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Factors associated with depression among young female migrants and commercial sex workers in Ethiopia

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BRIEF

FACTORS ASSOCIATED WITH DEPRESSION AMONG YOUNG FEMALE MIGRANTS AND COMMERCIAL SEX WORKERS IN ETHIOPIA

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Mental health disorders account for 13 percent of the global burden of disease, with depression being the third greatest contributor to the global disease burden (Collins, Patel and Joestl, 2011). Mental health disorders represent 16 percent of disease burden for adolescents aged 10 to 19—a comparatively larger share than other age groups—and depression is among the leading causes of morbidity within this age group (WHO, 2019). A study conducted in 17 countries suggested that mental health disorders are common, begin during childhood or early adolescence (by age 14) and frequently remain undetected for decades (Kessler, Angermeyer, Anthoney et. al, 2007).

The challenges related to prioritizing mental health are particularly glaring in sub-Saharan Africa. Mental health has received limited attention on the continent across multiple domains, including law and policy, health services and research. According to the World Health Organization's (WHO) Mental Health Atlas 2017, among all the WHO regions, the African region countries report the lowest number of stand-alone mental health laws (44 percent), the lowest number of stand-alone policies (72 percent), the fewest number of mental health professionals (0.9 mental health workers per 100,000 population) and the fewest mental health facilities (0.1 facilities per 100,000) (WHO, 2018). In addition, a review of papers published in The Lancet Global Health over a five year period found that 637 papers were devoted to health issues in sub-Saharan Africa; among these, only 21 papers were devoted to depression, seven to anxiety and six to suicide (Sankoh, Sevalie and Weston, 2018). Moreover, scant attention has been paid to mental health disorders among adolescents and youth in Africa, many of whom are at risk of mental health disorders as they face mounting pressures in the context of rapid population growth coupled with limited social and economic opportunities (Sankoh, Sevalie and Weston, 2018).

A meta-analysis of 12 studies of depression in Ethiopia found that, across the available studies, the pooled prevalence of depression was an estimated 11 percent, though methods of measurement and study populations varied across studies (Bitew, 2014). Many of the studies reviewed found that being female, being divorced or widowed and being a victim of intimate partner violence were consistently associated with a higher risk of depression and one study found that migrants are at three times greater risk of depression than non-migrants (Bitew, 2014). A more recent study in Northwest Ethiopia among nearly 800 adults estimated levels of depression at 18 percent, among which 11 percent exhibited mild symptoms, 4 percent moderate and 2 percent severe symptoms. In this study, females experienced elevated levels of depression compared to males (Molla, Sebhat, Hussen et al. 2016). Another study among out-patient adults in Sodo district Ethiopia found an estimated 12 percent had depression. However, none of the cases screening positive for depression were detected during clinical consultation or treated (Rathod, Roberts, Medhin et. al. 2018).

This research brief focuses on a study that examines the prevalence of depressive symptoms among Ethiopian girls and young women who migrated to urban areas. We also explore factors associated with depression, including demographic characteristics and the timing and pattern of migration.

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Ethiopia is the second largest country in sub-Saharan Africa with an estimated population of 108 million (CIA, 2020; estimate for July 2020). An estimated 42 percent of the population of Ethiopia are adolescents or youth. While rates of rural residence remain high in Ethiopia (80 percent), rates of urbanization are among the highest in sub-Saharan Africa, with an annual urban population increase of 4.63 percent (UN, 2018). In addition, the majority of internal, rural-urban migrants in Ethiopia are female. According to recent research by The World Bank, among rural migrants to Addis Ababa, 69 percent were female; among rural migrants to other urban areas of Ethiopia 56 percent were female (Bundervoet 2018). The same study estimated that rural-urban migrants were aged 22 years, on average, making migrating populations markedly young and female.

This study examines the prevalence of depressive symptoms among Ethiopian girls and young women who migrated to urban areas. We also explore factors associated with depression, including demographic characteristics and the timing and pattern of migration.

METHODS

This is part of a larger study of out-of-school Ethiopian girls and young women aged 15 to 24, focusing on migration and the transition to different work roles following migration (Erulkar, Girmay, Negeri, 2016). This was a large, mixed methods study that included formative qualitative research and a largescale quantitative survey. The quantitative study included questions to assess the mental health of those chosen for interview. The majority of survey respondents were rural-urban migrant females, but we also interviewed a small number of rural parents, rural girls and young women and brokers who help migrants find work. As the issue of mental health was not included in the initial qualitative research, we draw exclusively upon the findings from the quantitative study for the present study. Likewise, parent and broker interviews did not collect mental health information.

