A 'beautiful death': Mortality, death, and holidays in a Mexican municipality

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ABSTRACT

Several studies have reported increased mortality during holidays. Using a cultural epidemiological, sequential mixed-methods approach, this study explored holiday-related trends using mortality data from Yautepec (Morelos, Mexico) collected between 1986 and 2008 ($N = 5027$ deaths). This analysis found that mortality increased on Christmas Day and All Saints' Day. Mortality increased on Candlemas Day among women, and increased on New Year's Day among men. More deaths caused by cardio-vascular disease among women and traumatic injuries among men occurred during holidays than in non-holiday periods. To ascertain the elements comprising the health/illness/death process in the context of a holiday in this municipality, we conducted semi-structured interviews in March and April 2009 with relatives of seven individuals who had died during holidays in the previous 4 years ($N = 11$); data from these interviews were analyzed from a grounded theory perspective to ascertain common conceptual themes. The "beautiful death" emerged as the main concept in the interpretation of death; this concept was related to the expectation of a good death and the particularly special nature of death during a holiday because of the involvement of religious entities, such as God, the Virgin Mary, and/or a saint, at the moment of death. Quantitative and qualitative results provided information about the important effects of holidays, culture, and religious belief on mortality patterns within a Mexican context, and contributed to a better understanding of the relationships among mortality, the nature of death, and holidays. Our results suggest that, in the studied region, death can be interpreted as a "beautiful process". More research is needed to explore this process in other similar contexts and to address topics related to the care and attention given the dying person and the expectation of a good death.

Introduction

Mexican culture has a particular fascination with the subject of death. This relationship hasn't only generated a series of meanings, attitudes, and practices about death throughout history, but has also played a role in the construction of the Mexican state and of popular Mexican culture and has been constituted as a national symbol (Lomnitz, 2005). The diverse expressions of Mexican holidays are reflected in the annual religious, civic, and historical calendars. The Day of the Dead (November 2) is the main manifestation of the links between the culture of death, holidays, and Mexican identity (Lomnitz, 2005). The calendar includes religious, civic, and historical holidays that are essential manifestations of

local, regional, and national culture. In this context, popular religiosity plays a fundamental role in cultural expression.

Although the majority of the population considers itself to be Catholic, religious syncretism dating to the Spanish conquest and colonisation is reflected in holidays. This syncretism was characterised by the adaptation of Christian expressions imposed by the Europeans and the integration of these expressions with pre-hispanic rituals and religious manifestations (Parker, 1993). Popular religiosity has been given meaning through annual celebrations such as Carnival, Easter, the day of the Virgin of Guadalupe, Christmas, Epiphany or Kings' Day, Candlemas Day, and days dedicated to different saints and the local patron saint.

Diverse studies have found relationships between mortality rates and holidays. Mortality has been found to increase or decrease on a daily or weekly basis when social events are celebrated (Eliason & Ohlson, 2008; Shimizu & Pelham, 2008; Yang, Huang, Janes, Lin, & Lu, 2008). Four mechanisms have been

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proposed to explain these associations: 1) different conditions during holidays impact the seeking of, access to, and delivery of health services, resulting in delays in medical care and higher mortality (Phillips & King, 1988); 2) holidays include trigger factors for cardiovascular events associated with emotional stress (Kirkup & Merrick, 2003; Kloner, 2004), excessive intake of food and alcoholic beverages, increased consumption of tobacco, and strenuous physical activity (Kloner, 2004); 3) holidays induce greater precaution against risky behaviours due to strong cultural beliefs (Yang et al., 2008); and 4) a psychosomatic mechanism is associated with the willingness to die during or after a holiday celebration (Phillips & King, 1988; Shimizu & Pelham, 2008) and/ or with the economic incentives provided by certain dates (Eliason & Ohlson, 2008).

The results of these studies don't provide sufficient evidence to support the premise that one factor can determine the time of death (Skala & Freedland, 2004). Further, experts have pointed out methodological flaws in these studies, such as inadequate sample sizes, inappropriate analytical periods, and selectivity regarding the definition of populations and the use of death record information (Young & Hade, 2004). Thus, little is known about the health/ illness/death process during holidays. Creative approaches are required to understand the underlying reasons for these changes in mortality rates. Our research was based on cultural epidemiology, which is defined as collaboration between medical anthropology and epidemiology (Trostle & Sommerfeld, 1996) in the examination of the ways in which cultural attitudes and beliefs impact health and patterns of disease and death (Trostle, 2005). Interdisciplinary dialogue between anthropological and epidemiological approaches can generate not only methodological exchange, but also conceptual and theoretical explanations of a health event (Béhague, Gonçalves, & Victora, 2008).

