TEMPORAL FLUCTUATIONS OF SUICIDE DURING MAJOR PUBLIC HOLIDAYS

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Abstract

The relationship between suicide and major public holidays has been studied from data of 1,211 Nigerian suicides by persons aged 25 years and above in the 15-year period 1990 – 2004. Evidence was found to support the theory of the “broken promise affect” for major holidays in that there appears to be a postponement of a significant number of suicides from before a holiday to after it. The division of holiday into working and non-working days showed that a holiday effect could only be found around major public holidays, particularly Christmas and Easter. The tranpositioning effect is relevant to prevention, especially because of the availability and accessibility of help at the end of and after major public holidays.

Researchers have consistently found birthdays and major public holidays especially Christmas, as normal periods people all look more or less forward to and to most of people they are associated with good things in life, joy, gifts, reminiscing and the like. On the other hand, there may be a few people who experience Christmas period without at least some kind of disappointment, anxiety or even sadness (Satin 1975). These major holidays are often periods with a great variety of stress, including alcohol, change sleep rhythms, increased financial burden and family conflicts. Some major public holiday include Christmas; New Year days, Easter.

In the psychoanalytic literature, Christmas is often seen as a symbol for a time of change, between light and darkness, good and bad. Christmas is a crisis of love versus aggression. It is the season when the solid citizen becomes liquid and the devil is raised. The ambiguity of Christmas might be the reason why there is still a widespread belief held by the general public and also by health professionals that the frequency of suicide tends to increase during public holidays (Lester and Becker, 1976). Following this reasoning, there is also a common belief that some rich people tend to postpone death until after a special positive event such as a public holiday (Jessen, Berge & Jensen, 1999). Durkheim (1897/1951) suggested that the rhythm of temporal fluctuations in suicides could be seen as parallel to the rhythm of social life, where the
level of activity tends to be higher at the beginning of every new cycle, such as the begin-
ing of a month or a holiday.

He related the temporal fluctuations in suicides to temporal or cyclical aspects of social interaction commenting that, the rhythm of social life seems to reproduce the calendars divisions. In other words, individuals are strongly attached to their society and to its ceremonies and social rhythms. Durkheim held that the strength of the individuals integration may vary between too extremes. Some individual are not integrated in society and not involved or interested in its ceremonies and some individuals are over interested in society and are highly involved in its ceremonies. A large number of studies have reported that the frequency of suicide is affected by temporal variables such as, season, month, day of the week, presidential elections, public national holidays, and so on, but very few theories have been provided to explain the relationship between temporal variables and the timing of suicide. Lester and Beck (1976) and Sparhawk (1987) found evidence that holiday to some extent have a postponing effect on suicide. For Christmas and Easter, a significant suppressing effect in suicide was found. Philips (1984) found that increase in adult suicides in the period after a holiday nearly counterbalanced the decrease in suicide before the holiday.

In trying to explain the overall temporal fluctuations in frequency of suicide, Gabennesch (1988) put forward a more comprehensive theory, the broken-promise effect, stating that springtime, weekends and holidays are usually effective positive events but at times, promise more than they can deliver. Both Gabennesch (1988) and Stack (1995) pointed out that the effect of such experiences of disappointment is consisted with Gabennesch theory of anomie. In general, there was evidence that fluctuation of suicide roughly shows the same pattern around major public holidays, namely, a decrease in suicide before and an increase after the holiday. It was also found that major holidays like Christmas and Easter showed the largest fluctuation in suicides, especially compared to the pattern of suicide around shorter or minor, holiday or holidays that are partially working days. This is exemplified by the following statement by Satin (1975): “The holiday season, then, is characterized by the arousal of dependency needs, by regression, by anxiety and depression associated with the fulfillment of interpersonal needs, by awareness of one’s mortality, and by the memory of past disappointments and losses. If all individuals have this gloomy view on their holiday people should expect a lot more suicide around major holidays than they actually occur”.

