nonvictims, No. (%) or Mean ±SD
Health problems			
Sexual intercourse problems*	136 (18)	56 (31)	80 (14)
Pregnancy problems*	102 (15)	42 (26)	60 (11)
Depression or trauma problems*	55 (7)	32 (17)	23 (4)
Gynecologic health problems*	165 (24)	62 (38)	103 (19)
Access and barriers to health care			
Ever received a Papanicolaou test	220 (35)	42 (28)	178 (36)
Have a place to receive health care*	670 (77)	110 (58)	560 (83)
Barriers to health care (range = 0–13)*	0.44 ±0.98	0.83 ±1.08	0.33 ±0.92
Health care needs (range = 0–14)*	0.97 ±1.80	2.14 ±2.68	0.64 ±1.28
Victimization index (range = 1–6)	194 (22)	. . .	. . .
Looting or burning of home or other property	104 (12)	. . .	. . .
Being abandoned or thrown out by family	69 (8)	. . .	. . .
Being abducted	23 (3)	. . .	. . .
Sexual violence (rape or other sexual assault)	66 (8)	. . .	. . .
Being attacked with a weapon	79 (9)	. . .	. . .
Witnessing murder	47 (5)	. . .	. . .
Female genital mutilation or cutting*	687 (79)	140 (73)	547 (81)
Personal characteristics			
Age, y (range 15–90)	31.15 ±13.80	33.27 ±15.19	30.54 ±13.32
Single or never married*	366 (42)	65 (34)	301 (45)
Education (range = 1–6)	2.91 ±1.52	2.77 ±1.60	2.95 ±1.49
Years in the United States (range = 0–47)	8.65 ±6.85	8.57 ±6.60	8.67 ±6.93

*Statistically significant differences between victims and nonvictims ($P < .05$).

TABLE 2—Logistic Regression Models Examining the Relationship Between Exposure to Victimization, Female Genital Mutilation or Cutting, and Women's Health Problems: Arizona, 2017

	Model 1,[a] OR (SE; 95% CI)	Model 2,[b] OR (SE; 95% CI)	Model 3,[c] OR (SE; 95% CI)	Model 4,[d] OR (SE; 95% CI)
Victimization	2.69 (0.73; 1.58, 4.58)	2.12 (0.65; 1.16, 3.86)	3.69 (1.24; 1.91, 7.13)	2.57 (0.61; 1.61, 4.09)
FGM/C	5.93 (3.88; 1.64, 21.39)	7.32 (6.11; 1.43, 37.62)	13.44 (14.37; 1.65, 109.23)	6.91 (3.26; 2.74, 17.42)
Health needs	1.01 (0.06; 0.89, 1.14)	1.39 (0.12; 1.17, 1.64)	1.25 (0.08; 1.11, 1.42)	1.20 (0.06; 1.08, 1.33)
Health care barriers	1.31 (0.15; 1.04, 1.65)	1.12 (0.12; 0.90, 1.38)	1.32 (0.15; 1.06, 1.64)	1.20 (0.12; 1.00, 1.45)
Age	1.01 (0.01; 0.99, 1.03)	1.01 (0.01; 0.99, 1.03)	1.01 (0.01; 0.99, 1.04)	1.02 (0.01; 1.01, 1.04)
Education	1.34 (0.11; 1.14, 1.57)	1.10 (0.10; 0.91, 1.32)	0.97 (0.11; 0.77, 1.21)	1.31 (0.10; 1.13, 1.51)
Years in the United States	0.98 (0.02; 0.94, 1.01)	0.94 (0.02; 0.90, 0.98)	0.99 (0.03; 0.94, 1.04)	0.99 (0.02; 0.96, 1.02)
Single marital status			0.45 (0.20; 0.19, 1.09)	0.78 (0.20; 0.48, 1.29)
Constant	0.02 (0.01; 0.00, 0.08)	0.02 (0.02; 0.00, 0.13)	0.00 (0.00; 0.00, 0.03)	0.01 (0.01; 0.00, 0.03)
HL χ^2	421.76	381.66	577.13	653.62

Note. CI = confidence interval; FGM/C = female genital mutilation or cutting; HL χ2 = Hosmer–Lemeshow χ^2 goodness-of-fit test statistic; OR = odds ratio.
[a]Sexual intercourse problems among nonsingle women.
[b]Pregnancy problems among nonsingle women.
[c]Depression or trauma health problems among all women.
[d]Gynecologic health problems among all women.

