

Exploring Resilience and its Correlates in HIV/AIDS Positive People in Lahore

MANSOOR AHMED

Forman Christian College (A Chartered University), Lahore.

ABIA NAZIM, PhD

(Corresponding Author)

Associate Professor, Forman Christian College (A Chartered University), Lahore.

Email: abianazim@fcollege.edu.pk

ELIZABETH SCHWAIGER, PsyD

Associate Professor, Forman Christian College (A Chartered University), Lahore.

Email: elizabethschwaiger@fcollege.edu.pk

IVAN SUNEEL, PhD

Professor, Chairperson Department of Psychology,
Forman Christian College (A Chartered University), Lahore.

Email: ivansuneel@fcollege.edu.pk

Abstract

Resilience is ones' ability to bounce back in distressing situations and gains interest of healthcare practitioners from across the world as an important factor influencing treatment adherence, quality of life, treatment outcome and psychological distressed particularly in chronic and terminal conditions. Present study was part of an elaborated research project exploring several dimensions of People living with HIV/AIDS in Lahore. Present study was designed to explore the level of resilience and its associated demographic factors in HIV/AIDS positive people residing in Lahore. A sample of 300 HIV/AIDS positive people was taken from treatment centres of Punjab AIDS control program including men, women and transgenders. Findings show an interesting set of associations observed between resilience and demographic characteristics of the participants particularly age, gender, education, marital status, monthly income and family system. The findings were discussed in the light of previous researches conducted to study the same phenomena in HIV/AIDS positive people and found to be helpful to gain insight into this pertinent area of people living with HIV/AIDS.

Keywords: HIV/AIDS, Resilience, Gender, Family Systems and Adaptation.

Introduction

The word resilience comes from the Latin resilience which means “recover, rebound” (Harper, 2012). In psychology resilience is generally defined as the availability of psychosocial services to counteract the adversity and promote positive behavioral adaptation (Afek et al, 2021). Resilience help individuals deals with individual differences in response to risk factors and cannot be regarded as an individual's fixed characteristic (Dale et al., 2014).

There are myriads of theories reported regarding resilience but the present study subsumes ecological theory, family resilience theory, and community and social resilience theory as these are the most cited theories to explain resilience particularly in HIV/AIDS context. According to Harper et al. (2014),

Bronfenbrenner's Bioecological Systems Theory (BST) is a helpful theoretical framework for elucidating the ecological perspective regarding sexual risk and resilience. According to this theory the process of resilience is effected by a broad range of microsystem or interpersonal factors such as lack of communication between parent and children. This lack of communication regarding sex, safe sexual practices, risks and protective factors of AIDS along with the peer pressure to indulge in sex influence resilience and prevention against AIDS. Furthermore, the intrapersonal factors like lack of knowledge regarding protected sex or the risk factors of HIV/AIDS transmission also negatively affect resilience. Similarly, BST assumes that people do suffer from HIV/AIDS because of idleness, unemployment and lack of goals in their lives. Moreover, the macrosystem which is the broadest ecological perspective assumes that people can be protected from HIV/AIDS by developing awareness to lessen the unprotected sexual behavior, unsafe blood transfusions and improve other unsafe practices. *Family Resilience Theory* defined resilience as the ability of the family to counter the adversity and to restore themselves successfully and termed it as family resilience. Furthermore, it highlighted the significance of socioeconomic resources, support and interaction among family members, sharing beliefs as contributors of resilience (Walsh ,2015). *Community and Social Resilience Theory* – Mancini and Bowan (2009) described community resilience theory in their study in which community resilience is defined as the capacity of societies to cope with and respond to challenges and adversity in ways that promote the achievement of expected community outcomes.

Researchers (Karlik et al., 2006) often associate resilience with illness protection, quality of life, better health outcomes, this keeps researchers extremely interested in studying these aspects particularly in chronic and terminal illnesses including AIDS (Poblete, 2000; Snorraddóttir, 2018).