Today, the Day of the Dead is celebrated in two ways (Garciagodoy, 1998). Rural and indigenous celebrations have a religious focus. These celebrations take place in a domestic context; represent the encounter and dialogue between the living and the dead through offerings, and frame a space of social relations within the community. The importance of these celebrations is reflected in the 2003 UNESCO proclamation that the Indigenous Festivity dedicated to the Dead was part of the intangible heritage of humanity. In urban Mexico, Day of the Dead celebration is less religious and more festive, primarily expressing the artistic character of the holiday and its importance as a symbol of national identity (Lomnitz, 2005). Holidays, whether historical or secular, correspond to social events that distinguish festive time from daily life and are expressed through socially established transfiguration and transgression, which create a distinctive symbolic system (Sevilla & Portal, 2005). Because most studies of the relationship between holidays and mortality rates have been conducted in developed countries, their findings cannot be extrapolated readily to populations with different cultural characteristics.

Previous studies have focused on the analysis of mortality by natural causes, which corresponds to national epidemiological profiles, rather than on mortality by other causes, such as accidents or violence. No study to date has examined the relationship between mortality and holidays in a Latin American country. It thus is necessary to confirm the existence of this phenomenon and to investigate the process by which individuals, families, and societies interpret and live the experience of death and holidays. Cultural epidemiology was used in this study for two purposes: 1) to identify the statistical relationship between annual holidays and mortality; and 2) to ascertain the elements that make up the health/illness/death process in the context of a holiday.

Materials and methods

This study was conducted in Yautepec (Morelos, Mexico), which is located about 100 km south of Mexico City. With approximately 85,000 inhabitants, Yautepec is a centre of economic growth and has a low degree of marginalisation. The main sources of employment are the service and agriculture sectors, and the municipality exhibits both urban and rural characteristics. Yautepec has an epidemiological profile similar to that in the rest of Mexico; there has been a reduction in overall mortality and an increase in non-communicable diseases, unhealthy lifestyles, and injuries and accidents caused by violence. The study was carried out in two phases: an ecological quantitative analysis and a qualitative phase that involved semi-structured interviews. Using this sequential mixed-method approach, we identified days with significant increases in mortality, then identified recently deceased individuals and contacted their family members to request interviews. In this way, we optimised the qualitative sampling (Teddlie & Yu, 2007), as described below.

Ethical aspects

The goal and methodology of the study, confidentiality measures, and potential means of diffusion were explained in detail to each interviewee. The interviewees were told that they could refuse to answer some questions and that they would be free to interrupt or even terminate the interview at any time. This study was approved and supervised by the faculty of the National Institute of Public Health, following the Mexican legislation pertaining to research with humans (Regulation of the General Law of Health in Research for Health, 1986).

Quantitative phase

Information was collected on deaths in Yautepec between 1 January 1986 and 31 December 2008 by reviewing all available civil records of registered death certificates held by the municipal government offices. A database was developed using the certificates, which included socio-demographic information about the deceased and information about the death. Data on causes of death were found in the form of textual medical diagnoses, and were coded following the International Classification of Diseases (ICD-10). Because there were multiple causes of death in some cases, the main cause of death was identified using ICD-10 guidelines and coding rules for mortality classification.

The dates selected for the analysis correspond to the following religious holidays: Epiphany or Kings' Day (January 6), Candlemas Day (February 2), Yautepec Carnival (Friday–Sunday of Carnival according to the religious calendar), the days of Holy Week, the Feast of the Assumption of the Virgin Mary (August 15), All Saints' Day (November 1), Day of the Dead (November 2), the Day of the Virgin of Guadalupe (December 12), Christmas Eve (December 24), and Christmas Day (December 25). The following civic holidays were also analysed: New Year's Eve (December 31) and New Year's Day (January 1), Mother's Day (May 10), Benito Juarez Day (March 21; birth of one of the most important Mexican presidents), Independence Day (September 15), and Mexican Revolution Day (November 20).

First, we explored the annual distribution of deaths and analysed the data using descriptive statistics. The exact binomial test was used to compare the likelihood for each holiday with the daily average of deaths for the 5 days preceding and 5 days following the holiday, similar to the methodology used in a previous study (Young & Hade, 2004). In this way, we reduced heterogeneity between days related to cyclical variations. Because we performed

numerous comparisons, spurious differences may have appeared (Sterne & Davey Smith, 2001). Unfortunately, no standard technique is available to explore this possibility; thus, we constructed a scatter plot depicting the ratios between proportions of deaths (before and after a holiday) to identify holidays associated with larger differences in mortality occurrence. A peak in mortality occurrence was defined when both ratios were >1, and mortality rates were estimated for these days. These findings were used to guide the qualitative phase of the study. Additionally, Fisher's exact or chi-square tests were used to compare sex ratios for the major causes of death during holiday and non-holiday periods.

