

Periodic Research Psychopathology and Coping Among HIV Infected Males And Females

Abstract

Main aim of the present study was to find out the correlation between psychopathology and ways of coping among HIV infected male and female patients. To fulfill this requirement a purposive sample of 200 HIV-infected Patients (age range 18-45 years) was selected. Out of these 200 HIV-infected patients, 100 of them were Male and the remaining 100 were Female. These Patients were HIV-infected since last 3 years and were not suffering from any known pathology. These Patients were sampled from various Medical Colleges, Hospitals and Sero-surveillance Centers in Haryana State. A Control Group of 100 Male and 100 Female (age range 18-45 years) was randomly selected for comparison purposes. Tools used were Personality Assessment Inventory (PAI) (Morey, L.C. 1972) and Coping Responses Inventory – Adult Form (CRI - Adult) (Moos, H., 1992). Results showed that various dimensions of both tests are significantly correlated among HIV infected patients.

Keywords: HIV, Psychopathology, correlation, coping, personality, pathology

Introduction

HIV/AIDS is a significant cause of death and disability, especially in low- and middle-income countries. Mental health and HIV/AIDS are closely interlinked; mental health problems, including substance-use disorders, are associated with increased risk of HIV infection and AIDS and interfere with their treatment, and conversely some mental disorders occur as a direct result of HIV infection. HIV/AIDS imposes a significant psychological burden. People with HIV often suffer from depression and anxiety as they adjust to the impact of the diagnosis of being infected and face the difficulties of living with a chronic life-threatening illness, for instance shortened life expectancy, complicated therapeutic regimens, stigmatization, and loss of social support, family or friends. HIV infection can be associated with high risk of suicide or attempted suicide. The psychological predictors of suicidal ideation in HIV-infected individuals include concurrent substance-use disorders, past history of depression and presence of hopelessness.

Apart from psychological impact, HIV infection has direct effects on the central nervous system, and causes neuropsychiatric complications including HIV encephalopathy, depression, mania, cognitive disorder, and frank dementia, often in combination. Infants and children with HIV infection are more likely to experience deficits in motor and cognitive development compared with HIV-negative children. Cognitive impairment in HIV/AIDS has been associated with greatly increased mortality, independent of other factors such as baseline clinical stage, CD4+ cell count, serum haemoglobin concentration, antiretroviral treatment, and social and demographic characteristics. The incidence of AIDS-defining illness in patients receiving highly active antiretroviral therapy has been reported to be especially high in injecting drug users. In a study conducted in HIV-positive women in the United States of America, chronic depressive symptoms were associated with increased AIDS-related mortality and rapid disease progression independent of treatment and comorbid substance use.

Since its advent, HIV/AIDS has created a scare and is an epidemic. HIV is not just immune depression; it creates serious psychophysical, neurological, existential, socio-economic, legal, political and mainstreaming complications. The seven year gestation period between HIV-positive and AIDS is full of psychophysical pathologies and co-morbidities. Given its gravity, it is fully justified to explore the relationship of HIV-positive with Psychopathology and Ways of Coping.

O. P. Sharma
Associate Professor,
Deptt. of Psychology,
University of Rajasthan,
Jaipur

Sajni Devi
Assistant Professor,
Deptt. of Psychology,
Govt. College,
Dujana, Haryana

Mridula Pal Singh
Counselor,
Delhi, India

Mangi Lal
Research Scholar,
Deptt. of Psychology,
J.N.V. University,
Jodhpur, Rajasthan