WHO (2021) declared HIV/AIDS a serious public health concern which has claimed more than 34.7 million lives so far with a rapid spread in Asian countries. The first case was HIV/AIDS was identified in Pakistan in 1987, a large majority of the initially identified cases were traced back to those deported to middle eastern countries. It was also reported that these HIV positive individuals became instrumental in transferring the virus to their wives and other sexual partners and through transfusion of infected blood (Burgeri, 2006). Pakistan established the National AIDS Control Program (NACP) for HIV/AIDS to control the spread of HIV/AIDS and providing treatment to those who already are infected and NACP has 49 centers in different provinces of Pakistan, till March 2021.

World Health Organization (2021) reported an increase in prevalence of HIV infection in Pakistan specially among vulnerable groups such as sex workers (3.8%), men to men sexual relations (3.7%), injectable drug users (21%), transgenders (5.5%), and prisoners (2%) in particular. National AIDS Control Program established the Punjab AIDS Control Program (PACP) in Punjab province, and a total of 26 centers are working under the PACP in 16 districts of Punjab, till March 2021. Pakistan is a developing country with limited resources where low literacy rates are associated with unsafe health and sexual practices, unsafe blood transfusion, lack of knowledge about HIV infection transmission which contribute significantly to rapid spread of HIV/AIDS.

Researchers from across the world have been studying risks and protective factors of HIV/AIDS with specific reference to different geographical and sociocultural contexts to improve the treatment outcome and quality of life of people having HIV/AIDS positive status. They frequently report resilience as one important factor associated with treatment outcomes and quality of life of people with HIV/AIDS (Vedhara & Nott, 1996; Xu et al., 2018). Literature has identified several demographic factors like age, family structure (Perrino and Szapocznik, 2000), gender and social support as important factors responsible for better resilience in HIV/AIDS positive individuals. The literature (Earnshaw et al., 2015) has also observed that resilience improved the adaptation with HIV/AIDS, facilitated making related lifestyle changes and helped manage psychological distress developed after HIV/AIDS diagnosis (Farber et al., 2000).

Literature Review

In a country like Pakistan, which struggles with limited healthcare facilities and resources, people living with HIV/AIDS experience significantly more social, economic and psychological problems associated with their health status. In this context, experts stress the need to investigate the contextual factors that effect the health and treatment outcomes. Although, in the past few years many researchers have studied the HIV/AIDS and related phenomena in Pakistani context, the studies are still scarce. Following is the brief review of some of the researches relevant to the topic and objectives of the present study.

Brown et al (2021) highlighted the importance of resilience based care providing for HIV/AIDS positive people. They defined resilience based care as a health model where care providers facilitate HIV/AIDS people by providing them with multilevel effective resources to manage numerous adversities to promote optimum health. They concluded that care providers can enhance well being of HIV/AIDS positive people by adopting resilience based HIV care which prepare HIV/AIDS positive people to develop systems to better manage stress and social adversities in the long run.

Researchers (Pieta et al., 2023) studied the role of resilience and intraindividual variability related to stigma, positive and negative effect and post traumatic reactions in HIV/AIDS positive people. These phenomena are quite prevalent among HIV/AIDS positive people. They observed that resilience was significantly associated with negative and positive effect and post traumatic reactions but showed no association with stigma. The also reported that stronger resilience was significantly associated with higher levels of positive effect and lower levels of negative effect and post traumatic depreciation.

Literature at large associates resilience with positive health indicators and better quality of life among people with HIV/ AIDS positive status. For instance, Dale et al (2021) studied resilience in 100 black women living with HIV/ AIDS in United States of America. They observed that higher levels of resilience was linked with higher better self esteem, higher self efficacy, and lower levels of post traumatic symptoms, fewer symptoms of depression.