Qualitative phase

We next used death certificates to identify individuals who had died in the last 4 years (January 2005–February 2009) during holidays with high mortality rates, as determined by the quantitative analyses. The inclusion criterion was the ability to contact local relatives who hadn't changed the region of their residential location or emigrated. Information about the relatives of 11 deceased people was gathered from the records. Researchers visited the residences of these relatives in March and April 2009 to identify the people listed on the death certificate and/or relatives who had lived with the deceased person. In some cases, it was necessary to confirm the location of the residence by speaking with neighbours because the registered address did not correspond to the actual place of residence or the person no longer lived there. The purpose of the visits was to explain to the relatives how the information about the residence was obtained and to request an interview. This identification process included the advantages of census-data and purposive sampling (Teddlie & Yu, 2007).

Through this process, seven interviews (~1 h each) were conducted by two researchers (JLW, LAM) in which ten informants participated. Because the interviews were carried out in family residences, other members who were present also participated because they were interested in talking about the deceased; in all cases, they confirmed the information reported by the primary interviewee. The primary informants ranged in age from 37 to 75 years. All participants identified themselves as Catholic and had a close kinship with the deceased. Six of the participants lived with the deceased at the time of death and five performed long-term care-giving tasks. All informants provided verbal consent before starting the interview.

The seven semi-structured interviews provided theoretical saturation regarding issues of interest and an initial understanding of the phenomenon (see discussion section for details). The interview guide had the following thematic areas: 1) a general profile of the deceased, 2) previous health conditions of the deceased, 3) general aspects of Yautepec holidays, 4) previous experiences of the deceased during holidays, and 5) the main event of death. A Yautepec resident whose relative had died 8 years previously on the Feast of the Assumption of the Virgin Mary participated in a preliminary interview to test the guide. The interviews were audio-recorded and transcribed. ATLAS.ti v4.2 was used to organise and analyse qualitative data. Given the lack of knowledge about the research topic in the Mexican context, the analysis was based on grounded theory (Glaser & Strauss, 1967).

After an initial review of the interviews, major themes were identified and codes were created. In the second review, the codes were grouped to form categories. Using consensus and triangulation of the researchers' interpretations, the generated codes and categories were discussed and analysed. This process provided new interpretations of the information that led to redefinition of the categories. The main emergent category was defined and categorised, and then relationships with other categories were

analysed. This inductive development of concepts allowed the researchers to formulate theory-based propositions (Strauss & Corbin, 1999).

Results

Quantitative phase

We reviewed 5027 death certificates (approximately 218.3 per year). The average age at the time of death was 58.1 years [standard deviation (SD): 27.6 years]; 60.7% of the deceased were male, 8.64% were minors (<15 years old), and 87% resided in Yautepec [other sites of domicile were other municipalities in the state of Morelos (7.2%), other Mexican states (5.1%), and other countries (0.6%)]. Among a total of 10,916 primary or secondary causes of death listed on the death certificates 32.7% were cardiovascular disease, 14.8% accident or intentional injury, 7.3% malignant neoplasm, 7.1% nutritional deficiency, 6% respiratory disease, 4.6% diabetes, 4.5% hypertension, 3.1% liver disease, and 0.9% diagnoses related to alcohol consumption. The main causes of death were cardiovascular disease (27.1%), accident or intentional injury (23.8%), malignant neoplasm (12.85%), respiratory infection (6.2%), and gastrointestinal disease (6%).

An average of 0.6 deaths per day occurred during the study period. The average number of deaths was 0.64 during holidays and 0.59 during non-holiday days. Fig. 1 shows mortality according to sex during holidays compared with that during the 5 days before and 5 days after each holiday. Increased numbers of deaths were observed on Christmas, New Year's Day, and All Saints' Day. Moreover, an increased number of female deaths on Candlemas Day and male deaths on New Year's Day was observed, in comparison with the 5 days before and after these holidays (Table 1).

Table 2 shows mortality according to sex and cause of death during holidays and normal days. The following significant differences were observed: 1) among women, a higher number of deaths caused by cardiovascular disease occurred during holidays than on normal days; 2) among men, a higher number of deaths caused by accidents and intentional injuries occurred during holidays than on normal days. Using these findings, we identified 11 individuals who
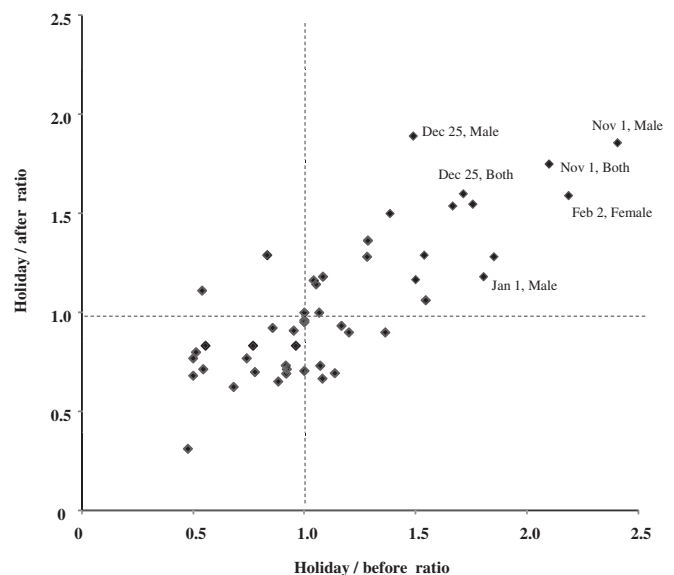

Fig. 1. Mortality changes in Yautepec, Morelos, Mexico, during selected holidays, according to sex.

