

## **Suicide Risk among Individuals with HIV/AIDS**

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The study was carried out to investigate suicide risk among HIV/AIDS individuals in comparison with HIV negative individuals. The sample of the present study comprised of two hundred participants (N = 200), including two groups: hundred people diagnosed as HIV positive, and hundred people diagnosed as HIV negative. In both groups, male and female adults were ranging in ages between twenty to fifty years with educational background of primary, intermediate and above, from Peshawar and Islamabad. The Suicide Probability Scale and a self-constructed structured interview was administered individually and sought out demographic information from the participants. This helped in the collection of qualitative data pertaining to their physical illness as well as the extent of their emotional disturbance. t-test analysis was carried out to analyze the data. Results indicated significant differences among people diagnosed as HIV positive and people diagnosed as HIV negative on the suicide probability scale ( $t = 8.534$ ,  $df = 196$ ,  $p < .001$ ). It is concluded that the rate of suicide risk was high in people diagnosed as HIV and AIDS. These research findings have implications for endorsing attention to mental health provision, emotional support and social context. Limitations of the present study were also discussed.

*Keywords:* HIV positive individuals, acquired immunodeficiency syndrome (AIDS), suicide risk

HIV and AIDS is a life threatening illness of the present era that places enormous burden on affected individuals which exacerbates their normal functioning. This chronic disease has traumatized the entire world which appeared twenty five years ago and mystified medics and scientists equally as it came to be one of the most dreadful contagions in human history. The virus of AIDS called human immunodeficiency virus has infected millions of persons and the prevalence is increasing distressingly in the world. AIDS is an acquired immunodeficiency syndrome which is a progressive, degenerative, chronic, multi-organ, multi-system illness. The agent causing AIDS, a human immunodeficiency virus is a lentivirus that infects the immune systems' cells and replicate within those cells (Rubbert, Behrens, & Ostrowski, 2007).

Humans have evolved sophisticated defenses in the form of innate and acquired immunity. The activity of the immune system centers on the white blood cells. The human immunodeficiency virus (HIV), when enters in the blood invades the innate immunity and therefore destroy the components of the intrinsic immune system (Simon, Ho, & Abdool, 2006). Thus, HIV infects a variety of white blood cells such as T helper lymphocytes, macrophages and dendritic cells of the vaginal, cervical, and rectal epithelium, which are the first infected target cells for the virus. The white blood cells contain the surface molecule cluster determinant 4 (CD4) which act as main receptors for the virus replication. The hallmark of HIV infection depends on the gradual destruction and deregulation of white blood cells function throughout the disease, thus the persistent progression of HIV causes AIDS by directly killing the normal functioning of the immune system cells (Klotman, Simon, & Vidya, 2008).

People with HIV/AIDS die from sickness, termed as opportunistic infections; infections that arise when the immune system deteriorates. The primary effect of HIV on the body is the gradual destruction of CD4 lymphocytes which causes a progressive weakening of the immune system. This in turn gives the opportunity to viruses, bacteria, fungi, and protozoa to flourish and cause diseases and thus the diseases induced by these pathogens are known as opportunistic infections which are responsible for up to 90 percent of all AIDS-related deaths (Klotman, Simon, & Vidya, 2008).

The entire course of HIV disease, starting from the primary infection to clinical AIDS and death spans a period of ten to fifteen years. The available antiretroviral combination treatments slow disease progression and have transformed AIDS from a fatal condition to a manageable, chronic illness. However in spite of substantially expanded prevention options, a definite cure remains vague (Klotman, Simon, & Vidya, 2008).

Currently 35 million people are living with HIV/AIDS globally (UNAIDS, 2013). The spread of HIV differs extremely by terrestrial regions of the world both between and within countries. In Asian countries, HIV transmission is characterized primarily by travelers from regions of America, Africa, and Western Europe. The epidemics of HIV in Asia remain focused largely in injection drug users, sex workers and their customers, and homosexual men (NACP, 2014).

In Asia, according to UNAIDS (2013) an estimated 4.8 million people living with HIV infection are living with HIV of which approximately 34 percent were women, and an estimated 300,000 of AIDS related deaths occurred by the end of same year.

