High prevalence of mental health disorders in HIV positive adolescents and youths: an observational study from 8 health services in Sofala Province, Mozambique.

0567

Authors : **Di Gennaro Francesco***[1-2], Marotta Claudia*[1], Ramirez Lucy[1], Cardoso Hamilton[1], Chivite Alamo[1], Cinturao Vasco[1], Bavaro Davide Fiore[2], Dezi Cornelia Mahotas[3], Lazzari Marzia[1], Fernando Chenene[1],Chimundi Natalia[1], Atzori Andrea[1], Chaguruca Izilda[1], Tognon Francesca[4], Helga Guambe Dos Anjos[3], De Meneghi Giovanna[1], Mireille Tribie[3], Fabrizia Del Greco[1], Namarime Edson[1], Occa Edoardo[1], Putoto Giovanni[3], Pozniak Anton[5], Saracino Annalisa[1-2]

1. Doctors with Africa CUAMM, Beira 2100, Mozambique 2. Clinic of Infectious Diseases, University of Bari, University Hospital Policlinico, Bari, Italy. 3. UNICEF Mozambique. 4. Operational Research Unit, Doctors with Africa CUAMM, 35121 Padua, Italy. 5. Department of HIV Medicine, Chelsea & Westminster Hospital NHS Foundation Trust, London, UK

BACKGROUND

- Adolescent mental health is a significant public health concern, which became extremely relevant when referring to adolescents living with HIV [1]. Adolescence is a critical period of physical, emotional, and social development, characterized by heightened vulnerability and challenges which may impact also on adherence to HIV care and ART [2];
- Mozambique rates 8th worldwide for HIV prevalence with 150 000 people infected per year HIV/AIDS as the second leading cause of death in the country, accounting for 27% of all death [3];
- Moreover, in Mozambique 52% of population are under 18y with median age in adolescent range (17.2 years) [3].
- In order to better understand the proper intervention to deliver in this setting, we performed an observational study to evaluate anxiety, depression, post-traumatic stress disorder and alcohol-drug abuse in adolescents and youth assessing health services in Beira district, Mozambique.

METHODS

From 20 November 2019 to 20 November 2021, all adolescents and youth (10-24y) accessing one of the psychological services offered at 8 Servicios Amigos dos Adolescentes (SAAJ) of the Sofala Province, were screened by psychologist using the following standardized tools:

- GAD-7 for anxiety,
- PHQ-9 for depression,
- PC-PTSD-5 for post-traumatic stress disorder,
- CAGE-AID for alcohol -drug abuse.

Eight LHFs were enrolled in the study: Ponta Gêa, Munhava, Macurungo, Nhaconjo, Mascarenha, Inhamizua , HCB, in Beira district serving a population of about 300 000 people while another one, Nhamatanda, outside Beira district. All of these are in Sofala Province. Within each of these LHF, there was a SAAJ supported by Doctor with Africa CUAMM, an Italian non-governmental organization (NGO), from 2013.

→ HIV positive adolescent had worst scores of all the four tools tested and for concomitant Mental Health disorders (GAD-7, PHQ-9, PTSD-5 and CAGE);

→ Around 30% of adolescents and youths suffers of stigma or discrimination;

→ Around 73% of adolescents and youths living with HIV HIV-positive group had one or more pathological scores versus almost 35% of non-HIV-positive young people .

RESULTS

- Overall, 2,108 adolescents and youth were included in the study (63% F, median age: 19 ys). Of them, 1096 (52%) were HIV positive. When comparing scores of HIV positive subjects to negative ones, the median values were: 6 (IQR:4-9) vs 3 (IQR:1-6) for GAD-7, p-value<0.01; 5 (IQR:3-7) vs 3 (IQR:1-5) for PHQ-9, p-value<0.01; 1 (IQR:1-2) vs 0 (IQR:0-1) for PTSD-5, p-value<0.01; 1 (IQR:1-2) vs 0 (IQR:0-1) for CAGE, p<0.01.
- The multivariable logistic regressions showed a greater probability to be GAD-7>10 for women, [(AOR): 1.46, 95% CI: 1.01-2.10], for workers (AOR: 2.18, 95%CI: 1.12-4.23) and for people HIV+ (AOR: 1.78, 95%CI 1.25-2.54). Higher values of CAGE (≥ 2) and PTSD (≥ 3) seemed to be associated only with HIV positive condition (AOR:4.87, 95%CI: 3.72-6.38 and AOR:1.73, 95%CI: 1.28-237).

Table 1 Results at mental health screening tools by HIV status.