Table 1
Deaths in Yautepec, Morelos, Mexico (1986–2008) during holidays with higher mortality, and during the 5 days preceding and 5 days after the holiday.

Celebration	Sex	Holiday	5 Days before	p	5 days after	p
New Year's Day (January 1)						
	Women	8	8	0.85	7	0.70
	Men	13	7	0.04	11	0.54
	Both sexes	21	15	0.11	18	0.48
	Percentage	0.40	0.29		0.36	
	95% CI	0.24–0.61	0.17–0.49		0.21–0.57	
Candlemas Day (February 2)						
	Women	7	3	0.04	4	0.22
	Men	7	9	0.61	11	0.36
	Both sexes	14	12	0.56	15	0.90
	Percentage	0.28	0.24		0.29	
	95% CI	0.15–0.47	0.12–0.42		0.17–0.49	
All Saints' Day (November 1)						
	Women	8	5	0.16	5	0.19
	Men	13	5	0.01	7	0.03
	Both sexes	21	10	<0.01	12	0.02
	Percentage	0.40	0.20		0.24	
	95% CI	0.24–0.61	0.10–0.37		0.12–0.42	
Christmas Day (December 25)						
	Women	10	5	0.07	8	0.37
	Men	14	9	0.13	7	0.02
	Both sexes	24	14	0.02	15	0.04
	Percentage	0.48	0.28		0.29	
	95% CI	0.31–0.71	0.15–0.47		0.17–0.49	

CI, confidence interval.

had died during holiday days between 2005 and 2009. Their characteristics and some attributes of their relatives are listed in Table 3. Note that data for one or more individuals per holiday were collected during the interviews.

Qualitative phase

Through semi-structured interviews, we gathered information about seven deceased individuals. Six of the individuals were over 65 years old at the time of death and one was less than 30 years of age. Five of the individuals were Catholic, one was Pentecostal, and one had no religious affiliation. Two of the individuals were illiterate, three had not completed primary education, and one had finished primary school. Three of the deceased were agricultural workers. Six of the seven deaths occurred during religious holidays (Candlemas Day, All Saints' Day, and Christmas Day) and one (the

man less than 30 years of age) occurred during a civic holiday (New Year's Day).

The analysis identified the main category of 'beautiful death', which was linked to the following subcategories: (1) being sick, dying, celebrating; (2) the imminence of death; (3) death as rest, travel, the will of God, ritual; and (4) 'to die without anyone seeing you die.' Theoretical saturation was reached regarding the concept of the aesthetics of death, because all the informants said the same adjective (beautiful or pretty) to describe the experience of death.

Being sick, dying, celebrating

The interviewees' experience of others illness and death. Four of the deceased individuals had a chronic illness. Three individuals died after a long-term illness (liver disease, musculoskeletal disorders and disabilities, respiratory disease, and neurodegenerative disorders); one of these individuals was in a terminal disease stage. One person died due to an acute respiratory disease and another by a sudden cardiac event. Another person had suffered from alcoholism for several months, then drank heavily on New Year's Eve and died the next day.

The interviewees reported that the individuals who had chronic illnesses had repeatedly mentioned their decision not to seek institutionalised medical care. In some cases, the use of social-security care was described as 'martyrdom', an expression commonly used in Latin American countries to refer to suffering or torment caused by a particular situation. Instead, these individuals decided to experience the dying process at home, which became the space of illness, healing, and death. In these cases, the family was the main provider of medical care. The community also participated in the provision of care on several occasions.

During the illness process, the holiday didn't necessarily change the routine of providing care for the sick individual. In cases in which the health condition was described as worsening in the days prior to death, the interviewees commented that they didn't prepare for the holiday as usual. The festivities were considered secondary or were cancelled in order to continue caring for the sick person:

> '[…] I said to my husband, listen, I see that my mom is doing badly […] As it was the second [of February], we were going to have a meal. And I had bought everything, and I said to my daughter, listen Daughter, I don't want to have the meal […] it is that I see that your grandma is doing badly, I feel that she isn't going to last much longer.' Interview 5. Woman − granddaughter of woman who died on Candlemas Day (178:185).