The quantitative study spanned six regions of Ethiopia and took place in seven cities: Adama, Addis Ababa, Dessie, Dire Dawe, Harar, Mekelle and Shashemene. These cities were chosen because they were considered to receive a large number of migrants from rural areas. Multiple categories of migrant girls and young women were interviewed. To be eligible for the study respondents had to be age 18 to 24, out-of-school and to have migrated to the city before the age of 18. However, for domestic workers we included an age range of 15 to 24 in order to capture the experience of child domestic workers. Most respondents were sampled through household listings, followed by random selection of eligible household members. Two additional categories of respondents were sampled purposefully: commercial sex workers and bar/café workers.

In each of the study cities, we identified neighborhoods where migrant young women were known to live, mainly low-income areas. We conducted a systematic listing of all households and other structures in the area, such as back rooms of restaurants or establishments where young women may spend the night. Interviewers went house-to-house to list members of the household or structure, in order to identify girls and young women who were eligible for the study. Eligible females were sampled randomly, using the random number generator available in SPSS v.25.

Commercial sex workers and bar/café workers are more hidden and stigmatized populations. Bar/café workers are often considered to partially engage in sex work, which results in stigma. These categories of respondents were sampled purposefully, visiting places where targeted respondents were known to congregate (bars, cafes, nightclubs, local brew houses and red-light districts) and approaching potential respondents for interview.

Survey interviewers were recruited from the study cities to ensure that they possessed relevant language capabilities and understanding of the local culture and community. Our female sample was interviewed by only female interviewers. The survey interviewer training lasted seven days. Interviewers reviewed the questionnaire item-by-item, reviewed ethical procedures including informed consent and actions to be taken in the case of adverse events, and engaged in practice interviews in pairs, ensuring understanding and adherence to skip patterns and general questionnaire administration. A professional counselling firm was also made available to respondents in case they had negative reactions based on the interview or expressed a need for such services.

A structured questionnaire was developed, pretested and translated into local languages. Questionnaires elicited information on demographic and socioeconomic characteristics, education, families and social networks, migration, livelihoods, use of job placement brokers in finding work, mental health, marriage, sexual experience, HIV knowledge and behavior, family planning and pregnancy, and utilization of services. All data was transported from the field and entered in Addis Ababa by trained data entry clerks. Data was converted to SPSS v.25 for analysis. The study received ethical approval from the Population Council's Institutional Review Board (IRB) and the National Research Ethics Committee in Ethiopia.

MEASURES

In order to measure symptoms of depression among respondents, we used a nine-item patient health questionnaire (PHQ-9), asking about symptoms experienced in the two weeks prior to survey. PHQ-9 was developed to assess depression in primary care settings (Kroenke, Spitzer, Williams, 2001). Several facility-based studies have validated PHQ-9 in Ethiopia (Gelaye, Williams, Lemma, et. al, 2013, Hanlon, Medhin, Selamu, et. al. 2015). In the current study, respondents were asked the following: "I will read you a list of feeling or experiences one may have. I would like you to tell me if you have experienced this over the last two weeks: 1) Little interest or pleasure in doing daily activities, 2) Feeling down, depressed or hopeless, 3) Feeling tired or having little energy, etc. If the respondent answered 'yes' to any item, they were asked a follow-up question about how frequent the experience was: occasionally, on several days or daily. Each item was scored from 0 to 3 to reflect the existence and frequency of symptoms. An overall score of 0 to 4 on PHQ-9 was considered no depression, those who scored 5-9 were coded has displaying moderate depression; those with a score of 10 or over were considered to have severe depression (Hanlon, Medhin, Selamu, et. al. 2015).

We present the percentage of young women in each category (domestic workers, sex workers, bar sex workers, other occupational categories and those not working) who have moderate or severe depression. We also examine the association between depression and various demographic characteristics as well as the experience of social isolation, patterns of migration and violence. Logistic regression was used to model the odds of experiencing moderate or severe depression. Variables with significant associations in the bivariate analysis were found to be uncorrelated, except for age and marital status which had a weak correlation. Because depression was very common among commercial sex workers, analysis was undertaken on two separate sub-groups: those who are sex workers and those who are in other forms of paid work or are unemployed.