E: ISSN No. 2349-9435

Yongfang Xu, Xinqin Lin, Shiyi Chen, Yanfen Liu and Hongjie Liu did a study on Ageism, resilience, coping, family support, and quality of life among older people living with HIV/AIDS in Nanning, China (2015). They investigated the interrelationships among ageism, adaptability, family support, and quality of life among older people living with HIV/AIDS (PLWHAs). In this cross-sectional study, among 197 older PLWHAs over 50 years old, path analytic modeling was used to assess the interrelationships among ageism, resilience, coping, family support, and quality of life. Compared with female PLWHAs, male PLWHAs had a higher level of resilience and coping. There were no significant differences in the scores of quality of life, ageism, family support, HIV knowledge, and duration since HIV diagnosis between males and females. The following relationships were statistically significant in the path analysis: (1) family support \rightarrow resilience [β (standardised coefficient) = 0.18], (2) resilience \rightarrow ageism ($\beta = -0.29$), (3) resilience \rightarrow coping ($\beta = 0.48$), and (4) coping \rightarrow quality of life ($\beta = 0.24$). In addition, male PLWHAs were more resilient than female PLWHAs ($\beta = 0.16$). The findings indicate that older PLWHAs do not only negatively accept adversity, but build their adaptability to positively manage the challenges. Family-based interventions need take this adaptability to adversity into consideration.

Bekele et.al. (2018) to estimate the prevalence of childhood adversity and examine its relationship with health outcomes among people living with HIV. Study participants included 1409 adults living with HIV and receiving care in Toronto, Canada. Data on childhood adversity, health behaviors, HIV outcome measures, depression, and health-related quality of life (HRQOL) were collected through face-to-face interviews and medical records. Statistical analyses included multivariable linear and logistic regression modeling. The prevalence of any childhood adversity was 71% (individual types ranged from 11% to 44%) and higher prevalence was associated with younger age, Indigenous or African/Caribbean/Black ethnicity, lower socioeconomic status, and higher rates of cigarette smoking and nonmedicinal drug use. Greater number of childhood adversities was associated with greater odds of depression and decreasing mental HRQOL. HIV care providers need to screen for childhood adversities and address childhood trauma within the context of HIV care.

Jennifer C. Elliott, Malka Stohl and Deborah S. Hasin (2017) did a research among individuals with HIV: who drinks despite knowledge of the risk? This study utilizes two subsamples of individuals with HIV from the National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III): those reporting at least one drink (a) in their lifetime ($n = 205$) or (b) in the past year ($n = 166$). Participants reported on drinking despite health problems and psychopathology in the past year and in their lifetime, and family history of alcohol problems. Individuals with a drug use disorder (Adjusted Odds Ratios [AORs] = 3.56–12.65), major depressive disorder (AORs = 10.18–10.55), or a family history of alcohol problems (AORs = 33.60–96.01) were more likely to

Periodic Research

drink despite health problems. Anxiety and personality disorders did not increase risk. Individuals with HIV with drug use disorders or major depressive disorder are more likely to drink despite health problems. Individuals with a family history of alcohol problems were also more likely to do so, although further research is needed given large confidence intervals. Future research should consider how to help these individuals avoid alcohol-related harm.

Psychopathology and coping in recently diagnosed HIV/AIDS patients - The role of gender was title of the research done by Olley, Benjamin & Gxamza, Faniswa & Seedat, Soraya & Theron, Hugo & Taljaard, Jantjie & Reid, Emile & Reuter, Helmuth & Stein, Dan. (2004). Their study compared psychiatric morbidity, coping responses, and disability in male and female outpatients recently diagnosed with HIV/AIDS. One hundred and forty-nine patients (44 male, 105 female) with HIV/AIDS (mean +/- standard deviation (SD) months since diagnosis 5.8 +/- 4.1) attending an infectious diseases clinic at Tygerberg Hospital, Cape Town, were evaluated. Subjects were assessed using the MINI International Neuropsychiatric Interview (MINI), the Carver Brief COPE, and the Sheehan Disability Scale. In addition, negative life events and risk behaviours were evaluated. Fifty-six per cent of patients were diagnosed with a psychiatric disorder, most commonly major depression (34.9%), dysthymic disorder (21.5%), post-traumatic stress disorder (14.8%), and alcohol dependence (10.1%). There were no significant gender differences in the prevalence of mood disorders in the sample. Men, however, were more likely than women to meet diagnostic criteria for alcohol abuse or dependence, and to engage in certain risky sexual behaviours. Women were more likely to suffer from post-traumatic stress disorder, and to use coping strategies of planning and religion to deal with the illness. There were no significant gender differences in disability. Psychiatric disorders are common in recently diagnosed HIV/AIDS patients in South Africa. Clinicians should be aware of the high prevalence of mood disorders in both men and women, and of gender-different responses such as increased alcohol and substance use and more risky sexual behavior in men.