The holidays didn't take place because caring for the sick person was considered more important. Only in the case of the young man

Table 2
Major causes of death by sex (percentages and 95% confidence intervals) in Yautepec, Morelos, Mexico (1986–2008) during holidays and non-holiday days.

Disease group	Women			Men		
	Holiday	Non-holiday	p	Holiday	Non-holiday	p
	(n = 130)	(n = 1843)		(n = 207)	(n = 2847)	
Infectious and parasitic diseases	3.08 (0.84–7.69)	6.56 (5.47–7.79)	0.136	5.80 (3.03–9.91)	4.37 (3.64–5.18)	0.299
Diseases of respiratory system, middle ear, and mastoid	6.15 (2.69–11.77)	11.66 (10.23–13.21)	0.071	10.14 (6.39–15.09)	10.28 (9.19–11.46)	1
Conditions originating in the perinatal period	2.31 (0.48–6.60)	0.65 (0.34–1.13)	0.071	0.48 (0.01–2.66)	0.85 (0.54–1.25)	1
Nutritional deficiencies	0.77 (0.02–4.21)	0.81 (0.46–1.34)	1	0 (0.00–0.01)	0.56 (0.32–0.91)	0.621
Malignant neoplasms	14.62 (9.03–21.88)	18.93 (17.16–20.79)	0.245	8.70 (5.24–13.39)	9.12 (8.09–10.24)	1
Diabetes mellitus	6.92 (3.21–12.74)	3.90 (3.07–4.89)	0.105	0.97 (0.12–3.47)	2.54 (1.99–3.18)	0.237
Mental disorders and diseases of the nervous system	1.54 (0.19–5.45)	2.11 (1.51–2.88)	1	0.48 (0.01−2.66)	1.73 (1.28–2.27)	0.256
Diseases of the circulatory system	41.54 (32.97–50.51)	32.70 (30.56–34.90)	0.043	18.36 (13.33–24.31)	23.49 (21.94–25.09)	0.104
Diseases of the digestive system	3.08 (0.84–7.69)	4.34 (3.45–5.37)	0.654	8.21 (4.86–12.82)	7.04 (6.13–8.05)	0.486
Diseases of the genitourinary system	6.15 (2.69–11.77)	5.97 (4.93–7.15)	0.849	4.35 (2.01–8.09)	4.82 (4.07–5.68)	0.867
Diseases of the musculoskeletal system	0.77 (0.02–4.21)	0.11 (0.01–0.39)	0.185	0 (0.00–0.01)	0.11 (0.02–0.31)	1
Congenital abnormalities	2.31 (0.48–6.60)	1.19 (0.75–1.80)	0.225	0.97 (0.12–3.47)	0.88 (0.57–1.30)	0.705
Accidents or intentional injuries	8.46 (4.30–14.64)	8.95 (7.68–10.34)	1	40.58 (33.83–47.61)	32.92 (31.19–34.69)	0.027
Other signs and symptoms	2.31 (0.48–6.60)	1.19 (0.75–1.80)	0.225	0.48 (0.01–2.66)	0.53 (0.30–0.87)	1

Table 3
Characteristics of individuals deceased during holidays (2005–2009) with occurrence peaks, and of their relatives in Yautepec, Morelos, Mexico.

Individuals deceased						Relatives[a]	
Holiday	Age	Sex	Year of death	Main cause	Religion	Kinship	Religion
New Year's Day (January 1)	81	Male	2005	Respiratory failure	No interview		
	27	Male	2006	Alcohol toxicity	No data	Uncle and uncle's wife	Catholic
Candlemas Day (February 2)	43	Female	2008	Heart failure	No interview		
	104	Female[b]	2009	Pneumonia	Catholic	Granddaughter	Catholic
	68	Female	2009	Acute myocardial infarction	Pentecostal	Son and daughter-in-law	Catholic
All Saints' Day (November 1)	75	Female	2005	Cardiac arrest	Catholic	Niece	Catholic
	84	Male	2006	Cardiac arrest	No interview		
	58	Male	2006	Haemorrhage	No interview		
	80	Male	2007	Cardiac arrest	Catholic	Wife	Catholic
Christmas Day (December 25)	82	Male[b]	2006	Acute myocardial infarction	Catholic	Wife and daughter	Catholic
	81	Female	2008	Acute myocardial infarction	Catholic	Granddaughter	"Atheist"

[a] Relatives of deceased individuals included in the qualitative phase of the study.
[b] Born in a Mexican state other than Morelos.

who died on New Year's Day was it mentioned that the deceased had participated in the celebration and consumed alcohol before dying. The man had no previous illness, but had suffered from alcoholism during the last year of his life. In this case, the holidays took place and were part of the process directly related to the death.