Sun and colleagues (2023) on the other hand, explored the relationship of psychological resilience with depression, anxiety and social support in people living with HIV/AIDS among 161 participants with positive HIV/AIDS status. They concluded that psychological resilience shared an inverses association with both anxiety and depression. Psychological resilience observed to have a complete and significant mediating effect on social support and symptoms of depression and anxiety in people with positive HIV/AIDS status.

Krause and Halkitis (2022) studied the role of resilience in dealing with various psychosocial and mental health challenges faced by older adults living with HIV/AIDS. According to them older adults makes the biggest proportion of HIV positive individuals living in America. They noted lowers levels of substance dependance and post traumatic stress disorders among those who had higher levels of resilience. They stressed the need to further study the role of resilience on well being and overall health of individuals particularly older adults living with HIV/AIDS.

According to literature (Abdullah et al., 2021) there were 44,000 HIV/AIDS patients registered with Pakistan's National AIDS Control Program till 2020, however, the actual number of HIV/AIDS positive cases was believed to be as higher as 150,000 to 170,000. The lower number of registrations with NACP was attributed to lack of knowledge about symptoms of HIV/AIDS and relevant health facilities, fear of stigma and social discrimination, illiteracy, limited resources to access NACP centres. They reported that there still exist significant gap in awareness regarding HIV/AIDS symptom presentation, common transmission modes and preventive strategies which refrain people from accessing the facilities that offer screening and diagnostic assessment of nosocomial infections like HIV/AIDS. They stressed the need for improving the access of healthcare facilities for people with HIV/AIDS positive status and promoting

preventive strategies against HIV/AIDS spread. They also identified the significant gap in knowledge related to prevention, treatment and enhancing the health quality of life of people living with HIV/AIDS.

Significance

Present research explored the association of resilience with demographic variables in HIV/AIDS positive individuals. AIDS is now a manageable condition with Antiretroviral therapy (ART) which reduces pain and physiological problems and can become instrumental to inculcate positive changes in one's life. This has allowed researchers and medical health professionals to study other areas affecting lives of HIV/AIDS positive individuals and their treatment outcome. Myriads of studies indicated the significant role of resilience in HIV/AIDS positive people (Lyons et al., 2016).

The conclusions drawn in researches conducted in the other countries are not fully applicable on Pakistani context as they may or may not be relevant to HIV/AIDS positive individuals living in Pakistan. The socio cultural dynamics, awareness and knowledge of the condition, religious and social standards are important factors leading to variations in expression of different medical and psychological conditions, thus, healthcare practitioners stress to get information which is contextually relevant and accurate in order to design effective treatment programs for HIV/AIDS (Murdaugh et al., 2006). Therefore, results of the present study will help practitioners develop good understanding of dynamics of resilience in individuals living with HIV/AIDS in Pakistan. The findings will be helpful to identify significant demographic variables closely related to resilience of people with HIV/AIDS in Pakistan to improve their prognosis, quality of life and well being.

Objectives of the study

The present study had following objectives

- To explore the resilience in HIV/AIDS positive individuals living in Lahore.
- To identify the significant demographic correlates of resilience in HIV/AIDS positive individuals.
- To find out gender differences in resilience levels of HIV/AIDS positive individuals.

Materials and Methods

Sample

The present study was based on cross sectional research design and used non probability purposive sampling technique to select 300 participants who had HIV/AIDS positive status. The age of the selected participants was between 18 and 65 years with average age of 32.7 ($SD=7.93$) years. The participants were approached at 3 HIV/AIDS treatment centers in Lahore run by Punjab AIDS Control Program (PACP). Only those individuals were selected who were registered with PACP, were not abusing any substance at the time of data collection and were not suffering from psychosis. Initially, more than 400 registered HIV/AIDS positive individuals were contacted but only 300 gave consent to participate.

Measures of Data Collection. The data for the study was collected through demographic form and Adult Resilience Measure-Revised (ARM-R).