Pakistan is a low prevalence Asian country that faces a focused epidemic among some significant populations and is at greater threat of an HIV/AIDS epidemic due to the presence of various socioeconomic situations which may include poverty, low levels of education and unemployment. Among 187 million people living in Pakistan, less than 0.1 percent of the population is infected with HIV and the incidence is increasing at an alarming rate. Presently an estimated 83,468 people suffering from HIV/AIDS, of whom 7,568 are registered in eighteen antiretroviral centers. The number of registered HIV/AIDS cases is relatively low due to lack of surveillance system, and restricted individual level care-seeking resulting from unawareness of the disease and or stigma and discrimination. Consequently HIV incidence data for Pakistan is considered as generalized epidemic in this country and the situation is distressing in this region (NACP, 2014; UNAIDS, 2013).

AIDS is a disease that overwhelmingly afflicts an individual's physical health but also affects mental health, so it is an important root of mortality. It threatens an individual's health, life objectives, anticipations, extensive interpersonal and intrapersonal relations as well as material resources, so people living with HIV/AIDS may suffer psychological distress as a result of many physiological, societal and financial repercussions of the infection on their lives. Among the various stressors are lengthy symptomatic illness, impairment in physical functioning, prolonged physical discomfort, the probability of infecting others, social stigma, discrimination, constant worry of death, and economic burdens due to expensive and lifelong medical treatments, and loss of fundamental human rights. All these issues commonly change an infected individual's behavior and affect their cognitive and emotional functioning (Kalichman, 1995).

Thus being infected with the virus would lead to significant agitation, fatigue, isolation, and other adverse psychological responses such as hopelessness which can further exacerbate these individuals to commit suicide. They expect that the disease will ultimately kill them and feels they are no longer healthy. Also the previous risk behaviors such as drug and immoral sexual behaviors would increase depression by internalized shame and constant anxieties.

Several studies found that mental distress is the cause of HIV/AIDS that is a severe medical illness. Likewise studies of Steven and Doerr (1997) and Herbst (2006) have described by determining that when an individual is HIV seropositive is psychologically distressful; they experience feelings of sorrow, hopelessness, helplessness, grief, guilt, distress, and despair. Thus due to the HIV associated despair and distress, it was found that suicidal ideation tends to be present among two third of patients who were depressed and the rate of suicide among them was 10 to 15 percent (Ruiz, Guynn, & Matorin, 2000).

Suicide is one of the most tragic of the psychiatric aspects of AIDS and is multi-factorial. Suicidal ideation among people with HIV can be there at any point of time. This can be at the time of realization that the life is at risk or the feeling that the person is extremely sick. Also this can be the result of exquisitely painful bio-psychosocial challenges that they face. Infected people often have feelings of shame, anger, sadness, guilt, anxiety and hopelessness and see no options to alleviate their distress other than commit suicide. Many factors can be associated with suicide risk among HIV/AIDS; such as the recognition of having certain severe opportunistic infections, dealing with its pains, viral loads and lower CD4 counts, and unemployment issues due to stigma. Therefore early in the AIDS epidemic, studies postulated that the number of

complaints of suicide in HIV/AIDS patients ranges widely from 7.4 to 66 times more as compared to those who are healthy and non-carriers of their infections or approximately 80 to 713 per 100,000 people (Cote, Biggar, & Dannenberg, 1992; Alfonso et al., 1994). Regardless of the fact that the treatment options have advanced and are better, the recent studies in the United States by (Marzuk et al., 1997), Australia (Ruzicka, Choi, & Sadkowsky, 2005), and France (Lewden et al., 2005) have shown that the chances of suicide among HIV patients are very high.

As HIV infected people commonly engage in suicidal behavior and substantial number end their lives by suicide, therefore studies indicated that the rate of suicide among HIV/AIDS goes up to 36 percent (Alfonso & Cohen, 2008).

Likewise a cohort from Missouri, 17 percent of HIV positive gay men reported serious thoughts to end their lives at the time of routine clinical discussion (Goggin et al., 2000). Similarly in a rural cohort of small communities in eight U.S. states, 38 percent of individuals with HIV infection admitted that they had suicidal thoughts one week prior to responding to self-administered surveys (Heckman et al., 2002).