The imminence of death

In four of the interviews, all of which mentioned previous interviewees' experiences of an illness processes, the individual was reported to have an attitude of resignation and preparation for death. According to the interviewees, the deceased person referred to death as an imminent event:

'[…] *this was his dream, to return to his land to see, well, more than anything, and they took him and thank God for giving him another year, and at the end of that year he died* […]' Interview 4. Woman − wife of man who died on Christmas Day (99:103).
'[…] *she told us before that we would keep on doing the same, that we would make her offerings, that we would adorn the virgin on the twelfth day* [of December]; *she said, adorn the virgin for me* […]' Interview 3. Woman − niece of woman who died on All Saints' Day (315:324).
'He said, *Daughter, I am not going to last much longer, I need you to take care of your mama, your siblings* […] *I am not going to last much longer, but the day that they bury me I want my grave to be pretty.*' Interview 6. Woman − wife of man who died on All Saints' Day (276:289; 487:506).

The sick person and the family expressed awareness of the proximity of death in various ways. For example, the family members performed certain activities prior to death and tasks and responsibilities were delegated to allow the family to say goodbye and to recall special memories after the death.

Death as rest, travel, the will of God, ritual

This category includes views about death as a socio-cultural process. In various interviews, death was described as rest, as being happy after living without joy, and as not feeling pain. Death was considered to be the midpoint between suffering and rest:

'[…] *That she has at least her rest, that she will be well, that she will not suffer, this is what I ask God for.* […], *since they didn't have the luck to be happy here, maybe in the afterworld they will be happy.*' Interview 3. Woman − niece of woman who died on All Saints' Day (397:422).

Death was also described as travel:

'*My husband asked her* [the person that died later], *what are you doing?* […and she responded,] *I walk gathering my steps because I am going to go, I am going to walk. My husband said, what do you mean you are going to go, where are you going to go?* [and she responded] *well, I am going to go away from here, I am going to travel far. I said to my daughter, I think my mama sensed that she was just about to go.*' Interview 5. Woman − granddaughter of woman who died on Candlemas Day (198:208).

In one of the interviews, death took on a feminine form:

'[The final month] *the only thing he told us … look at this woman, she is calling me, she is there, I don't know why she wants me… look at her, come and look, look at her, she is there, she is calling me so that I will go with her …*' Interview 4. Woman − wife of man who died on Christmas Day (125:148).

Various elements referred to in the interviews were related to religiosity and gave meaning to death through the conceptualisation and performance of ritual activities. First, in general, death wasn't conceptualised as dependent on human will, but rather on the will of God:

'[…] *and so we told her, well, it is when God wants, not when you want, Aunt, when God calls you, then it doesn't matter, but it isn't when a person wants, Aunt, God comes for us and that is it.*' Interview 3. Woman − niece of woman who died on All Saints' Day (232:232).

Second, deceased's activities such as prayers or the *Novenario* (9 days of mourning), were expressions of the religious significance surrounding the death. The role of religiosity was also expressed in terms of the tension between Catholicism and other religious affiliations. In two interviews, the informants expressed that this tension generated changes in customs related to the holiday and to death:

'*I am going to be frank, look, your son* [of the deceased person] *is an evangelist, but he said to the sister, look sister if you want to do the 9 days for my dad go ahead, I'm not going to oppose, I for one will not* […] *because when we were in a house that was not ours* […] *we did not do the 9 days.*'Interview 6. Woman − wife of man who died on All Saints' Day (327:331; 384:386).

'They die and nobody even watches them die.'

In interviews about individuals who had severe, chronic illnesses, interviewees described how the family members became their caretakers. Family members who provided care developed intimate relationships with the individual, and such care was considered to be a responsibility and moral duty:

'*She was arthritic but my son took care of her* [his aunt] *for 20 years, he was with her day and night. He never went to other*

places because he was always there for her. He took care of her and fed her and we bathed her and we all understood her […] *and I never told her I didn't have time, I stopped what I was doing so that I could do things for her. In that regard we are calm, because we don't have anything on our consciences, because what she wanted was done for her* […] *he* [my son] *says to me, Mom, ask God to make sure that I am alive when you need me.'* Interview 3. Woman – niece of woman who died on All Saints' Day (85:91; 278:280).

For the interviewees, the meaning of caretaking extended beyond the management of an illness. Accompanying the sick person, rather than merely providing care, took on a transcendental value and became part of the expectation of death:

'[…] *then my daughter said to me, oh Mama, if you would not have been with my grandparents, what would have happened to them? I said, Daughter, there are people who die and nobody even watches them die.'* Interview 5. Woman – granddaughter of a woman who died on Candlemas Day (267:269).