Demographic Form- a detailed demographic form was developed to record the information of participants. This form included several questions regarding personal information like age, marital status, number of children, gender, education, profession, family system, monthly income, duration of diagnosis, information regarding ART, and any other physical disease etc.

Adult Resilience Measure-Revised (ARM-R) was used to assess levels of resilience in study participants. The measure has 17 items and uses 5 point Likert scale ranging from 1 (low) to 5 (high) points. The ARM-R reportedly have satisfactory psychometric properties ranging from 0.74 to 0.86 (Jefferies et al., 2018). The tool was only available in the English language so the researchers translated it into Urdu language using standard procedure of translation.

Procedure

After the approval from ethical and research review boards of the institute, formal permission was taken from the project director of Punjab AIDS Control Program (PACP) to collect data from three PACP's HIV/AIDS treatment centers. The staff of the centre was requested to refer registered HIV/AIDS positive patients to the principal investigator. The researcher explained the study purpose, significance and participant's ethical rights specifically regarding confidentiality and right to withdraw without any consequences. They were also given details of the availability of free psychological help by trained clinical psychologist in case of psychological distress for responding to study measures. All participants received the study measures in same order and researchers remained available throughout in case they needed any assistance to fill the forms. The data was collected over the period of four months. The data was analyzed using Statistical Package for Social Sciences-version 23 (SPSS-23) and involved a range of descriptive and inferential statistical procedures. Pearson product-moment correlation was run to explore association of resilience with demographic variables. Whereas, one-way analysis of variance (ANOVA) was run to find out the differences in resilience scores across gender.

Ethics were strictly maintained while conducting this project. The design and procedure of the project was approved from ethical and research review board of Forman Christian College University, Lahore after a detailed review. Formal permissions to use the measures and for data collection were obtained from all concerned. Consent was taken from participants after informing them about the study objectives and their rights particularly of participation and withdrawing their participation at any point. The privacy and confidentiality of all participants was insured. Debriefing was provided to participants and they were told that they could seek free psychological help in case of experiencing any emotional difficulty after filling questionnaires.

Analysis

The study explored the relationship between demographic variables and resilience in HIV/AIDS positive individuals. The Statistical Package for Social Sciences-version 23 (SPSS-23) was used for data analysis of 300 participants, who had HIV/AIDS positive status. To begin, the psychometric properties of the study's measures were computed. Then, the data was analyzed using descriptive statistics, Pearson product-moment correlation and One-way analysis of variance (ANOVA) to study the main objectives of the research.

Table 1: Psychometric Properties of Resilience Measure (ARM-R)

Measures	K	Minimum	Maximum	M	SD	α
ARM-R	17	40	115	65.61	7.88	.76

Note. K= Number of items, α = Cronbach's alpha, ARM-R= Adult resilience measures-revised scale.

Table 1 shows the reliability analysis of the measures used in the present study. Cronbach's alpha reliability value turned out to be in acceptable reliability range.

Table 2: Descriptives of Demographic Variables of Study Participants

Variables	F	(%)	Variables	F	(%)
Marital status			Education		
Single	135	(45%)	Uneducated	64	(21.3%)
Married	138	(46%)	Matriculation	167	(55.6%)
Divorced	4	(1.3%)	Intermediate	33	(11%)
Widowed	19	(6.3%)	Graduation	30	(10%)
Separated	4	(1.3%)	Professional degree	6	(2%)
No. of children			Monthly family income		
None	156	(52%)	10000-50000	200	(66.6%)
1-3 children	105	(36%)	50000-100000	74	(24.6%)
4-6 children	32	(10%)	100001 above	16	(5.3%)
7-8 children	7	(2%)	Family System		
Place of residence			Joint Family	196	(65%)
Urban	240	(80 %)	Nuclear Family	10	(35%)
Rural	60	(20%)			

The table illustrates that most of the participants living with HIV/AIDS were men (77%) with mean age of 32.7 years ($SD=7.93$). Most of the participants were married and living with their spouses. Whereas, unmarried participants were noted to have the second-highest percentage (45%). Most participants didn't have any children and a large majority was residing in urban residential settings.

