

ENVIRONMENTAL CORRELATES OF SUICIDE

BY

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Abstract

Suicide is a serious global public health problem, which claims a life in every thirty seconds, 3000 lives daily, and over one million lives yearly, with up to ten to twenty million people attempting suicide every year. It is the tenth leading cause of death in the world, and the second among the youth, following accident. And it has increased up to sixty-five percent in recent years, especially in developing countries. It has become increasingly apparent that suicide in the 21st century has gone beyond being the traditionally 'socio-psychiatric phenomenon, but a multifaceted and multifactorial health problem with environmental influences. Literature shows that environment may induce or perpetuate or aggravate suicide potential, hence the need to identify environmental correlates of suicide, and suggest the roles or relevance of environmental health in the prevention and management of suicide issues in the society.

Key words: *Environment, Suicide*

Introduction

Suicide has attracted international attention due to its global prevalence and increasing rate, and its disastrous effects on individuals, family and society. It is a major public health problem in the world (WHO, 2001). Approximately, 3000 people commit suicide every day, and every thirty seconds, one suicide-

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related death is reported (WHO, 2007). It is the tenth leading cause of death world-wide (Hawton, & Van-Heeringen, 2009), with over a million people dying by suicide annually, and about ten to twenty million people attempt suicide yearly (WHO, 2006). Contemporary research indicates the presence of environmental factors that are associated with elevated risk of suicide.

Suicide simply means to kill oneself. It has been defined in many ways by different authorities, as a self-murder (Oxford Advanced Learners' Dictionary), an intentional self-execution (Asogwa, 1997), the act of a human being intentionally causing his or her own death (Hawton, & Van-Heeringen, 2009), an act to end one's own life intentionally, either by direct self-infliction or indirect means of assistance of another person, or inaction of the victim, when he or she knows that his or her inaction would cause his/her death (Asogwa, 2011). Suicide, therefore, can be said to be a deliberate act to end one's life. For a death to be suicide, it must be by one's own doing, intended, and then effected

by the person who died, or by assistance of another.

Suicide has been demonized in some societies, and glorified in others. In an anti-suicide society, like Nigeria, suicide is seen as a mental or psychiatric disorder (madness) (Arsenaukit, & Turecki, 2004; Cavanagh, Carson, Sharpe, & Lawrie, 2003), a taboo (Callhoun, & Allen, 1991), nemesis for evils committed (Kasterbaum, 1991), crime and a violation of state law (Okafor & Okafor, 1998), "Ajo-Onwu" (meaning bad death) and "Nso ala" in Igbo language (abomination) (Asogwa, 2011). In such a society, suicide is abhorred, condemned, morally proscribed, and survivors are stigmatized. It is considered as a sin, contempt for society, and an insult to humanity. Suicide represents a failure in the adaptive denial and shirking of the duty of the individual as an integral part of the universal whole. It is the individual's inability to adapt himself, and constitutes a final regression from reality.

In some other societies, suicide is seen as a rational alternative to suffering, pains or humiliation; considered as a great death; perceived as understandable, and honourable in certain circumstances, or part of battle or resistance; as a way of preserving the honour of a dishonourable person (Watson, 2007; Taylor, 1992); regarded as an indicator of courage, wisdom, and respect for those whom are becoming dependents; as a means of atonement, a reunion, rest and refuge, and unintentional mistake (Rando, 1984).

There are people who regard suicide as a legitimate matter of personal choice, and a human right (right to die). They argue that no one would be forced to suffer against will, particularly, from conditions, such as incurable disease, mental illness or old age that have no possibility of improvement (Appel, 2007). For libertarians, suicide is morally permissible because individuals enjoy a right to suicide. They assert that the right to suicide is a right of noninterference, a liberty right, or a claim right. According to

libertarianism, attempts by the state or by the medical profession to interfere with suicidal behaviour are essential coercive attempts to pathogenize morally permissive exercises of individual freedom (Szasz, 2002). The liberalists believe that the choice between life and death is a deeply personal decision of obvious and overwhelming finality (Appel, 2007).