'The beautiful death'

The interpretation of 'beautiful death' corresponded with certain expectations reported by the interviewees, such as a quick but not sudden death, death without pain, and being surrounded by family and loved ones at the time of death. A special value was accorded to a death that occurred during a holiday, because a religious entity was considered to have been present at the time of death. A direct connection with such an entity was created for deaths that occurred during celebrations centred on a religious representation of God, the Virgin Mary, or a saint, because these entities were believed to have been involved in the process of death as companions on the deceased's journey:

'[…] *for me, it was a beautiful way to die because she didn't suffer … she didn't suffer very long, she was not hospitalised, she wasn't in bed for very long. So, for me it was beautiful, because we didn't suffer and neither did she, it was a spiritual passing for her and peaceful, because I tell you that she didn't complain or anything… my brother, he says that when God calls him he wants to die like my mother, one doesn't know how they are going to go* […] *my thought is this, that she went and was accompanied by the virgin, no? That that day the virgin arrived when she died, because to me, in my thoughts, it is always on my mind, her ending was beautiful, because she chose these dates to go with her, so she didn't go alone, and I don't know if that is why I feel peaceful.'* Interview 5. Woman – granddaughter of woman who died on Candlemas Day (212:216).

Four interviewees described the death of their relative as 'beautiful'. Thus, the way in which the person died was more important than death itself. Dying during a festivity turned an inevitable death into a special event:

'[…] *there was a friend also, my neighbour back here* […] *he also threw his bottles* [he drank alcohol] *in his free time* […] *and one time he told me: look, I know that I am going to die, and I accept it, after death you don't feel anything, but I would like to die on Candlemas Day, a festivity here in the neighbourhood* […] *and these words grabbed me, the day that I die, Candlemas Day, and that day was approaching, and he went, he went on February 1, on the eve. On February 2 they buried him.'* Interview 2. Man – uncle of man who died on New Year's Day (277:278).

Also, as this interview demonstrates, interpretations of 'beautiful death' highlighted cultural identity and values and made death seem proper.

However, death during a festivity doesn't ensure that it is a beautiful death. One interviewee stated that dying suddenly during a holiday was not necessarily desirable, because it was a sad and unexpected event that contrasted with the festive atmosphere:

'[…] *hopefully God will take my life after the festivity. Before the festivities nobody really does anything, like what happened with my mama, the day that we were going to have the party of the second* [of February] *she died and then nothing* […]' Interview 1. Man – son of woman who died on Candlemas Day (277:283).

Discussion

This study provides an explanation of the experience and interpretation of death in relation to holidays in a Mexican context. Several factors determine the health/illness/death process in Yautepec, such as the severity and progression of the disease; forms of caretaking; awareness, resignation, and preparation for death; and the role of family and religiosity. The holiday wasn't perceived as more important than the process of dying. Rather, the provision of caretaking and support to the sick person took priority over the celebration of a holiday.

We observed mortality in increments of 5 days, which is similar to the design of other studies (Shimizu & Pelham, 2008). All of these holidays were religious: All Saints' Day, Christmas, Epiphany or King's Day, and Candlemas Day. The differences in the causes of death by sex suggest that cultural practices and gender-specific aspects of participation in holidays may impact health and the death process. In men, accidents and violence were the main causes of death during the study period, and mortality increased during holidays. This finding is related to the increased incidence of death among men on New Year's Day in comparison with the days preceding the holiday. In Mexico, alcoholism, which typically impacts men, may significantly influence the death process. It is related to the construction of male identity, which is characterised by a lack of self-care and the notion of the body as an instrument that can be taken to the extreme (de Keijzer, 2003).

Alcoholic behaviour in Mexico not only involves risk, but is also constructed as a way of life based on membership in a particular social group (Menéndez, 1998); thus, alcoholism must be understood not merely as an individual behaviour, but rather as a socio-cultural phenomenon. Celebration during holidays is part of the process of alcoholism and, given its socio-cultural value, can become the principal moment in the health/illness/death process. One of the interviews we conducted concerned the death of a young man that incorporated important features of alcoholism, such as masculine and group-focused characteristics, the collective effects on health, and the relationship between death and celebrations.

Among women, the leading cause of death in the study period was cardiovascular disease, and such mortality increased significantly during holidays. In this population, mortality was significantly higher on Candlemas Day than in the preceding days. One explanation for this increase in mortality might be that women are responsible for holiday preparations, which can lead to stress and involve highly demanding domestic activities but this would require a further study. These results are related to the stress mechanism described by Kloner (2004).

In our sample, the processes of illness and death occurred within the home. After an ill person accepted the severity and progression of his/her disease, s/he avoided institutionalised care because it was associated with suffering and 'martyrdom', and the family became responsible for caretaking. Blauner (1966) argued that death in modern society, despite being less problematic in

terms of the collective, has undergone major transformations that involve a greater impact on the patient's experience and that of their social network. Industrialised societies have experienced a process of medicalisation in which death is viewed as a socio-medical failure (Timmermans, 1999), which is reflected in exaggerated hospital practices of treatment and diagnosis. Thus, tension is created between the medicalisation of death and the acceptance of death as a natural process (McCue, 1995).