Objective

To investigate the significance of nature and degree of relationship between Psychopathology and Ways of Coping in HIV-infected Male and HIV-infected Female.

Hypothesis

Psychopathology and Ways of Coping will have significant nature & degree of Relationship in HIV-infected Male and HIV-infected Female.

Sample

A purposive sample of 200 HIV-infected Patients (age range 18-45 years) was selected for the present study. Out of these 200 HIV-infected patients, 100 of them were Male and the remaining 100 were Female. These Patients were HIV-infected since last 3 years and were not suffering from any known pathology. These Patients were sampled from various

E: ISSN No. 2349-9435

Medical Colleges, Hospitals and Sero-surveillance Centers in Haryana State. A Control Group of 100 Male and 100 Female (age range 18-45 years) was randomly selected for comparison purposes.

Measures

The following measures were administered on HIV-infected Male & Female and Control Group Male & Female with informed consent and they were duly assured that the results so obtained would be kept confidential and would not be used for any other purpose extraneous to the present research:

Personality Assessment Inventory (PAI) (Morey, L.C. 1972)

The Personality Assessment Inventory (PAI) is a self-administered, objective inventory of adult personality designed to provide designed to provide information on critical clinical variables. The PAI contains 344 items which comprise 22 non-overlapping full scales: 4 validity scales, 11 clinical scales, 5 treatment scales, and 2 interpersonal scales. Ten of the full scales contain conceptually derived subscales designed to facilitate interpretation and coverage of the full breadth of complex clinical constructs.

Reliability

The Reliability of PAI was examined through both internal consistency and temporal stability. The internal consistency reliability of PAI involved the use of coefficient alpha. The alpha values for PAI was consistently obtained very high, with median alphas for the full scales of .81, .86 and .82 for normative, clinical and college samples respectively

The test- retest reliability of the entire 22 scales of PAI for community, college and combined sample was found to be .71, .80 and .75 respectively.

Validity

The six sub-scales of PAI were correlated with independent external criterion measures viz. MMPI sub-scales, NEO-PI scales, Beck inventories and other measures to find out convergent and discriminate validity of the sub-scales. For indicative purposes, it is denoted herewith the validity correlations for the PAI neurotic spectrum scales with MMPI clinical scales as .60, .21, .20 and .26 for SOM, ANX, ARD and DEP sub-scales respectively.

Coping Responses Inventory – Adult Form (CRI - Adult) (Moos, H., 1992)

The Coping Responses Inventory – Adult Form (CRI-Adult) is a measure of eight different types of coping responses to stressful life circumstances. These responses are measured by eight scales- Logical Analysis (LA), Positive Reappraisal (PR), Seeking Guidance and Support (SGS), Problem Solving (PS), Cognitive Avoidance (CA), Acceptance

Periodic Research

or Resignation (AR), Seeking Alternative Rewards (SR) and Emotional Discharge (ED). The first set of four scales measures approach coping; the second set of four scales measures avoidance coping. The first two scales in each set measure cognitive coping strategies; the third and fourth scales in each set measure behavioral coping strategies.

Reliability

The table below presents the means, standard deviations, and internal consistencies (Cronbach's alpha) of the eight scales, separately for the mean and for the women, in the two field trials. Compared with men, women report more coping in all eight areas; this is especially true for Seeking Guidance and Support, Seeking Alternative Rewards, and Emotional Discharge.