Most of the participants were living in a joint family system (65%) and belonged to urban areas (80%). Majority of the participants were diagnosed for more than 3 years and most of the participants were infected from injectable drugs (32%) and others were infected by their male sexual partner (15%), from female sexual partner (13%), and 13 percent were infected from their spouses (13%). The families of the majority of the participants knew about their HIV/AIDS positive status (85%), however, 51 % of the participants never disclosed their status to their friends.

Table 3: Frequency and Percentages of Education, and Profession of Participants

Variables	F	Percentage	Variables	F	Percentage
Unemployed	49	16.3 %	Driver	13	4.3 %
Government job	8	2.6 %	Labor	28	9.3 %
Private job	88	29.3 %	Dancer	9	3 %
Retired	7	2.3 %	Begging	5	1.7 %
Housewife	29	9.9 %	Doctor	1	0.3 %
Self-employed	62	20.7 %	Advocate	1	0.3 %

The table above shows that majority of participants were uneducated and under matric. It can be noticed that majority of the participants were employed and doing jobs in the private sectors and government sectors. Furthermore, a countable number of participants were self-employed and running their businesses. Whereas, around (86%) transgender were dancing and begging to earn money.

Table 4: Correlation between ARM-R Scores and Demographic Characteristics of Participants (N=300)

Sr. No.	Variables	1	2	3	4	5	6	7	8
1	ARM-R								
2	Gender	-.15**							
3	Age	-.07	-.01						
4	Education	.19**	-.17**	-.09					
5	Marital status	-.03	.16**	.29**	-.16**				
6	Family income	.17**	-.16**	-.07	.38**	-.09			
7	Family system	-.18**	.27**	.30**	-.14*	.15**	-.28**	.27**	

* $p < .05$, ** $p < .01$

Resilience revealed a significant association with most demographic variables. Higher levels of education was positively associated with resilience. Whereas, being single, transgender and living in nuclear family system were inversely associated with levels of resilience.

Table 5: Differences in Resilience Scores Across Gender (N=300)

Variable	Male (n=232)		Female (n=52)		Transgender (n=16)		F	P
	M	(SD)	M	(SD)	M	(SD)		
ARM-R	66.22	(7.78)	64.02	(7.66)	61.94	(8.69)	3.55	.03*

The table above shows that the three gender groups have significantly different levels of resilience ($p < 0.05$) particularly between male and transgender participants. The Post Hoc Test was run to find out the exact difference among three gender groups by using the Gabriel Method. There was a significant difference of resilience scores between male and transgender group $p < 0.05$. As transgenders showed to have significantly lower resilience compared to males (Mean differences= 4.28, $p = 0.04$, 95% class intervals = 0.09 - 8.47). Whereas, no significant difference was found between males and females (Mean differences= 2.20, $p = 0.15$, 95% class intervals = -0.51 - 4.91) and females and transgender group (Mean differences= 2.08, $p = 0.70$, 95% class intervals = -3.07 - 7.24).

Discussion

HIV/AIDS is a serious public health issue which leads to multiple personal and social challenges for individuals living with it and their families. Despite these serious challenges, many HIV/AIDS positive people cope with these issues effectively and preserve their quality to life and psychological well being. These people are believed to have better levels of resilience compared to those who fail to face the negative impacts of HIV/AIDS (Brito & Seidl, 2019).