In addition to basic demographic variables such as age, religion and marital status, we explored the association between depression and aspects of girls' migration and social life. We included measures of early age at migration (below age 15) and having migrated on one's own, without accompaniment of family members or other acquaintances. In addition, many migrating girls and young women use brokers in the course of migration to assist in securing them jobs. Council research has also demonstrated that some brokers may take advantage of migrating girls, which can result in sexual abuse and putting girls at increased risk for trafficking (Erulkar, 2020). We included a measure of social connections and

social isolation through the variable reflecting whether or not the respondent reports having friends. Finally, we also included in the model measures of violence such has having been beaten in the last three months and have experienced coerced or forced sexual initiation (see Erulkar, Girmay and Negeri 2017 for description of measurement of sexual coercion).

RESULTS

A total of 4,495 migrant females were interviewed in seven cities. Table 1 shows the characteristics of the sample of migrant girls and young women, by major occupational groups. On average, sampled girls were age 20, with over half (54 percent) being Orthodox Christian, 36 percent were Muslim, and 10 percent followed another religion. Respondents across categories had extremely low levels of education, on average below five years of schooling (mean 4.2 years of education). Domestic workers had the fewest average years of schooling (mean 3.7), followed by commercial sex workers (mean 4.1). Nearly one quarter of migrant girls had never attended school (24 percent). About 1 in 10 respondents (9 percent) were double orphans, with commercial sex workers reporting higher rates of double orphanhood (17 percent) compared to the other categories of respondents. Regardless, a very small proportion of respondents lived with at least one parent (3 percent).

Compared to other respondent categories, commercial sex workers were more likely to be formerly married (divorced, widowed, separated) (25 percent), compared to domestic workers (10 percent), waitress and bar workers as well as those in other occupations (11 percent, each). Young women who were unemployed or not working were much more likely to report being currently married (76 percent) compared to the other occupation groups. When asked about the context of migration, a relatively high proportion of young women migrated on their own (40 percent), with 60 percent of commercial sex workers making this transition on their own.

TABLE 1: Sample characteristics, by current occupation of the respondent

	Not working (n=1,607)	Domestic workers (n=1,141)	Commercial sex workers (n=796)	Waitress/ Bar workers (n=510)	Other occupations (n=441)	All urban migrants (n=4,495)
Age (mean)	20.5	19.3	20.8	20.0	20.4	20.2
Religion						
Orthodox Christian	39.4	59.5	67.2	68.7	53.4	54.1
Muslim	50.6	31.3	22.2	21.0	33.2	35.6
Other	10.0	9.2	10.6	10.3	13.4	10.3
Years of education (mean)	4.2	3.7	4.1	5.3	4.0	4.2
Educational attainment						
None	22.2	26.1	28.8	12.9	26.8	23.7
1 to 4 years	28.1	32.0	19.2	20.6	24.9	26.3
5 to 8 years	44.3	39.2	48.5	59.0	42.0	45.2
9 + years	5.4	2.7	3.5	7.5	6.3	4.8
Number of living parents						
None	8.9	4.9	17.3	7.5	8.0	9.1
One parent	27.9	25.1	31.1	24.4	32.0	27.8
Two parents	63.2	70.0	51.6	68.1	60.0	63.1
Live with parent(s)	5.0	2.3	1.1	3.3	4.8	3.4
Marital status						
Never married	20.0	79.1	69.6	71.5	47.6	52.3
Currently married	76.2	11.4	5.5	17.3	41.7	37.2
Formerly married	3.8	9.5	24.9	11.2	10.7	10.5
Migrated before age 15	44.1	34.1	31.7	31.9	46.9	38.3
Migrated alone	29.7	35.0	59.6	50.3	37.6	39.5
Asset ownership						
Owns mobile phone	62.9	53.4	70.5	77.3	77.1	64.8
Owns a blanket	67.1	42.6	55.7	58.2	64.9	57.6
Owns bed	22.2	6.7	23.2	18.8	22.7	18.1
Owns a radio	16.2	3.9	15.5	13.5	14.3	12.5
Percent with 2+ assets (above)	53.0	25.1	51.2	53.3	56.9	46.1

We asked respondents about ownership of different personal assets, such as a radio, mobile phone, bed and blanket. Nearly two-thirds (65 percent) of respondents owned a mobile phone and 58 percent owned a blanket; only a minority owned a bed (18 percent) or radio (12 percent). We calculated the percent of respondents who owned at least two of the four assets mentioned. Roughly half of the respondents in all categories owned at least two of the assets named with the exception of domestic workers, among whom only 23 percent owned two or more of the mentioned assets, likely reflecting a much lower economic status among this category of respondents.

