

# The Interface



## The Christmas Effect on Psychopathology

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This ongoing column is dedicated to the challenging clinical interface between psychiatry and primary care—two fields that are inexorably linked.

### ABSTRACT

Urban legend suggests that psychopathology tends to increase around the holidays, including Christmas. To explore this issue, we undertook a literature search of the PsycINFO and PubMed databases for empirical studies relating to this phenomenon. According to our findings, the general mood of individuals may worsen and the number of alcohol-related fatalities may increase around the Christmas

holiday; however, overall utilization patterns by psychiatric patients in emergency rooms and in inpatient wards is lower as is the prevalence of self-harm behavior and suicide attempts/completions. Following the Christmas holiday, there appears to be a rebound phenomena with these latter behaviors—a concerning pattern that is relevant for both psychiatrists and primary care clinicians.

### KEY WORDS

Christmas, holiday, psychiatric disorders, psychopathology, self-harm, suicide

### INTRODUCTION

According to data from the United States Census Bureau, the most commonly reported religious identification in this country is a Christian affiliation.<sup>1</sup> As a predominantly Christian country, the two most significant religious holidays are Christmas and Easter. Given this backdrop, do religious holidays in the United States, such as Christmas, affect psychopathology? In this edition of “The Interface,” we discuss the existing empirical evidence regarding the effect of Christmas on psychopathology. In preparation for doing so, we carried out a literature search from 1980 to the present in both the PsycINFO and PubMed databases, using the search terms *Christmas, suicide, depression, psychiatric disorders, and self-harm behavior*. We included studies on Christmas phenomena from other countries as well as the United States to obtain a broad sense of this relationship, if any. In addition to *bona fide* studies, we came across several case reports but did not include these in an effort to avoid any bias in the reporting of data. In the aftermath of our data collection, we believe that we have captured the majority of empirical studies in this area for the described time period. We now describe relationships between various psychiatric phenomena and Christmas.

### THE UTILIZATION OF PSYCHIATRIC SERVICES

In presenting this general topic, we will first examine the utilization patterns of psychiatric services

during Christmas. In a 1981 study, Hilliard et al<sup>2</sup> examined the patient-use patterns of a psychiatric emergency service over a seven-year period.<sup>2</sup> They reported a decrease in the number of visits to the psychiatric emergency service during the days and weeks before Christmas, with a corresponding increase of roughly the same magnitude following Christmas.

In a 1994 study, Halpern et al<sup>3</sup> examined the patient-use patterns in a university-affiliated emergency room in North Carolina during a six-year period.<sup>3</sup> Like Hilliard et al, Halpern et al<sup>3</sup> found a general decrease in visits by psychiatric patients during the holiday, which was followed by an increase in patient volume afterward.

In a semi-global study of the potential effects of the new millennium, Sauer et al<sup>4</sup> examined patient utilization of psychiatric emergency services in a number of countries in the Northern and Southern hemispheres. Their findings indicated that there was not a millennium increase in service utilization until after Christmas.

In a Canadian study, Velamoor et al<sup>5</sup> examined psychiatric admissions from the emergency room for every month during a six-year period. In this study, the number of emergency-room patients admitted to psychiatric services did not vary significantly among the various months, including the Christmas month of December.

Finally, Ballard et al<sup>6</sup> examined the utilization patterns of an adult psychiatric inpatient service in the United Kingdom.<sup>6</sup> Like previous investigators,<sup>2-3</sup> Ballard et al<sup>6</sup> noted that there were fewer admissions and higher bed vacancy during the week before Christmas. Among those patients who were hospitalized during the holiday, investigators

reported a relatively severe degree of overall psychiatric illness characterized by alcohol abuse, aggression, and/or self-harming behavior.

### DEPRESSION

Despite the high prevalence of depression in the community, few studies have actually examined relationships between various depressive disorders and effects on symptoms during the Christmas holiday. In a 1980 study of Chicago-area college students, Peretti<sup>7</sup> investigated 420 participants with regard to their feelings about the Christmas holiday. The three most endorsed study themes were loneliness, anxiety, and helplessness. Peretti concluded that one of the most relevant factors in Christmas depressions is the individual's belief in the myth that everyone else is having a good time and engaged in loving family relationships—clearly a wish, but not necessarily a fact.

In a Canadian study from 1999, Velamoor et al<sup>8</sup> examined 55 patients who were being evaluated in a psychiatric emergency service during the Christmas season. The most common stressors reported by this cohort were loneliness (40%) and being without a family (38%). In describing their feelings about the holiday, most participants used the phrase, “depressed.”

### SUBSTANCE USAGE

Like other data in this area, there are few studies on the relationships between substance use/misuse and the Christmas holiday. In a 2007 Spanish study by Vidal-Infer et al<sup>9</sup> of 444 participants attending holiday parties in 13 restaurants in Valencia and Alicante, the authors reported the marked use of alcohol and other substances during Christmas. Interestingly, as opposed to alcohol

misuse, investigators found that cocaine was the illicit substance most widely used at such events.