In general, resilience helps us to cope with adverse experiences, stress and other psychological difficulties that one experiences while facing various adversities (Peccoralo et al., 2020; Virupaksha & Muralidhar, 2018). HIV/AIDS is a debilitating condition which puts both people suffering from it and their family members at risk of developing various psychological problems. Thus, many researchers have highlighted the significance of resilience in improving the quality of life and treatment outcomes in HIV/AIDS across all age groups (Fang et al., 2015; Lyons et al., 2016). Therefore, the present study was conducted to explore resilience in HIV/AIDS positive individuals and to identify the notable demographic factors associated with resilience in HIV/AIDS positive individuals. The findings showed that a large majority of HIV/AIDS positive cases were living in joint family system and comprised of men (77%) who were infected by injectable drugs (32%), this demographic profile was aligned with results of previous studies reporting similar trends in Pakistan and elsewhere (Khan et al., 2019; Brito & Seidl, 2019; Maan et al., 2014).

The level of resilience was assumed to be varied across gender in present study and findings supported this assumption showing different levels of resilience in HIV/AIDS positive males, females and transgender participants. The difference was particularly significant between males and transgender groups as male participants had significantly higher levels of resilience compared to transgender participants. This finding is similar to previous researches which also reported significantly lower levels of resilience in transgender individuals than males (Virupaksha & Muralidhar, 2018). The reason might be that transgender individuals usually face significantly more negativity, strong social discrimination and social rejection even from their own families which generally results in higher rates of psychological illness and poor coping (Lyons, 2015). These problems already leave them vulnerable and with poor coping resources against adversities. This was also observed by other researchers who studied resilience in HIV/AIDS positive transgenders, the findings reported that they faced significantly more psychological distress related to their sexual identity and positive HIV/AIDS status (Lyons et al., 2016).

Previous researches have studied the contribution of family in HIV/AIDS and concluded that family play a pertinent role in prevention of HIV/AIDS, helps fight stigma, and is directly linked with treatment outcomes, quality of life and coping with psychological distress of HIV/AIDS positive people (Perrino & Szapocznik, 2000). Findings of the present study showed that majority of the participants (65%) was living in joint family which was very prevalent in Pakistan (Nazim et al., 2021). The nuclear family system was inversely associated with resilience in present study which is supported by another study which reported a similar pattern of association between nuclear family system and resilience (Nazim et al., 2022). There are more members in joint families which may become a source of better social support which reportedly shares a positive association with resilience. The better social support available in joint family system might have contributed to increase the level of resilience in participants of the present study.

Present study noted education and family income to have positive associations with level of resilience. Both education and income are linked with availability of more resources, better living conditions and higher education level, all of these factors may contribute to improved levels of resilience. The finding in general is relatable with other researches that found higher education levels associate with stronger resilience in HIV/AIDS positive people (Folayan et al., 2022; Lima et al., 2014).

Age is an important demographic variables which is closely associated with several kinds of behavioral variations. The results of the present study linked older age with weaker resilience which does not fall in line with previous researches that associated older age with stronger resilience in HIV/AIDS positive people (Emlet et al., 2011). The different pattern observed in present study might be the outcome of differences in sample size, population characteristics and other contextual differences.

Limitations and Implications

Main limitations of the present study were that the sample was only collected from Lahore city and from public treatment centres. It would have been better to take participants from other cities as well as from treatment centres run by NGOs to get a broader contextual perspective.

HIV/AIDS has a lot of social stigma and discrimination attached with it which refrains people from getting tested and disclosing their health status. This leads to poor quality of life in HIV/AIDS positive people and become a reason for spreading the virus. Pakistan needs more research studies related to different dimensions of HIV/AIDS positive people to provide them better treatment options, improved living conditions and to help them and their family members cope with the biopsychosocial impact of this illness. The present findings can be helpful for health professionals to use various demographic factors to enhance resilience of HIV/AIDS positive individuals. The results can also provide guidance to design effective resilience based treatment programs for HIV/AIDS positive people.

Conclusion

Resilience is an important dimensions of one's behavior which strongly impacts various areas of our functioning. Resilience is considered a pertinent factor affecting the outcome of treatment in terminal illnesses including AIDS. The present study identified some key demographic variables strongly associated with resilience in HIV/AIDS positive individuals living in Pakistan. The demographic variables that were found to be significant correlates were gender, education, family income and family system.