Validity

The author tried to build content and face validity into the CRI-Adult by formulating definitions of specific domains, preparing items to fit the construct definitions, and selecting items to fit the construct definition related to a dimension and were empirically shown to belong to that dimension. To increase conceptual clarity and minimize item overlap, each item was placed on only one dimension. At each stage of revision author applied for criteria to select items and construct dimensions:

HIV Infection

HIV-positive diagnosis validated through ELISA Test by a competent physical at Medical College/Hospital or Sero-surveillance Centers.

Research Design

An Independent Measures Design along with Correlational Research Design was employed to see the significance of mean difference between the groups as well as the significance of nature and degree of relationship among the variables.

Variables

1. Psychopathology
2. Ways of Coping

Statistical Analysis

Descriptive Group Statistics of all the groups was computed through SPSS – 17.0 software.

The independent sample 't' statistics with unequal variance between groups was computed to investigate the significance of mean difference between HIV-infected Male & Female and Control Group Male & Female with respect to all the dimensions of Psychopathology and Ways of Coping.

Pearson Product – moment Correlation was also computed to investigate the significance of nature and degree of relationship between all the dimensions of Psychopathology and Ways of Coping in HIV-infected Male & HIV-infected Female.

Results

Table-1
Descriptive Statistics for Psychopathology and Ways of Coping in HIV-infected Male and Female

S. No.	Variables	Mean	SD
1.	Psychopathology		
	i. Nonsupport (NON)	9.80	4.28
	ii. Treatment Rejection (RXR)	11.59	4.20
	iii. Somatic Complaints (SOM)	31.86	12.02
	iv. Anxiety (ANX)	32.63	11.18
	v. Anxiety-Related Disorders (ARD)	34.45	11.11
	vi. Depression (DEP)	28.02	8.97
	vii. Mania (MAN)	28.91	7.55
	viii. Paranoia (PAR)	32.52	6.41
	ix. Negative Impression (NIM)	10.74	5.35
	x. Schizophrenia (SCZ)	27.29	9.92
	xi. Antisocial Features (ANT)	29.50	6.04
	xii. Warmth (WRM)	21.54	5.17
	xiii. Borderline Features (BOR)	36.07	8.99
	xiv. Alcohol Problems (ALC)	10.72	6.29
	xv. Dominance (DOM)	17.18	4.80
	xvi. Aggression (AGG)	23.61	5.57
	xvii. Suicidal Ideation (SUI)	8.81	5.80
	xviii. Drug Problems (DRG)	11.40	5.91
	xix. Positive Impression (PIM)	13.25	3.55
	xx. Infrequency (INF)	9.62	3.41
	xxi. Stress (STR)	14.11	4.33
2.	Ways of Coping		
	i. Logical Analysis (LA)	14.65	7.18
	ii. Positive Reappraisal (PR)	12.04	3.61
	iii. Seeking Guidance and Support (SGS)	13.42	7.16
	iv. Problem Solving (PS)	13.39	4.73
	v. Cognitive Avoidance (CA)	13.91	4.29
	vi. Acceptance or Resignation (AR)	13.78	3.95
	vii. Seeking Alternative Rewards (SAR)	13.95	4.22
	viii. Emotional Discharge (ED)	13.57	8.32

The Table 1 depicts Descriptive Statistics - various dimensions of the variables Psychopathology and Ways of Coping. Mean (\bar{X}) & Standard Deviation (SD) for HIV-infected Male and HIV-infected Female regarding the

Table 2
Descriptive Statistics for Psychopathology and Ways of Coping in HIV-infected Male