Using PHQ-9 to measure symptoms of depression, one in five migrant girls (21 percent) displayed symptoms of depression, whether moderate or severe, as show in Table 2. Nearly 5 percent reflected symptoms of severe depression. Depressive symptoms were much more common among commercial sex workers than the other categories of respondents. Over one third of commercial sex workers (37 percent) displayed symptoms of depression (moderate or severe) and 10 percent reflected severe depressive symptoms. Because commercial sex workers were a distinct group in terms of mental health profile, we conducted a sub-group analysis with commercial sex workers as a stand-alone category.

Table 3 shows bivariate associations between the experience of depression in the last two weeks and various background and social characteristics. Among young women who are not engaged in sex work, the experience of depression is significantly associated with age, marital status, migrating at a young age, using

TABLE 2: Percent of migrant adolescent girls and young women with symptoms of depression, by current occupation of the respondent

	Not working (n=1,607)	Domestic workers (n=1,141)	Commercial sex workers (n=796)	Waitress/ Bar workers (n=510)	Other occupations (n=441)	All urban migrants (n=4,495)
No depression	82.5	84.1	63.3	80.8	77.8	78.9
Moderate depression	14.7	12.4	26.9	14.7	15.9	16.4
Severe depression	2.7	3.5	9.8	4.5	6.3	4.7
Any depression (moderate or severe)	17.4	15.9	36.7	19.2	22.2	21.1

TABLE 3: Percent of migrant adolescent girls and young women with moderate or severe depression, by background characteristics

	NOT IN COMMERCIAL SEX WORK			IN COMMERCIAL SEX WORK		
CHARACTERISTICS	No depression (n=3,041)	Moderate or severe depression (n=658)	P value	No depression (n=502)	Moderate or severe depression (n=291)	P value
Age			<0.029			NS
15 to 19	47.0	42.9		34.1	32.0	
20 to 24	53.0	57.1		65.9	68.0	
Religion						
Orthodox Christian	50.9	53.0	NS	63.2	74.1	<0.003
Muslim	39.0	36.1		23.9	19.0	
Other	10.1	10.9		12.9	6.9	
Education			NS			NS
<5 years education	50.9	48.9		46.2	50.9	
5+ years education	49.1	51.1		53.8	49.1	
Marital status			<0.001			NS
Never married	49.4	44.7		71.1	67.0	
Currently married	44.0	44.0		5.2	6.2	
Formerly married	6.6	11.3		23.7	26.8	
Orphan (single or double)	33.7	37.6	NS	46.1	52.2	NS
Migrated before age 15	38.0	47.4	<0.001	30.2	33.7	NS
Migrated alone	34.4	38.4	NS	60.0	59.7	NS
Has no friends	50.5	49.1	NS	44.2	45.7	NS
Ever used a broker	23.0	35.4	<0.001	50.6	55.0	NS
Beaten in last 3 months	2.3	8.5	<0.001	18.5	23.0	NS
Sexual experience			<0.001			<0.012
Never had sex	39.7	30.2		-	-	
First sex consensual	50.2	45.3		69.2	60.2	
First sex forced	10.1	24.5		30.8	39.8	
Current occupation domestic work	31.6	27.5	<0.041	-	-	
First sex work before age 18	—	—		47.9	49.5	NS
Was a former domestic worker; entered sex work	—	—		45.6	55.7	<0.004
Deceived by broker or employer into sex work	—	—		17.7	23.5	NS

broker(s) for job placement, experiences of being beaten in the last three months and experiencing non-consensual first sex. Interestingly, being a domestic worker was associated with lower levels of depression compared to young women who were not working or those in other professions. Among young women in commercial sex work, depression was associated with one's religion, having experienced forced first sex and transitioning from domestic work to sex work.

Table 4 shows summary results from multivariable modelling where the outcome is depressive symptoms among migrant females not engaged in commercial sex work. Migrating before the age of 15, using a broker to find a job, experiencing forced first sex and having been beaten in the last three months were all associated with increased odds of having depression. Experience of violence was strongly associated with the increased odds of having depression, with the odds of being depressed among those having been beaten 3.4 times compared to those who had not; the odds of having depression among respondents who experienced forced/coerced first sex were 2.8 times higher compared to than those who had not.