Suicide has serious negative impact on the health of individuals, family, and the society. The devastation it creates makes it a concerning public health issue (Caruso, 2009). Whether suicide be "successful" (complete) or unsuccessful" (incomplete), whether be the sequential outcome of a mental disorder, a disturbance of interpersonal relations, physical pain, or any combination of these, the self-destructive act represents a tragic event. It involves for the suicide (victim) before his/her death, overwhelming feelings of hopelessness, and for the would-be suicide, much the same emotions with the addition, after the unsuccessful attempt, of shame, guilt, and humiliation. It involves for the family,

anguish, shame, and probably, self-reproach. Often, suicidal act comes a total surprise to the relatives and associates of the deceased, creating an aura of speculations as to antecedent, causes, and to queries as to whether the event might have been prevented. Failures of attempted suicide also has various serious and long-lasting or permanent injuries, organ damages, mental and physical handicapping.

Persons with suicidal attack intent can inflict serious damages to life and property of their targets, and people around them. United States 9/11/terrorist attack, and Boko-Haram suicide bombings in the Northern part of Nigeria, are good examples. WHO 2001 report, according to Chishti, Stone, Corcoran, Williamson, and Petridou (2003), estimates that if every suicide affects at least six family members, or friends, then every year in the world, there would be about five million new survivors.

Individuals who lose a loved one to suicide are at risk of feeling blamed for the problems that preceded the suicide; feeling rejected by their loved

one and stigmatized by others; extreme feeling of isolation and emptiness; intense emotional pain and sadness about the loss. Children are at risk suicide, if they have someone (either parents or friends) they know commit suicide. Friends and family may be more likely to experience regret about whatever conflict or other problems they had in their relationship with the deceased. They may, also, feel guilty about living, while their loved one is not. Social effects include stigmatization, isolation, discrimination, criminalization, denial, persecution and condemnation, and social disquiet or protest, as was the case in the suicide death of a Tunisian 26 year-old man, in 2010, which triggered off mass protest (known as Arab spring), that swept away many presidents of Arab countries between 2010 and 2013 (Awake, 2013).

Studies have shown correlation between suicide and environment. Certain environmental factors have been identified, which may have either aggravating or depressing influence on suicide. Environment is the aggregate

of all those conditions, both internal and external, that exert influences on the existence, growth, development, and well-being of all organisms (Achalal & Achalu, 2007). It is regarded as the sum total of all the natural, physical, biological and social factors that interact and affect human life.

For the purpose of this study, emphasis would be on the physical and social environments. The physical environment includes: land, mountains, valleys, water, shelter, general climate, altitude, among others. The social environment consists of physical and social structures and systems aimed at satisfying human basic needs. Human environment, (society), consists not only of the sum of its members, but also of the interactions of these individuals upon each other, plus the material things, which play an essential part in community life.

Environmental Correlates of Suicide

Suicide is, often, seen as a self-destructive act due to hostile

surroundings. In every social group, there is a specific tendency to suicide, either by the organic-psychic constitution of individuals, or the nature of the physical environment. The study of suicide in relation to environment has become apparently necessary, due to the multifactorial nature of suicide. Idiosyncratic features and peculiar disorders of individual personality alone cannot account for the causes of self-destruction. Research indicates the presence of environmental factors that are associated with elevated risk of suicide. Some of the factors include: Seasonal variations, geographical conditions, accessibility of lethal means, defense of territory, school/ domestic/political environments, increasing publicity of suicide, population density, social isolation and social disorganization, among others.

Seasonal Variation

Seasonal conditions may affect suicide rates. It is observed that climate accounts for the fluctuating rate of suicide at different times of the year. According to Chen, Choi, Mori, Savada and Suguno (2009), statistics show that

in many countries, especially, the less industrialized ones, higher suicide rates are observed in spring known as the "spring peak". Chew and Mcclary (1995) had earlier found out that countries with a large agricultural workforce have relatively high springs peaks, and countries with a large industrialized population have low spring peaks. The two studies associated spring with suicide rate, though, varied on effects on population groups. Spring can be likened to the early raining season in Nigeria, between April and June.