S. No.	Variables	Mean	SD
1.	Psychopathology		
	i. Nonsupport (NON)	10.10	4.45
	ii. Treatment Rejection (RXR)	11.12	4.08
	iii. Somatic Complaints (SOM)	31.93	14.10
	iv. Anxiety (ANX)	34.20	12.18
	v. Anxiety-Related Disorders (ARD)	36.58	12.00
	vi. Depression (DEP)	29.75	10.04
	vii. Mania (MAN)	28.44	7.53
	viii. Paranoia (PAR)	31.26	6.82
	ix. Negative Impression (NIM)	10.33	5.64
	x. Schizophrenia (SCZ)	27.15	11.12
	xi. Antisocial Features (ANT)	29.66	6.21
	xii. Warmth (WRM)	21.94	4.93
	xiii. Borderline Features (BOR)	35.39	9.22
	xiv. Alcohol Problems (ALC)	15.00	5.88
	xv. Dominance (DOM)	17.36	5.19
	xvi. Aggression (AGG)	23.70	5.68

	xvii. Suicidal Ideation (SUI)	10.21	6.26
	xviii. Drug Problems (DRG)	12.05	6.25
	xix. Positive Impression (PIM)	13.20	3.36
	xx. Infrequency (INF)	9.13	2.98
	xxi. Stress (STR)	13.81	4.65
2.	Ways of Coping		
	i. Logical Analysis (LA)	14.29	5.32
	ii. Positive Reappraisal (PR)	11.45	3.79
	iii. Seeking Guidance and Support (SGS)	12.91	4.37
	iv. Problem Solving (PS)	13.33	5.06
	v. Cognitive Avoidance (CA)	13.93	4.92
	vi. Acceptance or Resignation (AR)	13.87	4.08
	vii. Seeking Alternative Rewards (SAR)	13.67	5.14
	viii. Emotional Discharge (ED)	12.31	3.02

The Table 2 depicts Descriptive Statistics - Mean (\bar{X}) & Standard Deviation (SD) for HIV-infected Male regarding the various dimensions of the variables Psychopathology and Ways of Coping.

So as to see the significance of nature and degree of relationship between the various dimensions of Psychopathology and Ways of Coping in HIV-infected Male and HIV-infected Female, the Pearson Product-Moment Correlation was computed through SPSS-17.0 software. The Correlation Matrix depicts inter-correlations among the various dimensions of Psychopathology and Ways of Coping in HIV-infected Male and HIV-infected Female. This correlational matrix depicts that the various dimensions of ways of coping and psychopathology among HIV infected patient shows significant correlation. Psychopathology dimensions – Nonsupport, Treatment Rejection, Somatic Complaints, Anxiety, Anxiety-Related Disorders, Depression, Mania, Paranoia, Negative Impression, Schizophrenia, Antisocial Features, Warmth, Borderline Features, Alcohol Problems, Dominance, Aggression, Suicidal Ideation, Drug Problems, Positive Impression, Infrequency & Stress and Ways of Coping dimensions - Logical Analysis, Positive Reappraisal, Seeking Guidance and Support, Problem Solving, Cognitive Avoidance, Acceptance or Resignation, Seeking Alternative Rewards and Emotional Discharge were significantly correlated in HIV-infected Male and HIV-infected Female.

Thus it can be said that the hypothesis that Psychopathology and Ways of Coping will have significant nature & degree of Relationship in HIV-infected Male and HIV-infected Female stands accepted. The aforesaid results are as per theoretical expectations and can be vindicated by the empirical researches Simbayi, L., Kalichman, S., Strebel, A., Cloete, A., Henda, N., & Mqeketo, A. (2007); Adewuya, A., Afolabi, M., Ola, B., Ogundele, O., Ajibare, A., & Oladipo, B. (2007); Reece, M., Shacham, E., Monahan, P., Yebei, V., Ongór, W., Omollo, O., & Ojwang, C. (2007); Ashton E, Vosvick M, Chesney M, Gore-Felton C, Koopman C, O'Shea K, Maldonado J, Bachmann MH, Israelski D, Flamm J, Spiegel D., (2005)

Conclusion

It can be concluded that psychopathology and ways of coping both are significantly correlated among male and female HIV patients.