The psychosocial broken-promise effect (Gabennesch 1988), may contribute to a better understanding of temporal variations in suicidal behaviours, such as the spring peak, the post-weekend phenomenon, and especially the distribution of suicide around major public holidays. The theory holds that a suicidal individual may be influenced by approaching events like spring, weekends and holidays because they tend to promote
hope or expectations of the person feeling better than he or she does beforehand. The
forth-coming event is seen as synonymous with a new beginning in the sense that things
will get better than or thereafter. However, if individuals who for some reasons are
especially vulnerable and therefore at risk of suicide behaviour build up certain
expectations that are unrealistic and therefore cannot or will not be met, the resulting
frustration and disappointment may trigger suicidal reaction or even homicide as shown
by Stack (1995). Furthermore, this frustration and disappointment that can be felt in a
holiday period might get even worse because of the changes in the daily routine, such as
an increase in alcohol intake, change sleep rhythms, increase financial burden, or family
arguments and conflicts. The positive effect of holidays may become attenuated
throughout the holiday(s), or fade away completely and become a negative effect
instead.

The main objective of this study were to examine and analyze the pattern of
fluctuation of suicides around Christmas and other public holidays in delight of
Gabennesch’s theory of the broken-promise effect.

Method

The analysis is based on suicides in Akwa Ibom State (South-South Nigeria) as
registered by security agencies for a 15-year period 1990 – 2004 around major public
holidays and were based on the method described by Philips, (1984); Philips & Wills
(1987). A total of 1,211 suicides aged 25 years and above were recorded.

The daily number of suicides in the 15-year period was examined by multiple
linear regressions. As the number of suicides fluctuates around various periods and
days, binary variables were used for each of the holiday. The linear regression model
assumes an additive effect on all binary variables. The regression coefficients were
interpreted as the increase or decrease in the adjusted daily number of suicides. The
significance was interpreted as the probability of the regression coefficient being 0 (no
influence of the holiday on the number of suicides) the holidays were divided into two
groups.

(a) Holidays around Christmas and New Year
(b) Holidays around Easter

Results

As an introduction, a short description of holidays involved in the analysis is
given in table 1

Table 1: Description of Holidays Involved in the Analysis

<table>
<thead>
<tr>
<th>Holiday</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christmas Day</td>
<td>December 25</td>
</tr>
<tr>
<td>Boxing Day</td>
<td>December 26</td>
</tr>
<tr>
<td>New Years Day</td>
<td>January 1</td>
</tr>
</tbody>
</table>
Month of the Year and Day of Week

The fluctuations of suicides by month of the year and day of the week are shown in figures 1 and 2 respectively.

Figure 1: Fluctuation of Suicides by Month. Percentage Deviation from Mean

To adjust for the variation in length of months, the frequency of suicides per month was given as the differences in percentage between the actual and the expected number of suicides, assuming an equal number of suicides per day. In general, an increase in the frequency of suicides before and during the months of (March – May) and a decrease after then was observed. It was found that the average frequency of suicides varied by month (p < .001). Significantly, more suicides than expected were found on the first day of each month (p = .006).

In general, there was a decrease in the frequency of suicides before and during the weekend and an increase after the weekend (p < .001) when grouping the days of the week into three categories: Thursday to Saturday, and Monday to Wednesday. The differences between the actual and expected number of suicides (i.e., an equal number of suicides per day during the week) was significant (p < .001). There were significantly
fewer suicides during weekends (Saturday and Sunday, including public holidays) than on other days of the week (p < .001).

Figure 2: Fluctuation of Suicides by Weekday Percentage Deviation from Mean

Christmas and New Year

Figure 3: Fluctuation of Suicides Around Christmas and New Year. Percentage Deviation from Expected Number of Suicides Corrected for Weekday, Month and Year.

Figure 3 shows the fluctuation of suicides around Christmas and New Year. The number of suicides was corrected with regard to the month of the year and day of the
week. Significantly fewer suicides than expected were found on Christmas Eve (p = .01) especially among women, and significantly more suicides than expected were found in January (p < .006), especially among men. The cumulative effect was examined by aggregating the days around Christmas and New Year. Both the decrease in suicides on the days around Christmas and the increase in suicides after New Years day were significant (p .003 and p .001, respectively).