Past and contemporary studies have consistently shown that the greatest number of suicides occur in the spring (rainy season) and early summer (dry seasons), and the fewest in the winter season (cold climate). The works of Miller give prominence to weather as a contributing factor. He states that suicides represent that portion of the population which is unable to deal successfully with psychological stress, and psychological stress is intensified by bad weather (website) However, Durkheim (1992) opposes the cosmic explanation, ascribing

seasonal variation in suicide frequency to the increased tempo of social life in the northern hemisphere in May, June, July and its decrease in November, December and January. Going by Durkheim's position, suicide rate in Nigeria, or tropical region may be higher in dry season (November to January), because of increased tempo of social life activities that usually take place in dry season in this region.

Latitude, according to studies, affect suicide rate. Chew and Mcclary (1995) state that latitude as a measure of a strength of bioclimatic influences on suicide, affect seasonality only in the temperate region. Helliwell (2007), using latitude as a measure of the exposure to sunlight, suggests otherwise. Using cross-country data of 117 countries, Helliwell states that higher latitude is associated with higher suicide rates. On the contrary, Neumayer (2003) finds that minimum hours of daily sunshine does not have a significant effect on suicide rates, but states that average temperature has a significantly positive effect on female suicide rate. The findings of the studies reveal correlation between

latitude and suicide.

Geographical Conditions

Certain geographical conditions have been associated with suicide occurrence. On topography, Minoiu and Rodriguez (2008) using U. S. Panel data of forty-seven states from 1982-1999, show that mountain states, such as Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming have significantly higher suicide rates. No explanation for mountain states having higher rates than others is given.

The influence of rural – urban environment on suicide has been noted by studies. Direct relationship between the degree of urbanization and suicide rates is revealed by a number of sociological studies. Research shows that suicide occurs more frequently in urban areas than in rural areas. The high degree of residential mobility, the impersonality and anonymity of city life, the ineffectiveness of social norms in the control of individual behaviour, and the resulting social disorganization are responsible for the high rate of suicide

in urban cities.(webste). Studies agree that with the growth of urbanism come a progressive increase in suicide frequency.

Henry and Short in Walli's work, offering an explanation for the disparity between urban and rural suicide rates, write:

"One of the critical differences between rural and urban living is in the stability and continuity of family and neighborhood life. The strong control exercised by the neighbors in the small town contrasts sharply with the anonymity and impersonality of life in the city. The steady rise in suicidal from the tightly knit rural community to the anonymity of the city may reflect the strong relational systems of the rural small-town dwellers, and the relative isolation from meaningful relationships of many of the inhabitants of large" P.61 (<https://circle.ubc.ca/bitstream/.../UBC>).

Defense of Territory

Crawley, Mary and David (1985) observe self-sacrificing deaths in some animal species usually in defense of territory (eg, ants). Defense of territory by humans has caused many soldiers, or militants or militia and leaders to commit suicide. This was the case in Japan and Germany in the second world war. During the war, Japan's pilots volunteered for suicide bomb missions in an attempt to forestall defeat of the empire of Japan. In Nigeria, currently, the increasing suicide bombings and other suicidal behaviours by Islamic terrorist group, Boko-Haram in the North-East of Nigeria are due to defense of a perceived Islamic territory and pursuit of expansionistic or annexistic agenda of the Jihadists.

Isolated Environment

Crawley, Mary, and David (1985) in their study, observed that when environmental conditions become stressful for animals, such as for those confined in zoos, self-mutilation and refusal to eat may occur. They speculate that similar dynamics may explain the increased incidence of

self-destructive behaviour in humans, who are imprisoned or isolated. They suggest that more humane care in institutional settings (prisons and schools) can result in elimination of self-destructive behaviours in prison inmates and students, or animals in confinement. Crawley and colleagues further recommends that greater nurturing and caring behaviour may similarly reserve many of the stress – related, self-injurious behaviours in humans. Instance of effect of stressful environment was observed in Nazi concentration camp during world war 1, where many Jews inmates were known to have killed themselves by deliberately touching electrified fences.