References

- Abdullah, M. A., Shaikh, B. T., & Ghazanfar, H. (2021). Curing or causing? HIV/AIDS in health care system of Punjab, Pakistan. *PloS one*, *16* (7), e0254476. <https://doi.org/10.1371/journal.pone.0254476>
- Afek, A., Ben-Avraham, R., Davidov, A., Berezin Cohen, N., Ben Yehuda, A., Gilboa, Y., & Nahum, M. (2021). Psychological resilience, mental health and inhibitory control among youth and young adults under stress. *Frontiers in Psychiatry*, *11*. doi.org/10.3389/fpsyt.2020.608588
- Brito, H.L., & Seidl, E.M.F. (2019). Resilience of people with HIV/AIDS: Influence of religious coping. *Trends in Psychology*, *27* (3): <https://doi.org/10.9788/TP2019.3-04>
- Brown LL, Martin EG, Knudsen HK, Gotham HJ and Garner BR (2021) Resilience-Focused HIV Care to Promote Psychological Well-Being During COVID-19 and Other Catastrophes. *Frontiers in Public Health*, *9* :705573. doi: 10.3389/fpubh.2021.705573
- Dale, S.K., Reid, R., & Safren, S.A. (2021). Factors associated with resilience among Black women living with HIV and histories of trauma. *Journal of Health Psychology*, *26* (5):758-766.
- Dale, S. K., Cohen, M. H., Kelso, G. A., Cruise, R. C., Weber, K. M., Watson, C., Burke-Miller, J. K., & Brody, L. R. (2014). Resilience among women with HIV: Impact of silencing the self and socioeconomic factors. *Sex roles*, *70*(5-6), 221–231. <https://doi.org/10.1007/s11199-014-0348-x>
- Dulin, A. J., Dale, S. K., Earnshaw, V. A., Fava, J. L., Mugavero, M. J., Napravnik, S., Hogan, J. W., Carey, M. P., & Howe, C. J. (2018). Resilience and HIV: a review of the definition and study of resilience. *AIDS Care*, *30* (5), 6–17. <https://doi.org/10.1080/09540121.2018.1515470>
- Emllet, C. A., Tozay, S., & Raveis, V. H. (2011). "I'm not going to die from AIDS": Resilience in aging with HIV disease. *The Gerontologist*, *51*(1), 101-111.
- Fang, X., Vincent, W., Calabrese, S. K., Heckman, T. G., Sikkema, K. J., Humphries, D. L., & Hansen, N. B. (2015). Resilience, stress, and life quality in older adults living with HIV/AIDS. *Aging & Mental Health*, *19*(11), 1015-1021.
- Farber, E. W., Schwartz, J. A., Schaper, P. E., Moonen, D. J., & McDaniel, J. S. (2000). Resilience factors associated with adaptation to HIV disease. *Psychosomatics*, *41*(2), 140- 146.
- Folayan, M.O., Ibigbami, O., & Lusher, J. (2022). Associations between resilience, self esteem, HIV status and sexual identity among residents in Nigeria. *Scientific African*, *17*:e01333. doi.org/10.1016/j.sciaf.2022.e01333
- Harper, G. W., Riplinger, A. J., Neubauer, L. C., Murphy, A. G., Velcoff, J., & Bangi, A. K. (2014). Ecological factors influencing HIV sexual risk and resilience among young people in rural Kenya: Implications for prevention. *Health Education Research*, *29*(1), 131-146.
- Jefferies, P., McGarrigle, L., & Ungar, M. (2018). The CYRM-R: a Rasch-validated revision of the Child and Youth Resilience Measure. *Journal of Evidence-Informed Social Work*, *1*-24. <https://doi.org/10.1080/23761407.2018.1548403>
- Kralik, D., Van Loon, A., & Visentin, K. (2006). Resilience in the chronic illness experience. *Educational Action Research*, *14*(2), 187-201.
- Kristen D. Krause & Perry N. Halkitis (2022) Mental health correlates of HIV-related resilience among older gay men living with HIV/AIDS in New York City: The gold studies. *Journal of Gay & Lesbian Mental Health*. DOI: 10.1080/19359705.2022.2152517
- Lyons, A. (2015). Resilience in lesbians and gay men: A review and key findings from a nationwide Australian survey. *International Review of Psychiatry*, *27*(5), 435-443.
- Lyons, A., Heywood, W., & Rozbroj, T. (2016). Psychosocial factors associated with