FGM/C in terms of predicted probabilities for receiving a Pap test.

Among the full sample, victims were significantly less likely than nonvictims to have a designated place to receive health care (model 2, Table 3). Alternatively, participants with FGM/C were significantly more likely to have a designated place to receive health care compared with those without FGM/C (model 2, Table 3). Coefficient comparisons revealed that FGM/C had a significantly stronger association with having a designated place to receive health care compared with victimization ($z = -5.73$; $P < .05$). Among participants with FGM/C, the predicted probability of having a designated health care place was 15% less among victims compared with nonvictims ($P < .05$). This was also true for those without FGM/C, among whom the predicted probability of having a health care place was 69% less for victims compared with nonvictims ($P < .05$).

TABLE 3—Logistic Regression and Negative Binomial Models Examining the Relationship Between Exposure to Victimization, Female Genital Mutilation or Cutting, and Women's Health Care Access and Barriers: Arizona, 2017

	Model 1,[a] OR (SE; 95% CI)	Model 2,[b] OR (SE; 95% CI)	Model 3,[c] Coefficient (SE; 95% CI)
Victimization	0.75 (0.20; 0.45, 1.26)	0.35 (0.08; 0.23, 0.54)	0.65 (0.17; 0.32, 0.98)
FGM/C	2.49 (1.01; 1.04, 5.92)	2.47 (0.63; 1.49, 4.08)	0.08 (0.22; −0.36, 0.52)
Health needs	1.02 (0.06; 0.90, 1.15)	1.06 (0.05; 0.96, 1.17)	0.15 (0.03; 0.08, 0.21)
Health care barriers	0.72 (0.10; 0.56, 0.94)	0.61 (0.06; 0.49, 0.74)	
Age	0.98 (0.01; 0.96, 0.99)	1.02 (0.01; 1.00, 1.04)	−0.00 (0.01; −0.02, 0.01)
Education	1.09 (0.08; 0.95, 1.25)	0.99 (0.07; 0.86, 1.14)	0.04 (0.05; −0.06, 0.14)
Years in the United States	1.02 (0.02; 0.99, 1.05)	0.99 (0.02; 0.96, 1.02)	−0.04 (0.05; −0.04, 0.01)
Single marital status		1.17 (0.28; 0.73, 1.88)	−0.37 (0.17; −0.71, −0.03)
Constant	0.61 (0.34; 0.20, 1.80)	1.71 (0.79; 0.69, 4.24)	−1.01 (0.35; −1.69, −0.33)
HL χ^2	428.43	717.21	
Pearson χ^2			85.24

Note. CI = confidence interval; FGM/C = female genital mutilation or cutting; HL χ^2 = Hosmer–Lemeshow χ^2 goodness-of-fit test statistic; OR = odds ratio.
[a]Ever received a Papanicolaou test among nonsingle adult women aged 21 years and older.
[b]Have a place to receive health care among all women.
[c]Health care barriers among all women.

Women and adolescent girls in the full sample exposed to victimization also faced significantly more barriers to health care than nonvictims (model 3, Table 3). Among participants without FGM/C, victims had 1 more barrier to health care than nonvictims ($P < .05$). There were no significant differences in the number of barriers faced by victims and nonvictims with FGM/C. When the types of barriers to health care were disaggregated, the most prevalent barrier to health care was lack of transportation (n = 119; 14%) followed by lack of child care (n = 42; 5%).

Unmet Health Care Needs

The full sample reported an average of 1 unmet health care need (Table 4). Victims reported significantly more unmet health care needs (mean = 2.14) than nonvictims (mean = 0.64). Negative binomial results indicated that victimization was significantly associated with more unmet health care needs, whereas FGM/C was nonsignificant. Among

TABLE 4—Negative Binomial Model Examining the Relationship Between Exposure to Victimization, Female Genital Mutilation or Cutting, and Women's Health Care Needs Among the Full Sample of Women: Arizona, 2017