School Environment

School environment is one of the places where life is regimented, and regimented life could lead to self-destructive behaviours or suicide. In tertiary institutions, for instance, suicide is the second leading cause of death among college students, following accidents (Burrell, 2012; Hass, Silverman & Koestner, (2011). Within the school, a number of special

groups of students may have particular risk factors and high suicide rates. These include international students who may have little social or emotional support at a time they are making major life transition, gay, lesbian, bisexual and transgendered students, who on some campuses, experience discrimination and social isolation, and older students, who often, experience difficulties in returning to school (Hass et al 2011). Hass and colleagues also observe that graduate students appear to have a much higher suicide rate than undergraduates, due to intense academic competition, maintaining financial burdens, and uncertainties about future employment.

Domestic Environment

Family structure or size may have positive effect on suicide rate. Burr, McCall and Powell-Griner (1994) shows a positive relationship between the proportion of one-person households and suicide rates. In similar findings, Daly and Wilson (2006), show that as per U.S. aggregate data, the share of married people had a significantly negative

impact on suicide rates, whereas, that of single or never married people had a significantly positive impact on suicide rates in the individual level data. Durkheim (1992) claims that being married and having children combat egoism and anomic, and thus, are associated with lower suicide rates, and further introduces two concepts: "the coefficient of preservation", and "the coefficient of aggravation". According to him, too early marriages have an aggravating influence on suicide. From twenty years, married persons of both sexes enjoy a coefficient of preservation in comparison with unmarried persons to suicide can be ascribed to one of two causes: matrimonial selection, or the influence of the domestic environment.

Stallion (1985) points out that the married of both sexes have a lower rate of suicide than the single, widowed and divorced people. She further states that single men are twice as likely to commit suicide as married men, while single women are fifty percent more likely than married women to commit suicide. Maris (1981) in Asogwa

(1997) reports that the highest suicides are among the divorced. According to him, being single is more suicidogenic than being widowed after the ages of forty to forty-four.

Cutler, Glasser, and Norberg (2000) find that increased share of youths living in a home with a divorced parent is the most important factor explaining the risk of youth suicide. Although, many studies reveal positive relationship between suicide and unmarital status, but generally, according to Maris, Berman, Maltsberger and Yufit (1993), marriage does not protect against suicide.

Population Density

According to Chen et al. (2009), population density, or population growth is used as a proxy for modernization or urbanization. And Durkheim's theory predicts that the process of modernization or economic development may reduce the level of social integration, and thus, increase suicide rates.

Studies also show the influence of

population heterogeneity on suicide rates in an environment. The share of minority and indigenous people is said to have a positive relationship with suicide rate. It is observed that rapid colonization, marginalization, cultural alienation, loss of identity, and social disintegration lead to anomic, low self-esteem, despair, and deprivation (Chen et al. 2009; Neumayer, 2003), which are important immediate causes of suicide. This implies that societies with higher ethnic heterogeneity, like Nigerian communities, are considered to be having higher suicide rates.

Social Isolation

According to Durkheim's theory, social isolation, disintegration and disconnectedness lead to suicide. Social isolation is one of the strongest and most reliable predictors of suicidal ideation, attempts or completions. Numerous studies have demonstrated associations between lethal suicidal behaviour and various facets of social isolation, which include loneliness, social withdrawal, living alone, and having few social supports, living in non-intact families, residing in a single prison cell (Chen et al., 2009;

Chishti et al., 2003).