Periodic Research

Correlation Matrix for Psychopathology and Ways of Coping in HIV-infected Male and HIV-infected Female

	NON	RXR	SOM	ANX	ARD	DEP	MAN	PAR	NIM	SCZ	ANT	WRM	BOR	ALC	DOM	AGG	SUI	DRG	PIM	INF	STR	L.A.	P.R.	S.G.S.	P.S.	C.A.	A.R.	S.A.R.	E.D.	
NON	1																													
RXR	-.246**	1																												
SOM	.285**	-.253**	1																											
ANX	.286**	-.269**	.723**	1																										
ARD	.142*	-.328**	.347**	.598**	1																									
DEP	.293**	-.102	.557**	.523**	.394**	1																								
MAN	.229**	-.282**	.330**	.388**	.545**	.348**	1																							
PAR	.180*	-.211**	.401**	.318**	.349**	.355**	.417**	1																						
NIM	.172*	-.120	.554**	.517**	.240**	.403**	.371**	.337**	1																					
SCZ	.257**	-.173*	.627**	.583**	.339**	.510**	.443**	.488**	.583**	1																				
ANT	.131	-.272**	.279**	.298**	.350**	.372**	.471**	.288**	.235**	.369**	1																			
WRM	-.068	-.135	-.216**	-.105	.037	-.102	.074	-.251**	-.294**	-.249**	.053	1																		
BOR	.173*	-.282**	.451**	.566**	.507**	.419**	.481**	.408**	.411**	.541**	.334**	-.142*	1																	
ALC	.015	-.123	.085	.175*	.219**	.257**	.009	.012	.076	.093	.181**	.021	-.030	1																
DOM	.106	-.162*	.041	.069	-.087	-.098	.123	-.230**	.069	.008	.228**	-.086	-.048	1																
AGG	.155*	.047	.258**	.410**	.168**	.358**	.384**	.042	.396**	.347**	.349**	-.035	.362**	.137	.165*	1														
SUI	.171*	-.318**	.308**	.361**	.318**	.296**	.307**	.249**	.275**	.443**	.334**	.074	.279**	.292**	.065	.155*	1													
DRG	-.043	-.111	.045	.058	.111	.067	-.058	.012	.089	-.019	.028	-.004	-.093	.273**	.011	-.011	.253**	1												
PIM	-.199**	.086	-.377**	-.362**	-.420**	-.305**	.503**	-.325**	-.411**	-.443**	-.258**	.201**	-.387**	.015	.059	-.280**	-.210**	.066	1											
INF	.034	.117	-.026	-.011	-.061	.069	.047	.128	.129	.002	.092	.378**	.013	-.105	.028	.091	-.102	-.104	-.038	1										
STR	.178*	-.110	.181**	.264**	.158**	.201**	.334**	.091	.286**	.173**	.348**	.012	.200**	.155**	.000	.464**	.165**	.098	-.164**	.053	1									
L.A.	-.175**	.042	-.234**	-.181**	.005	-.263**	.069	-.060	-.252**	-.319**	-.233**	.142**	-.131	-.057	.075	-.062	-.129	.008	.004	.016	-.051	1								
P.R.	-.072	-.050	-.149**	-.206**	-.111	-.431**	.012	.027	-.240**	-.126	-.119	.158**	-.120	-.140**	.095	-.225**	-.036	-.052	.042	.005	-.130	.223**	1							
S.G.S.	.003	.001	-.136	-.077	-.068	-.131	.044	-.019	-.039	-.200**	-.112	.017	-.057	-.072	.164**	.059	-.058	-.042	-.058	.040	.083	.145**	.226**	1						
P.S.	-.152**	-.043	-.288**	-.070	-.016	-.369**	.000	-.161**	-.270**	-.285**	-.123	.288**	-.127	-.110	.332**	-.097	-.111	-.023	-.006	.020	.086	.299**	.373**	.218**	1					
C.A.	-.180**	-.054	-.234**	-.110	.078	-.241**	.129	-.054	-.087	-.181**	.051	.217**	-.091	.014	.224**	.035	-.003	.094	-.083	.039	.277**	.192**	.350**	.224**	.696**	1				
A.R.	-.209**	-.162**	-.248**	-.076	.088	-.354**	.220**	.019	.006	-.122**	.084	.036	-.042	.074	.201**	-.056	.070	.057	-.134	.102	.056	.275**	.309**	.197**	.388**	.331**	1			
S.A.R.	-.128	-.126	-.454**	-.269**	-.002	-.435**	.044	-.115	-.348**	-.416**	-.092	.424**	-.092	-.116	.220**	-.161**	-.233**	-.093	.119	-.069	-.001	.296**	.443**	.248**	.597**	.550**	.413**	1		
E.D.	-.118	.102	.008	-.088	-.100	-.123	.095	-.030	.017	-.074	.006	-.101	.025	-.089	-.061	.081	-.112	-.028	.005	.015	.042	.100	.183**	.057	.060	.079	.132	.126	1	