Factors in association to an increased risk of suicide among HIV/AIDS individuals who completed suicide are; individual's unique life experiences, biological, psychological, social, chronic medical illnesses and culture (Alfonso & Cohen, 2008). Other factors include that person with chronic medical illnesses fears that the loss of their bodily functions will make life not worth living. Interpersonal conflicts indulge the person in distress and depression associated with infection which leads them to suicidal behavior than relying on others and to prevent the intolerable loneliness.

Social dynamics that drive infected people to commit suicide includes stigma and discrimination, which can lead them toward hopelessness, and despair that increases the possibility of death by suicide. Suicidal behavior increases when persons have poor social support, decreased social integration, poor family relations, and a restricted social environment (Kalichman, Heckman, Kochman, Sikkema, & Bergholte, 2000; Haller & Miles, 2003). Several studies have shown that being burdened by care giving and having an HIV-positive spouse or children can increase suicide risk (Chandra, Ravi, Desai, & Subbkrishna, 1998).

In addition to demographic factors such as gender and age related issues data of general-population indicated that death by suicide among men is three times higher than among women (McIntosh, 2003). Whereas HIV infected women are at a significantly higher risk for attempting and dying by suicide (Cohen & Alfonso, 2004). Also Women AIDS and Violence Epidemic (WAVE) provided the data which revealed that women with HIV infection were more likely to commit suicide than the non-carriers (Gielen, McDonnell, O'Campo, & Burke, 2005).

Associated with age, studies have shown that individuals with HIV infection can be suicidal at any time from diagnosis to end-stage illness (Cohen & Alfonso, 2004).

Other predominant factors related to suicide among HIV/AIDS are chronic medical illnesses and psychological co-morbidities. Thus it has been found that the opportunistic infections related to AIDS such as pain, hiccups, insomnia, nausea, intractable diarrhea, severe

wasting, blindness, motor deficits, and cancers may compound hopelessness which can trigger thoughts of suicide and suicidal behavior (Cohen & Alfonso, 2004).

Other factors that contribute to suicide ideation among HIV positive individuals can be the comorbid psychological disorders such as posttraumatic stress disorders and depression. In which the infected person may have pessimistic thinking; they view themselves incurable, unloved, unwanted, abandoned, frequently disapprove, blame themselves, and accusations in contradiction of the self over wrong blame and shame. As a result the infected individuals become hopeless and have no choice other than to get away from these painful circumstances. Thus elevated suicide rates are found among persons with HIV infection and co-morbid depressive disorders as well as the presence of hopelessness (WHO, 2008), bereavement, posttraumatic stress disorder, schizophrenia and other psychotic states (Haller & Miles, 2003).

Similarly clinical researchers have recently identified a particularly high suicide rate with co-morbid major depression (Oquendo et al., 2005; Sher et al., 2005), and which is a common coexisting conditions in persons with HIV infection (Cohen, Alfonso, Hoffman, Milau, & Carrera, 2001). Even though the work of Cohen and Alfonso (2004) have demonstrated that the emotional conditions of unhappiness, blame, annoyance, fright, and disgrace generally exist and escalate the risk to commit suicide in those who are HIV positive, and consequently hopelessness was considered as strongly associated affective state of depression with suicide risk in them.

Due to the above literature and epidemiological facts the researcher anticipated to assess suicide risk among HIV/AIDS individuals in Pakistan. The reason for the impetus on Pakistani culture is due to the unavailability of relevant literature, as the existing material is with reference to western culture, thus the existing cultural differences and diversities allowed to study the phenomena with reference to particular aspects of Pakistani society.

Pakistan is an Islamic republic in South Asia. The cultural patterns followed by South Asian countries are collectivist, where duties and obligations are shared in groups (Hofstede, 1980). Pakistan is one of the countries that follow the Islamic laws and moral values and people live their life according to Islam. Islam has played a vital role in shaping cultural life and has provided standardized set of practices for molding lives according to the recommended ways. Thus in this Muslim country the religion defines culture and the culture provides significance to every phase of a person's life.

Muslims view the AIDS epidemic through the "prism of sin" and as a result of sinful conduct, such as prostitution sex with multiple partners (Mohamed, 2013). Muslim scholars described HIV and AIDS as an illness attributed to sex and characterized HIV as a non-Muslim disease because they consider it as an immoral sexual behavior and use of drugs. Universally condemned, in the Muslim countries unlawful sexual relations (zina) is greatly grimaced by Muslim societies, and often severely banned by the country (Mohamed, 2013). Islam places a high importance on chaste behavior and only approves of sex between married couples and condemns prohibited activities such sexual behavior outside marriage. Islam explicitly forbids infidelity, homosexuality, and the use of intoxicants (Pickthall, 1930).