**Figure 4: Fluctuation of Suicides Around Easter. Percentage Deviation from Expected Number of Suicides Corrected for Weekday, Month Year.**

The fluctuation of suicides around Easter is shown in figure 4. The number of suicides was corrected with regard to the month of the year, the day of the week and the first day of the month. If the Easter period was interpreted as only on long holiday period, detailed information was lost, but when the Easter period was looked at as the three major days of Easter (Palm Sunday, Good Friday, Easter Sunday) a decrease before (or on) and an increase after each of these three days were found. When split into three separate periods, the definition of days, “before” and “after” becomes more operational (e.g. the Wednesday after Palm Sunday was defined as Wednesday before Good Friday). Significantly, fewer suicides than expected were found before Good Friday (p = .03) and on Easter Monday after Easter Sunday (p = .03). Significantly more suicides than expected were found on the Tuesday after Palm Sunday (p = .02) and on the Saturday after Good Friday (p = .03), especially among men. The cumulative effect was examined by aggregating the days around Easter. The decrease in suicides on both Easter days was significant (p = .04) as was the increase in suicides after Palm Sunday (p = .04)
Discussion

Regarding temporal fluctuations and seasonality, the results of this study confirm findings of several previous studies especially concerning the peaks in suicides in March to May. The results confirm the tendency to a decreasing frequency of suicide throughout the week with significantly fewer suicides on Saturdays and Sundays than on weekdays. Findings from Massing and Angermeier, (1985) & Atiatah, (2007) have shown that differences between the frequency of suicides during weekends and other workdays are becoming observable distinct. This may due to the trend of change in society. In general evidences of fluctuation in suicides roughly show the same pattern around all the major public holidays, namely a decrease in suicides before and an increase after the holiday. It was also found out that major holidays like Christmas and Easter showed the largest fluctuations in suicides.

Atiatah (2007), Barrachough & Shephard (1976) found some negative aspects of holidays as exemplified by Sattin (1975) statement, the holiday season, then, is characterized by the arousal of dependency needs, by regression, by anxiety and depression associated with the fulfillment of interpersonal needs, by awareness of ones mortality, and by the memory of past disappointment and losses. If all individuals have this gloomy view of their holidays, people should expect a lot more suicides around major holidays than it usually occurs. However, as already mentioned, some holidays holds sets of positive conditions that may modify negative ones.

The psychosocial broken-promise effect (Gabennesch, 1988) may contribute to a better understanding of temporal variations in suicidal behaviour, such as the spring peak, the post weekend phenomenon, and especially the distribution of suicides around major holidays. The theory holds that a suicidal individual may be influenced by approaching events like spring, weekends and holidays because they tend to promote hope or expectations of the person feeling better than he or she does beforehand. The forthcoming event is seen as synonymous with “a new beginning” in the sense that things will get better then and thereafter. However, if individuals who for some reasons are especially vulnerable and therefore at risk of suicidal behaviour build up certain expectations that are unrealistic and therefore cannot or will not be met, the resulting frustration and disappointment may trigger suicidal reactions as shown by Stack (1995).

Furthermore, the frustration and disappointment that can be felt in a holiday period might get even worse because of changes in the daily routine, such as increase in alcohol intake, changed sleep rhythm, increased financial burden or financial arguments and conflicts. The positive effects of holidays may become attenuated throughout the holiday (s) or fade away completely and become a negative effect instead. The role of holidays as a kind of “suicidal immune system” may then unfortunately break down at...
the end of or after the holiday. People’s integration into society and involvement in traditional ceremonies has undergone challenges in these decades. The meaning of religious ceremonies and particularly the importance of the religious content of holidays are more or less lost in modern postindustrial society, Jessen & Jensen, 1999). This study shows that the smaller number of suicides before a holiday was counterbalanced by a proportional larger amount of suicides after the holidays, so there is no reason to believe that this broken-promise effect provides either fewer or more suicides (Philips & Liu 1980).

**Conclusion**

Evidence was found to support the theory of the broken-promise effect for major public holidays in that a significant number of suicides appear to be carried out after a major holiday. This broken-promise effect is relevant to prevention, especially the availability and the accessibility of help at the end of or after major public holidays.

**References**