	HIV - N=1012 (48%)		HIV + N=1096 (52%)		Total N=2108		p-value*
Generalized Anxiety Disorder- 7 (GAD-7) (median and IQR)	3	1-6	6	4-9	5	2-8	<0.01
Gad-7 ≥ 10 (n and %)	76	7,6	113	10,3	189	9	0,059
PHQ-9 Depression (median and IQR)	3	1-5	5	3-7	4	2-6	<0.01
PHQ-9 Depression≥ 11 (n and %)	76	7,6	78	7,1	154	7,3	0,023
PTSD-5 (Post Traumatic Stress Disorder) (median and IQR)	0	0-1	1	1-2	1	0-2	<0.01
PTSD-5 ≥ 3 (n and %)	94	9,4	161	14,7	255	12,1	0,001
CAGE Substance Abuse (Alcohol and Drugs) (median and IQR)	0	0-1	1	1-2	1	0-1	<0.01
CAGE ≥ 2 (n and %)	99	10,0	392	35,8	491	23,3	<0.01
Concomitant mental health disorders (more than 1)	74	7,3	166	15,1	240	11,4	<0.01

Note: *Fisher exact test or Mann-Whitney test, as appropriated

Table 4. Adjusting Odds Ratio

	GAD-7≥ 10				PHQ-9≥ 11				CAGE≥ 2				PTSD-5 ≥ 3			
	AOR	P>z	[95% Conf.	Interval]	AOR	P>z	[95% Conf.	Interval]	AOR	P>z	[95% Conf.	Interval]	AOR	P>z	[95% Conf.	Interval]
Age 10-14	1,03	0,357	0,97	1,09	0,98	0,569	0,92	1,05	1,00	0,878	0,96	1,04	1,01	0,552	0,97	1,06
Age 15-18	1,23	0,157	1,07	1,49	0,88	0,449	0,78	1,55	1,30	0,238	1,26	1,84	1,05	0,522	0,83	1,12
Age 19-24	1,43	0,204	1,27	1,89	1,20	0,301	1,02	1,85	1,18	0,202	1,06	1,34	1,41	0,152	1,25	1,86
Sex: female vs male	1,46	0,042	1,01	2,10	1,67	0,013	1,11	2,50	0,80	0,065	0,62	1,01	1,28	0,122	0,94	1,75
Student vs unemployed	1,37	0,270	0,78	2,39	1,43	0,282	0,75	2,73	0,88	0,474	0,61	1,26	0,96	0,836	0,62	1,47
Worker vs unemployed	2,18	0,022	1,12	4,23	2,80	0,007	1,33	5,92	1,51	0,078	0,96	2,39	0,77	0,419	0,42	1,44
Primary vs Technical Education	0,42	0,201	0,11	1,59	1,22	0,852	0,15	9,98	1,49	0,605	0,33	6,81	0,82	0,852	0,10	6,73
Secondary vs Technical Education	0,45	0,213	0,13	1,59	1,64	0,636	0,21	12,55	1,15	0,852	0,26	5,14	1,03	0,972	0,22	4,73
None vs Technical Education	0,30	0,328	0,03	3,34	omitted				1,13	0,899	0,18	7,25	0,99	0,989	0,22	4,37
University vs Technical Education	1,26	0,726	0,35	4,58	3,02	0,294	0,38	23,76	0,84	0,826	0,18	3,99	1,12	0,884	0,24	5,20
HIV+ vs HIV-	1,78	0,001	1,25	2,54	1,05	0,792	0,72	1,53	4,87	0,000	3,72	6,38	1,73	0,000	1,28	2,35

CONCLUSIONS

From our findings it came clear that it should be a priority for governments and policy makers :

- to develop mental health programs for young - especially HIV positive - in order to reduce stigma, increase adherence to treatment and improve quality of life of these patients;
- to promote awareness and education activities on mental health and HIV in schools, communities, etc.;
- to extend mental health services through alternative delivery modalities such as teleconsultations and telepsychiatry may offer particular benefits for adolescents in need of mental health screening and treatment.
- Given the higher prevalence of disorders within HIV patient, an integrated mental health approach within the primary HIV care setting to address gaps in mental health service access and treatment should be implemented.

ADDITIONAL KEY INFORMATION

Author Contact Information: Francesco.digennaro1@uniba.it

Acknowledgements: to HIV-positive young Mozambicans. You will always find us at your side

References

Laurenzi CA, et al. Preventing mental health conditions in adolescents living with HIV: an urgent need for evidence. J Int AIDS Soc. 2020 Sep;23 Suppl 5(Suppl 5):e25556.

Ayano G, et al. The prevalence of depression among adolescent with HIV/AIDS: a systematic review and meta-analysis. AIDS Res Ther. 2021 Apr 27;18(1):23.

3. MinistÈrio da Saúde- MISAU, Instituto Nacional de EstatÌstica—INE, and ICF, InquÈrito de Indicadores de ImunizaÁ„o, Mal·ria e HIV/SIDA em MoÁambique (IMASIDA) 2018, MISAU/MoÁambique,