Therefore, people living with HIV and AIDS are perceived as sinners by religion. Islamic scholars view HIV as a consequence of non-compliance and failure to obey the teachings of religion and infected people are perceived as liable for their disease due to their own subjective doings and failures. As a result living with HIV is associated to a life of sin and the negative attitudes towards people with HIV and AIDS leads to stigma and discrimination (Kafuko & Kampala, 2009).

Stigma is defined as the “holding of derogatory social attitudes or cognitive beliefs, the expression of negative affect, or display of hostile or discriminatory behavior towards members of a group on account of their membership of that group” (Goffman, 1963). Discrimination can take the form of ostracism and avoiding daily interaction, verbal harassment, and physical violence, verbal discrediting and blaming and denial of the funeral rights.

HIV infected individuals continuously experience internalized stigma and negative self-image; due to these factors they conceal their conditions after receiving diagnosed in their social group. Consequently a person suffered from HIV has countless social and psychological repercussions. In a collectivist culture like Pakistan factors associated with the stigma of HIV infection includes misconception about HIV transmission by sinful behaviors. Social stigma is perhaps the significant aspect in creating the adverse psychological effect on HIV and AIDS, and can become a basis of chronic psychological distress among them.

Therefore, if left untreated this psychological distress may lead to suicidal ideation. Suicidal ideation and its severity were associated with stigma, knowing HIV status of a spouse, loss of an affected HIV spouse, and severe physical symptoms of advance disease stage. In the local context, it is found from a case-study of an HIV infected person in which he described that he and his entire family was ostracized after disclosure of his HIV status in his community; he seriously intended for suicide due to the feelings of self-blame and dishonor (Ahmar, 2007). These findings recommend that considering suicide risk is an important variable among people living with HIV and AIDS and has significant implication for policies in Pakistan. Therefore the present research will assess suicide risk among HIV and AIDS individuals so that proper intervention plan can be recommended for them.

One of the objectives of the current research was that the information gleaned from inclusive clinical assessment can assist health care professionals involved in the treatment of HIV/AIDS individuals will help them to take preventive measures at the right time.

## **Hypothesis**

- Individuals with HIV positive status would have high scores on suicide probability scale than individuals with HIV-negative status.

## Method

### Participants

A purposive sampling technique for the selection of respondents was used. For the study, people diagnosed as HIV positive and people diagnosed as HIV negative were recruited as sample from Peshawar city of Khyber Pakhtunkhwa and Islamabad, Pakistan. People with HIV group who had been taking treatment of their disease from the outpatient department of ARV/VCT (Antiretroviral and Voluntary Counseling and Testing) treatment center of Hayatabad Medical Complex Peshawar, and PIMS (Pakistan Institute of Medical Sciences) Islamabad. A group of people with negative HIV status who had no chronic medical illness were selected from the general population of Peshawar and Islamabad. The total sample size was 200 adults (100 people diagnosed as HIV positive and 100 people diagnosed as HIV negative) of ages between 20 and 50 years. The HIV positive group was consisted of 33 recently diagnosed and 67 people living with AIDS. Both the groups were matched on demographic variables (age, sex, and education). The whole sample belonged to middle and low socioeconomic class.

### Measures

**An In-depth Structured Clinical Interview** was conducted to obtain from both the samples regarding the socio-demographic and medical information in order to conduct this study. It contained items focusing on the individual's demographics, educational background, personal data, recreational activities, medical history, sexual history, social background and history of substance abuse. Mental status examination was done through a combination of questioning and observation to examine behavior and appearance, mood and affect, speech and thought, perceptions, motivation, insight, judgment and impulse control, cognitions, attention and memory as a part of interview. This interview was qualitative in nature and takes for about 20-30 minutes to be administered.