	Model 1,[a] Coefficient (SE; 95% CI)
Victimization	1.03 (0.13; 0.76, 1.29)
FGM/C	0.20 (0.18; −0.15, 0.56)
Health care barriers	0.33 (0.06; 0.20, 0.45)
Have a place to receive health care	0.09 (0.15; −0.19, 0.38)
Age	−0.00 (0.01; −0.01, 0.01)
Education	0.03 (0.04; −0.05, 0.11)
Years in the United States	−0.00 (0.01; −0.02, 0.02)
Single marital status	−0.01 (0.14; −0.29, 0.26)
Constant	−0.78 (0.30; −1.37, −0.19)
Pearson χ^2	307.74

Note. CI = confidence interval; FGM/C = female genital mutilation or cutting. Full sample: n = 879.
[a]Health care needs among all women.

participants with FGM/C, victims had a predicted probability of 1.37 more unmet health care needs compared with nonvictims ($P < .05$). Among those without FGM/C, victims had a predicted probability of 1.15 more unmet health care needs compared with nonvictims ($P < .05$). Victims had significantly more health care needs compared with nonvictims across each of the individual needs. More than twice as many victims than nonvictims needed general health care (35% vs 14%), women's health care (28% vs 11%), dental care (22% vs 10%), and eye care (19% vs 8%). Victims were nearly 4 times more likely to need education on FGM/C (22% vs 6%) and 8 times more likely to need mental health care (16% vs 2%) compared with nonvictims.

DISCUSSION

This study is, to our knowledge, the first large-scale examination on the health, victimization, and FGM/C experiences of Somali women and adolescent girls. Consistent with expectations and previous research among other hidden populations, we found that exposure to victimization was significantly associated with health complications.[12] Shorter duration in the United States was only associated with increased pregnancy-related problems. One explanation for this may be that pregnancy is a shorter-term event with isolated health care needs, whereas sexual intercourse, mental health, and gynecologic health are more likely to persist over the life span. The findings underscore the need for Somali women and adolescent girls exposed to victimization to receive health care.

Given that victims experienced more health problems than nonvictims, the next logical question our analyses aimed to answer was whether victims accessed health care more or less than nonvictims. Despite victims' elevated exposure to violence—whereby increasing the need for health care—victims were significantly less likely to have a designated place to receive health care and no more likely to have a Pap test than nonvictims. Yet these findings are supported by research that shows Somali women to be unlikely to receive Pap tests given myriad barriers, including religious beliefs, culture and modesty, distrust of providers, misinformation about cancer screening, and language and logistical barriers.[21] It is important to note that some health providers lack the knowledge that women with FGM/C—including the most severe form of FGM/C (e.g., type III or pharaonic)—still need Pap tests. We also found that exposure to victimization was associated with an increased number of barriers to health care, with the most prevalent barriers cited as a lack of transportation and child care.

Turning to the issue of FGM/C, most of the women and adolescent girls in the sample were cut (79%; n = 687), which is consistent with the high national prevalence in Somalia.[6] We found that participants exposed to violence had significant health problems—even when we accounted for the health impact of being cut—yet the association between FGM/C and poor health remained remarkably and significantly high. One interpretation of this is that the lived experiences of Somali women and adolescent girls are just as important as their cut status. While being cut may overshadow the importance of other key differences and experiences related to health, the current study illustrates that victimization is a significant and impactful life experience with negative consequences to women's and adolescent girls' health, access to health care, and health needs.

The study's findings must be considered along with its limitations. Understanding the victimization–health link among girls aged even younger than 15 years is of importance particularly considering that FGM/C typically occurs during childhood. Our survey did not contain exhaustive measures of victimization, health, or health care access. Cronbach's alphas were lower for scales measuring pregnancy-related problems ($\alpha = 0.674$), depression or trauma ($\alpha = 0.622$), and health care barriers ($\alpha = 0.618$), which may suggest that additional or other indicators could yield more robust measures.

The survey contained many personal questions that participants may not have felt entirely comfortable answering. CMs ensured participants' confidentiality and privacy, yet reporting bias is possible. We are unaware of any pressure from CMs to over- or underreport personal information, including victimization and FGM/C. Moreover, we are confident in the accuracy of self-reported FGM/C given that (1) we provided visual images to help participants self-identify, (2) previous research has used FGM/C self-report methodology,[19] and (3) we found a high prevalence of the most extreme form of cutting, type III or pharaonic (n = 243; 36%).