Dictatorship/ Social Injustice

Research has found that civil liberty and quality of government may affect suicide rate. Jungeilges and Kirchassner (2002) show that suicide rate is lower in free societies, than in societies with strong dictatorship, and injustice. A typical instance of the effects of brutality of government officials played out in Tunisia in 2010. On December, 17, 2010, a 26 year old Tunisian man, Mohammed Bouazizion committed suicide. He was a street vendor in Tunisia, who was frustrated with being unable to find a better job. He was also aware of corrupt officials' demands for bribes. On that particular morning, inspectors confiscated his supply of pears, bananas, and apples. When he resisted, a female police officer slapped him. Humiliated and enraged, he went to the nearby government office to complain, but could not get a hearing. In front of the building, he reportedly shouted, "how do you expect me to make a living". After dousing himself with inflammable liquid, he struck a match. He died of his burns. His death

triggered the uprising that toppled the country's regime, and protests that engulfed the entire Arab countries, in what is now known as "Arab spring".

In Nigeria, the highhandedness of government officials and security agencies on the citizens, is an important risk factor of suicide. Incarceration, denial and delay of justice, and government insensitivity to people's welfare are important causes of suicide in a society.

Social Organization

Durkheim's social causation theory of suicide hypothesizes that suicide rates are determined by the society's level of social integration (i.e; the degree in which people are bound together in social networks), and the level of social regulation (i.e; the degree to which people's desires and emotions are regulated by social norms and customs). The theory postulates that the association is curvi-linear, with high levels of social integration and regulation leading to altruistic and fatality suicides, respectively, and very low levels of social integration and regulation leading to egoistic and

anomic suicides, respectively. In modern societies, a sociologist Barday Johnson suggests that the association is linear, with suicide increasing as social integration and regulation decrease (Lester, 2006).

In Bulin and Bunzel's theory of social organization, they suggest that the greater the emphasis on individuality and on personal acquisition, the greater will be a number of suicides, and the less the act will be stigmatized. Where there is less personal striving for leadership, possession, recognition, suicide will not be as prevalent, and attitude towards it much more prohibitive (website). Following these revelations, Nigeria may have been in for high rate of suicide, because, presently, her social organization is characterized by personal acquisition, crave for power and self-glorification and aggrandizement, which have led to various forms of corruption and fraud, and impoverishment of the masses, which is one of the underling risk factors of suicide.

Conclusion

Research has shown that suicide is

intimately related to gross structural disfunctioning reflected in social disorganization, social isolation, excessive individuation, anonymity and rootlessness, prevailing characteristics and conditions of group life, and hostile physical environment.

Literature, specifically, indicates positive relationships between suicide and certain environmental factors, which include climate/weather, urban environment influences, mountainous locations, defense of territory, isolation/confinement, one-person-household/unmarried status, modernization, loneliness, social isolation, social integration and regulation, dictatorship/highhandedness, and injustice, and among others.

Suicide, being a multifactorial health problem, a study of environmental risk factors of suicide is critical in the prevention and management of suicide issues in the society. Therefore, environmental health cannot ignore the effects of suicide on the environment, and suicide cannot be

discussed in divorce of environmental stressors and predictors.

Suicide, having defiled the traditional medi-socio-psychiatric prevention approach, there should be introduction of new strategies of public health models, with emphasis on control and management of environmental risk factors for suicide. There should be aggressive awareness campaign on environment sustainability and promotion healthful and healthy environments.

There should be control measures for hostile environment, modification of lifestyles, and improvement of the individuals', family, and community adaptive – skills and capabilities.

Recommendations

1. There should be good policies and programmes that are humane in institutional settings, like schools, prisons. Suicide, often, occurs due to hostile surroundings. Greater nurturing and caring behaviour of managers and stakeholders in social institutions, and humane

policies may reverse many of the stress-related, self-injurious behaviours in persons.

2. There should be suicide education curriculum in schools, and public suicide awareness education programmes and campaigns in various social settings, like churches, mosques, hospitals, prisons, town hall meetings, through mass media, worships, talk shops among others. These programmes, if well implemented, may equip the participants with adequate knowledge of and proper attitude towards suicide; increased skills and abilities to identify suicide risk factors including environmental factors, lethal means, persons at risk, and recognize suicide warning signs and signals, and offer necessary help or care to suicidal persons in any environment. Studies have shown that adequate knowledge and proper attitudes to suicide issues are the first-line strategy for suicide prevention.

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