**The Suicide Probability Scale (Cull & Gill, 1982)** consists of 36 items and this is basically designed to be used for assessing the risk of suicide amongst adults and teenagers. The scale provides the global suicidal risk index. The 4 point likert scale is used by the individuals where they rate their subjective experience and historic behaviors. The range starts from "None or little of the time" to "Most or all of the time". After getting the responses, scores are given to the individuals for the suicidal risk in general and specific in accordance with some key dimensions. This SPS scale is a self-reporting technique. It provides the quantitative score of suicidal risk which can be used for the purpose of research.

There are four clinical subscales of SPS: hopelessness, suicide ideation, negative self-evaluation and hostility. It is easy to administer and score SPS, and can be used by all the trained researchers and paraprofessionals. High scores on SPS indicate the high suicide probability. It takes 20 minutes to administer, score and interpret the results. The administration can be made for individuals as well as groups. For this study, Cronbach's alpha indicated good internal consistency of 0.93.

In Pakistan it is used by researchers for the assessment of suicide risk behaviors among psychiatric patients and general population (Rizwan, 2010; Agha, 2001). Therefore it is found a valid and reliable tool to be used in the local context for the assessment purpose. In the present study SPS is used for the evaluation of suicidal risk behavior as a function of many psychosocial risk factors associated to HIV and AIDS among people diagnosed as HIV positive in comparison with people diagnosed as HIV negative.

## **Procedure**

The HIV-positive sample was approached through Hospitals in Khyber Pakhtunkhwa and Islamabad after taking formal permission from the program directors of National AIDS Control Program. After taken the informed consent for data collection from the directors of all the respective institutions the doctors were contacted in PIMS Islamabad, and ARV/VCT (HMC) Peshawar to meet diagnosed HIV positive individuals. Participants were contacted in the hospital. Before administering them on different measures, all the participants were taken in confidence by providing them information about the purpose of the study and assuring the confidentiality of their responses. After getting their consent for their willingness to participate, an in-depth and structured interview was conducted; all necessary information was recorded. After this, the Suicide Probability Scale was administered to assess suicide risk, among people diagnosed as HIV positive to each subject individually. Subjects were asked to respond carefully to each item according to the instructions. Individuals who were facing difficulty to understand the English language, they were helped in the form of literal translations in the local language without modifying the basic tool.

In the second stage, participants from the general population including different institutions such as schools, and other organizations of Islamabad and Peshawar city, were contacted on the basis of demographics (age, gender and education). After seeking consent and explaining the purpose of research structured clinical interview was conducted and then suicide probability scale (SPS; Cull & Gill, 1982) was administered individually with them.

## **Results**

The data of the present study was analyzed with the help of Statistical Package of Social Sciences (SPSS). In order to check the reliability of scales, alpha coefficient was calculated. Independent t test was applied to find out the difference between people diagnosed as HIV positive and people diagnosed as HIV negative group on suicide probability scale. The result is presented in the following table.

Table 1

*Mean Differences and t-value of HIV Positive Individuals and HIV Negative Individuals on Suicide Probability Scale (N = 200)*

G r o u p s	n	M	S D	t	p	Cohen's d
H I V + v e Individuals	100	40.59	24.225			
				8.534	.001***	1.219
H I V - v e Individuals	98	16.91	13.087			

df = 196 \*\*\*p < .001

Above table shows the mean difference between people diagnosed as HIV positive and people diagnosed as HIV negative on the scores of Suicide Probability Scale. The figure shows that HIV positive individuals have higher suicide risk as compared to HIV negative individuals. This mean difference of 23.682 is overwhelmingly significant at  $p < .001$  level. This shows individuals with HIV and AIDS have higher symptoms of suicide risk as compared to people diagnosed as HIV negative.

### Discussion

The study aimed at investigating the suicide risk among individuals with HIV/AIDS and its comparison with HIV negative individuals. The investigation replicated several previous studies.

The hypothesis was that individuals with HIV positive status would have high scores on suicide probability scores than individuals with HIV negative status. Findings of the present study indicates significantly higher total suicide risk scores among HIV positive group compared with HIV negative group on the variable of suicide probability scale ( $t = 8.534$ ,  $df = 196$ ,  $p < .001$ ).

These results are highly consistent with the formulated hypothesis and are similar to the previous research findings that HIV/AIDS as a long term chronic illness is a consistent predictor of suicide risk (Marzuk et al., 1988; Alfonso & Cohen, 1994; Marzuk et al., 1997; Gil et al., 1998; Kalichman, Heckman, Kochman, Sikkema, & Bergholte, 2000; Heckman et al., 2002; Ruzicka, Choi, & Sadkowsky, 2005).