In addition to misuse patterns, two studies have examined fatal alcohol poisonings during the Christmas holiday. In a 2002 study from Finland, Poikolainen et al<sup>10</sup> examined all deaths due to alcohol poisoning between the years 1983 and 1999. Among the 6,000-plus deaths, a peak death rate was observed during the Christmas celebration.

In a 2005 study from Denmark, Makela et al<sup>11</sup> examined all cause-of-death designations between the years 1987 and 2001 using a population registry. Among other holidays, Christmas was described as having a higher rate of observed deaths due to alcohol poisoning compared with the expected death rate.

### SELF-HARM BEHAVIOR

Three studies have examined relationships between self-harm behavior and the Christmas holiday. In the first, Masterton<sup>12</sup> examined a sample of over 22,000 women in the United Kingdom who were admitted to a psychiatric facility for self-harm behavior. He noted a decrease in such behavior during the eight weeks around the Christmas holiday.

In a second study, Cullum et al<sup>13</sup> examined self-harm behavior among a United Kingdom patient sample who presented to three London-area hospitals between 1983 and 1989. Investigators reported that significantly fewer cases presented on Christmas day compared to control days.

In a third study from the United Kingdom, Bergen and Hawton<sup>14</sup> examined a sample of nearly 20,000 individuals from 1976 to 2003 who presented with self-harm behavior to the emergency room of a general

hospital in Oxford. They reported significant reductions in self-harm behavior (i.e., 30–40%) between December 19 and 26, with younger patients reporting even greater decreases in such behavior (i.e., 60%).

## SUICIDE ATTEMPTS AND COMPLETIONS

We located two studies exploring relationships between suicide attempts and the Christmas holiday. In the first, Nakamura et al<sup>15</sup> examined the medical records of 269 Hawaiian adolescents in two hospitals. Findings indicated that there was a decrease in suicide attempts during the Christmas holiday, with a rebound increase during the New Year holiday.

In a Danish study, Jessen et al<sup>16</sup> examined over 24,000 suicide attempts by patients from 11 countries whose facilities were participating in the World Health Organization/Europe (WHO/EURO) Multicentre Study on Parasuicide. In this study, there were fewer suicide attempts than projected before the Christmas holiday and approximately 40 percent more attempts afterwards.

In addition to studies of suicide attempts, several studies have examined completed suicides in relationship to Christmas. In a 1987 study of over 188,000 suicides in the United States from 1973 to 1979, Phillips and Wills<sup>17</sup> reported that suicide rates decreased before, during, and after the Christmas holiday. In a 1987 study, Sparhawk<sup>18</sup> examined relationships between traditional holidays and suicide completions among over 13,000 cases between 1975 and 1984. Like many other investigators, Sparhawk also reported a significant reduction in the prevalence of completed suicide during the Christmas holiday.

In a Danish study from 1999, Jessen and Jensen<sup>19</sup> examined suicide patterns between 1970 and 1994. They also reported a decrease in completed suicides before the Christmas holiday. In a Swiss study from 2003, Ajdacic-Gross et al<sup>20</sup> examined the timing of over 35,000 suicides between 1969 and 1994. During the month of December, prevalence rates fell by 10 percent compared with the remaining months of the year. In a Hungarian study from 2005, Karoly et al<sup>21</sup> examined 140,000 suicides between 1970 and 2002.<sup>21</sup> In this sample, they found a decrease in suicides during the Christmas holiday, but only among men. Like other investigators, they also reported a large increase in suicide rates during the first day of the new year.

Note that these previous studies of completed suicide have consisted of samples from general populations, typically through the use of large registries. In a final study, Greiner and Pokorny<sup>22</sup> examined associations between the Christmas holiday and completed suicide among a cohort of 4,800 psychiatric patients. Their findings also indicated a decrease in death by suicide in the days before the Christmas holiday.

## CONCLUSIONS

According to the overall trends indicated by these studies, the Christmas holiday appears to result in two broad patterns. Indeed, there appears to be an increase in certain types of psychopathology during the holiday, such as worsening of mood and alcohol-related fatalities. In contrast, however, there appears to be a decrease during the holiday in the overall utilization of psychiatric emergency services and admissions, self-harm behavior, and suicide attempts/completions. The preceding decreases appear to

exhibit a rebound phenomena following the Christmas holiday. These findings are in line with a review by Friedberg,<sup>23</sup> who reported that there is no increase in general psychopathology during the Christmas holiday, but rather an increase in dysphoric moods.

These overall findings suggest that clinicians, in both psychiatry and primary care settings, might anticipate an overall decrease in psychopathology-related phenomena immediately before the Christmas holiday. However, there is likely to be a corresponding increase in psychopathology immediately following the Christmas holiday. Thus, it appears that Christmas exhibits a generally protective effect with regard to many forms of psychopathology, with the exceptions being mood disorders and alcohol-related poisonings.

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