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

References

1. Adewuya, A., Afolabi, M., Ola, B., Ogundele, O., Ajibare, A., & Oladipo, B. (2007). "Psychiatric disorders among the HIV-positive population in Nigeria: A control study", *Journal of Psychosomatic Research*, vol. 63, pp. 203-206.
2. Ashton E, Vosvick M, Chesney M, Gore-Felton C, Koopman C, O'Shea K, Maldonado J, Bachmann MH, Israelski D, Flamm J, Spiegel D. Social support and maladaptive coping as predictors of the change in physical health symptoms among persons living with HIV/AIDS. *AIDS Patient Care STDS* 2005;19:587-98.
3. Jennifer C. Elliott, Malka Stohl & Deborah S. Hasin (2017) Heavy drinking among individuals with HIV: who drinks despite knowledge of the risk?, *AIDS Care*, 30:5, 560-563, DOI: 10.1080/09540121.2017.1382676
4. Olley, Benjamin & Gxamza, Faniswa & Seedat, Soraya & Theron, Hugo & Taljaard, Jantjie & Reid, Emile & Reuter, Helmuth & Stein, Dan. (2004). Psychopathology and coping in recently diagnosed HIV/AIDS patients - The role of gender. *South African medical journal = Suid-Afrikaanse tydskrif vir geneeskunde*. 93. 928-31. DOI: 10.4102/sajpsychiatry.v10i1.119.
5. Reece, M., Shacham, E., Monahan, P., Yebei, V., Ong'or, W., Omollo, O., & Ojwang, C. (2007). "Psychological distress symptoms of individuals seeking HIV-related psychosocial support in western Kenya", *AIDS Care*, vol. 19, no. 10, pp. 1194-1200.
6. Simbayi, L., Kalichman, S., Strebel, A., Cloete, A., Henda, N., & Mqeketo, A. (2007). "Internalized stigma, discrimination, and depression among men and women living with HIV/AIDS in Cape Town, South Africa", *Social Science & Medicine*, vol. 64, pp. 1823-1831.
7. Tsegaye Bekele, Evan J. Collins, Robert G. Maunder, et al., "Childhood Adversities and Physical and Mental Health Outcomes in Adults Living with HIV: Findings from the Ontario HIV Treatment Network Cohort Study," *AIDS Research and Treatment*, vol. 2018, Article ID 2187232, 17 pages, 2018. <https://doi.org/10.1155/2018/2187232>.
8. Yongfang Xu, Xinqin Lin, Shiyi Chen, Yanfen Liu & Hongjie Liu (2016) Ageism, resilience, coping, family support, and quality of life among older people living with HIV/AIDS in Nanning, China, *Global Public Health*, 13:5, 612-625, DOI: 10.1080/17441692.2016.1240822