Like previous literature (Kelly et al., 1998; Cohen, Alfonso, Hoffman, Milau, & Carrera, 2001; Haller & Miles, 2003; Sher et al., 2005; Ahmar, 2007; WHO, 2008), the findings of the present study suggests significant independent effects of the factors on suicide scores in the total

sample of HIV positive group which includes: anxiety, anger, shame, guilt and hostility, the presence of co-morbid psychological disorder like posttraumatic stress disorder and depression; and disease factors such as being diagnosed as HIV positive, loss of their body functioning as well as related opportunistic infections (Chandra, Ravi, Desai, & Subbakrishna, 1998; Lonnquist, 2001; Cohen & Alfonso, 2004; Mann et al., 2005).

The symptom burden for everyday discomfort and pattern of psychological adaptation such as hopelessness along with the premorbid attributes such as neuroticism were the most distinguished independent predictors of suicide ideation which has been noted as high among HIV positive individuals. Like the previous studies, findings of the present study show that those with elevated physical and psychological burden scores had significantly higher suicide risk rates (Cohen & Alfonso, 2004; Chandra, Desai, & Ranjan, 2005; WHO, 2008). Thus significantly associated psychological variables with the risk of suicide in this local context were similar to those found in western and Indian studies and include presence of depression, hopelessness.

Particular social factors as stigma, discrimination, unemployment, unstable interpersonal relationships and loss of social support were all the potential contributors to suicide risk.

The present data indicated similarities with the existing literature on the impact of long term illness burden on all aspects of suicidal risk behavior among HIV positive individuals (Chandra, Ravi, Desai, & Subbakrishna, 1998; Kalichman, Heckman, Kochman, Sikkema, & Bergholte, 2000; Haller & Miles, 2003). Therefore, all the above findings suggest that hospitals need to concentrate on specific devotion to the burden of disease symptoms both physical and mental as well as attention should be given to incorporate suicide risk prevention initiatives into routine care.

## **Conclusion**

The results of the present study propose that living with such a lethal disease extremely impair the infected individual's level of emotional functioning and provoke the risk of suicide especially when an individual recognizes the existing adverse societal attitudes towards them, as well as loss of bodily functions. Thus, it is concluded that factors which increase the risk of suicide in HIV-positive, highlight the need for careful screening for suicidal risk and suicidal ideation by HIV clinical services, emphasize the important role of psychiatric assessment and liaison by formulating therapeutic interventions targeted to remove social stigma and discrimination and increase the chances for social provision, and also eliminate distress which occurs due to condemnation and blame by involving family relatives and others to whom the infected individuals feel closer at this crucial time. These efforts will therefore, psychologically benefit people with such a complicated disease as well as impeding the risk of suicide among them.

## **Limitations**

It is significant to admit few limitations while conducting the current research. One of the most important limitations to be considered is the restricted control of generalization of the results because the sample size was not large enough to represent the whole HIV infected

population of Pakistan. Second, this study was also purposely restricted to the registered HIV-infected individuals in HMC Peshawar and PIMS because of the scarcity of resources as well as lack of availability of HIV positive people which restricted the sample based on convenience sampling instead of a nationally representative one.

Most importantly, depending on heterogeneity and complexity of the sample the results may be biased by wide variations in ethnicity, education, and socioeconomic conditions, and marital status as well as the cause of the disease transmission. The main weakness of the study was that qualitative research was shifted to confirm or reject the findings statistically. However, in-depth structured interview was conducted to collect the qualitative data but they were not fully advantageous to meet the objectives of the study.

### **Implications and Recommendations**

The researchers can replicate this study in future by using several methods. More inclusive information about the relative significance of potential variable can be provided through a longitudinal design. Therefore if such a research design would be used in future studies, it would present further accurate evidence about the prevalence of suicide risk in people diagnosed as HIV positive. Equally, working on the same variable, a prospective study should emphasize the variable of the effects of socioeconomic status. Such a study would also include an increased sample size.

Additionally this research is purely on HIV/AIDS as a predictor of risk of suicide, while future studies should consider other variables such as self-esteem which is affected by changes in body image due to illness, physical limitations, loss of social support, and style of coping.

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