TABLE 4: Adjusted odds ratios (and 95% confidence intervals) from logistic regression analysis to identify associations between selected characteristic of female migrants not in commercial sex work and risk of depression

	Has depression (n=3,666)	P value
Age category		
15–19 (Ref)	—	—
20–24	1.089 (0.899–1.319)	NS
Marital status		
Never married (ref)	—	—
Currently married	0.844 (0.634–1.124)	NS
Formerly married	1.187 (0.818–1.720)	NS
Occupation domestic worker	0.898 (0.723–1.115)	NS
Migrated before age 15	1.364 (1.144–1.626)	p<0.001
Ever used a broker to find a job	1.668 (1.379–2.017)	p<0.001
Beaten (last three months)	3.377 (2.316–4.923)	p<0.001
Sexual experience		
Never had sex (ref)	—	
Sexual initiation consensual	1.164 (0.853–1.587)	NS
Sexual initiation forced, coerced	2.841 (2.048–3.943)	p<0.001

Among respondents who were in commercial sex work, depression was associated with religion, experience of non-consensual sexual initiation and transitioning from domestic work into sex work/commercial sexual exploitation (Table 5). Among sex workers, the odds of being depressed were nearly 2.5 times greater among respondents who were Orthodox Christians, compared to other denominations. Compared to commercial sex workers who had experienced consensual sexual initiation, the odds of depression among girls who experienced forced first sex were 1.5 times higher. Similarly, respondents who started work in domestic work and transitioned to sex work were over 1.5 times more likely to be depressed compared to those who were not former domestic workers.

TABLE 5: Adjusted odds ratios (and 95% confidence intervals) from logistic regression analysis to identify associations between selected characteristic of commercial sex workers and risk of depression

	Has depression (n=777)	p value
Age category		
15–19 (Ref)	—	—
20–24	1.021 (0.740–1.409)	NS
Religion		
Other (ref)	—	—
Muslim	1.469 (0.814–2.748)	NS
Orthodox Christian	2.364 (1.369–4.082)	p<0.002
Sexual initiation forced or coerced	1.577 (1.156–2.152)	p<0.004
Former domestic worker; entered sex work	1.603 (1.188–2.164)	p<0.002

DISCUSSION

We conducted a large scale study of migrant girls and young women in Ethiopia which applied a standardized, tested and widely accepted method for measuring depression. To our knowledge, it is one of the few studies to examine the mental health of adolescent girls and young women in sub-Saharan Africa.

Previous studies of depression in Ethiopia reflected a pooled prevalence of depression of roughly 11 percent, with depression associated with being female, formerly married and experiencing gender-based violence (Bitew, 2014). Compared to these earlier studies in Ethiopia across various populations, this study found higher estimated prevalence of depression among migrating girls and young women. Thirty-seven percent of girls and young women in commercial sex work reported symptoms of depression, whereas respondents in other occupation categories ranged from 16 to 22 percent exhibiting symptoms of depression.

Like previous studies, this study suggested that the experience of violence—including forced sexual initiation and experiencing beating—was associated with elevated odds of depression. This study also demonstrated that factors associated with depression may vary across different sub-groups. For example, being Christian Orthodox was associated with elevated levels of depression among commercial sex workers but not among other categories of female rural-urban migrants. This suggests that the conditions of work that are in conflict with one's religion or values may undermine one's mental health, in addition to the well-known physical and health risks faced by young women in commercial sex work.

Among non-commercial sex workers, migrating before age 15 and migrating on one's own was associated with depression. Early migration and migrating on one's own may reflect a level of isolation, marginalization from one's family and community and desperation among young migrant women who are compelled to make a major physical relocation without accompaniment and/or at a young age.

This study highlights significant levels of depression among girls and young women in Ethiopia who are rural-urban migrants. As a population, these girls and young women have limited social support and social networks, little or no education, and limited opportunities for safe and rewarding livelihoods. After migration, many are absorbed into low-status work roles and a considerable number transitioned between different forms of low-status, exploitive and potentially dangerous jobs, such as domestic work and sex work. The study highlights the need to expand measurement of mental health conditions in health surveys. Importantly, our results underscore to need for additional research as well as critical investments in mental health infrastructure, programs and services for marginalized groups in sub-Saharan Africa.

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