- resilience in a national community-based cohort of Australian gay men living with HIV. *AIDS and Behavior*, 20(8), 1658-1666.
- Mancini, J. A., & Bowen, G. L. (2009). Community resilience: A social organization theory of action and change. *Pathways of human development: Explorations of change*, 245-265.
- Manning, L. K., Carr, D. C., & Kail, B. L. (2014). Do higher levels of resilience buffer the deleterious impact of chronic illness on disability in later life?. *The Gerontologist*, 56 (3), 514-524.
- Murdaugh, C., Moneyham, L., Jackson, K., Phillips, K., & Tavakoli, A. (2006). Predictors of quality of life in HIV-infected rural women: a psychometric test of the chronic illness quality of life ladder. *Quality of Life Research*, 15(5), 777.
- Nazim, A., Schwaiger, E., & Samuel, I.S. (2022). Exploration of resilience in elementary grade children across age, gender, family system and school system. *Asian Social Studies and Applied Research*, 3(1), 1-9.
- Nazim, A., Samuel, I.S., & Nazim, T. (2021). Comparison of HIV-related stigma in people with substance abuse and health care providers. *Asian Social Studies and Applied Research*, 2(4), 206-214.
- Peccoraro, L. A., Mehta, D. H., Schiller, G., & Logio, L. S. (2020). The Health Benefits of Resilience. In J. Uribarri, & J. Vassalotti (eds), *Nutrition, Fitness, and Mindfulness*, (pp. 189–201). Humana Cham. https://doi.org/10.1007/978-3-030-30892-6_13
- Perrino, T., González-Soldevilla, A., Pantin, H., & Szapocznik, J. (2000). The role of families in adolescent HIV prevention: A review. *Clinical Child and Family Psychology Review*, 3(2), 81-96.
- Pięta, M., & Rzeszutek, M. (2023). The role of resilience in daily experiences of posttraumatic growth, affect, and HIV/AIDS stigma among people living with HIV. *Scientific Reports*, 13, 796. <https://doi.org/10.1038/s41598-023-28187-x>
- Poblete, S. A. (2001). Relationship of spirituality, social support, reciprocity, and conflict to resilience in individuals diagnosed with HIV.
- Resilience Research Centre. (2018). CYRM and ARM user manual. Halifax, NS: Resilience Research Centre, Dalhousie University. Retrieved from <http://www.resilienceresearch.org/>
- Snorradóttir, H. S. (2018). *Quality of life among newly diagnosed lung cancer patients in Iceland: The role of resilience and social support* (Doctoral dissertation).
- Sun, Y., Song, B., & Zhen, C. (2023). The mediating effect of psychological resilience between social support and anxiety/depression in people living with HIV/AIDS—a study from China. *BMC Public Health*, 23, 246. <https://doi.org/10.1186/s12889-023-17403-y>
- Vedhara, K., & Nott, K. H. (1996). Psychosocial vulnerability to stress: A study of HIV-positive homosexual men. *Journal of Psychosomatic Research*, 41(3), 255-267.
- Walsh, F. (2015). *Strengthening family resilience*. Guilford Publications.
- World Health Organization (WHO) (1999) 'The World Health Report 2009' <https://www.nacp.gov.pk/howwework/overview.html>
- Xu, Y., Lin, X., Chen, S., Liu, Y., & Liu, H. (2018). 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.