Although this study is to our knowledge the first empirical examination of a large sample of Somali women and adolescent girls, it is cross-sectional, which prevents an investigation of the ways in which victimization, health, and FGM/C change over time. While the potential for participant selection bias cannot be ruled out, our research design incorporated several safeguards to minimize this possibility. For example, (1) we established legitimacy and rapport with the local Somali community leaders and more than a dozen community partners serving the Somali population to deepen our immersion in and connections with this population; and (2) we employed a respondent-driven sampling strategy and snowball sampling design, which results in minimal risk for bias when the assumptions of respondent-driven sampling are met, as they were in our design.[18] Although our study is by no means flawless, it is the first of its kind, to our knowledge, to comprehensively examine the links between

victimization, health, and FGM/C among the largest sample of Somali women and adolescent girls.

Public Health Implications

The victimization–health link is established among the general US population, yet targeted public health approaches for Somali women and adolescent girls are important given the differences in culture and lived experiences. The population of US women and adolescent girls are generally not affected by FGM/C, and our analyses clearly show that FGM/C is an important factor in understanding the victimization–health link among Somalis. As noted earlier, FGM/C may even be considered a form of gender-based violence among women and girls from African and other countries. Therefore, programs and policies that are culturally informed may substantially decrease barriers and increase Somali women's and adolescent girls'—both victims and nonvictims—access to health care. For example, a low-cost program transporting women to the hospital for emergency obstetric care in rural Sierra Leone, Africa, significantly increased women's access to care and decreased the proportion of women who died in the hospital from 20% to 10%.[22] Increasing women's and adolescent girls' access to health care also has important public health implications for decreasing the mortality rate of African children.[23] Although these studies were conducted in Africa, a US-based approach may have a significant impact on improving Somali and other immigrants' or refugees' health and health care. Other possible solutions for improving women's and adolescent girls' health care might include providing culturally and ethnically similar female providers, cultural health navigators of similar cultural and linguistic background to facilitate trust building, health literacy and health care navigation, women's health clinics, women's health days, and community outreach.[24]

Yet improving health care access is not enough to fully address the needs of women and adolescent girls exposed to violence. Assessing the quality of care that Somali and other immigrant or refugee victims receive is a key next step needed for future research to understand the complexities surrounding the links between victimization and health among those with and without FGM/C. This is particularly important given that victims of interpersonal violence often report discomfort with the health care environment, dissatisfaction with the responses of health care professionals, and lack of confidence in the outcomes of disclosing victimization to a health professional.[25] Somali women's and adolescent girls' experiences with health care providers is ripe for future investigation, yet real challenges to serving this hidden population have been documented among health care providers, including mistrust of providers, communication barriers, and resistance to obstetrical care.[26] Indeed, immigrant and refugee women are suddenly confronted with many Western approaches to medical care that are unfamiliar and may be overwhelming.[26] Therefore, it is important for health providers to become sensitive to the unique cultural needs of their clients, particularly among those from countries that have a high number of refugees, like Somalia.[4]

To implement effective public health programs and policies aimed at assisting Somali women and adolescent girls, their needs must first be understood. Returning to our findings, Somali women and adolescent girls exposed to victimization reported significantly more health needs compared with nonvictims. Given the striking differences in health care needs, health professionals may improve the quality of health care delivery by asking their clients about health needs and victimization exposure. This could be accomplished by discretely featuring a few additional questions on a medical intake form or raising such questions in an examination room. Health care professionals' efforts to maintain clients' privacy and respond with compassion and respect may help to overcome the challenges of working with Somali women and adolescent girls.[25]

Conclusions

Ultimately, this study reveals much about the health problems faced by displaced Somali women and adolescent girls—among victims and nonvictims. This study provides new insight into the detrimental health effects of those exposed to victimization, particularly among the hidden population of Somalis. Yet, health is extraordinarily complex and exposure to victimization is also complicated and multifaceted. While victimization has a powerfully negative effect on one's health, it is by no means the only influential factor. This study may be viewed as a springboard for future inquiry to expand upon the complexities of the connections between victimization, health, and FGM/C among other African and hard-to-access populations. AJPH

CONTRIBUTORS

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CONFLICTS OF INTEREST

The authors declare no conflict of interests.

HUMAN PARTICIPANT PROTECTION

We obtained formal approvals from Arizona State University institutional review board and informally from local Somali religious leaders.

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