This study showed the importance of the latter for families of the deceased. To avoid the institutionalisation of the dying process, care giving and the experience of death took place in the home. Through companionship and caretaking tasks, families managed the process by supporting the sick, being present at the time of death, and making funeral arrangements. The family was also the main subject in interviewees' interpretation of the illness and death process, as relatives often found special meaning in the death of a loved one during a holiday.

The celebration of a holiday didn't necessarily directly modify the illness process, but it deepened the interpretation of death by creating a special meaning for the mourners: a 'beautiful death'. Referring to a series of studies that have examined good and bad deaths from different disciplinary perspectives, Seale and van der Geest (2004) concluded that cross-cultural similarities in the perception of death can be seen. Cross-culturally shared ideas about what constitutes a good death include the following: the person lived a long and successful life, died at home, didn't experience violence or pain, was at peace with their surroundings, and had certain control over the events related to illness and death. Similarly, these authors argued that 'doing a good or bad death is an active process' that involves both the dying individual and the mourners.

The notion of a good death obtained from this study also corresponds to the expectations of a quick death without suffering, with family support and the ability to communicate a final thought or desire (Seale & van der Geest, 2004). These perceptions are accorded an additional religious value by the holiday, which completes the picture of a beautiful death. In this sense, a good death isn't the same as a good death during a holiday, which becomes much more special to the mourners.

Holidays are closely related to religiosity, which governs an annual calendar of events in Mexico; gives meaning to daily practices, customs, and traditions; and is an important component of family dynamics. Geertz (1973) approached religion as a cultural system consisting of symbolic acts that are public and observable social actions, that generate motivation and mood, and, at the same time, that establish a general order of reality. These symbolic acts give meaning to the unknown, suffering, and ethical paradoxes. Religiosity not only gives meaning to a holiday as an element of individual, family, and local and/or national identity, but also gives meaning to suffering in life and to death as a transition to a different life.

The results of the present study emphasised the central concept of the idealisation of dying, in terms of experiencing a 'beautiful death'. This ideal can also be incorporated into a wider concept, the 'aesthetic of death'. In this study, this aesthetic was considered not only in terms of The Death (a 'female' entity separated from the individual), but also as a mortuary ritual (i.e. a 'beautiful grave', as expressed by one of the deceased in our sample). Furthermore, dying alone was considered to be unaesthetic or 'ugly'. Our interviewees indicated that a beautiful death was achieved when one was able to die surrounded by loved ones; to perform a farewell ritual and voice an oral testament; and to choose a venue and a 'beautiful' grave for one's burial. The concept also implied the possibility of dying during certain holidays, as expressed by our participants. Religious holidays represent major occasions for

gathering and sharing in Yautepec, even during the Day of the Dead. Thus, it might be fair to say that death in Yautepec should be not only 'beautiful', but also festive.

Our interviewees also associated the aesthetic of death with the concept of rest: the rest of the dying person when s/he finally passes away, and that of the relatives when death puts an end to the suffering of their loved one. This idea of rest is also part of the conception of a dual body, in which death represents the destruction of the material body and the hope that the spirit will find happiness in the afterlife. In the words of one interviewed relative, 'to me it was beautiful, because neither she nor us had to suffer, it was actually spiritual for her [the deceased].' For another female participant, the conception of a beautiful death relied on the ability of the deceased to choose a date of death on or around a holiday: 'it was a beautiful ending for her, because she got to choose those dates [the Virgin of Guadalupe holidays] to go to her, so she didn't go alone […] that's why I was so calmed' [interview 6]. Death was beautiful in opposition to illness, which was seen as 'ugly', as stated by another relative of a deceased individual: 'I say he was suffering such an ugly illness' [interview 7].

This notion of the aesthetic of death concurs in many points with Ariès' (2000) description of the 'tamed death' (la mort apprivoisée); for example, the familiarity used by interviewees to express feelings towards death, and the farewell ritual requested by the dying person (who asked for the company of family and friends). These two concepts also concur with the idea that the deceased had a certain premonition regarding the choice of the day on which to die, and with the idea of the oral testament as a medium for the dying person's expression of their wishes.

According to Ariès (2000), the 'taming' of death took place in the Middle Ages, but is no longer part of Western culture in developed countries. In discussing the 'romantic death', the author emphasises the aesthetics of a dead person, referring to the beauty of the body as it was beheld. On the other hand, the concept of 'beautiful death' that emerged from the narratives of our participants referred more to the context of death, rather than death itself. Therefore, we suggest that this Mexican 'beautiful death', to a certain extent, reflects the romantic spirit of the tamed death described in the 18th and 19th centuries in Europe. Thus, the question arises: Does the notion of romantic death persist in the collective mind of a specific sector of the Mexican population, as part of its European heritage?

If we interpreted our findings in terms of Gadamer's (1991) proposal, the aesthetic experience of death would become a festive time that discarded time per se, instead suggesting eternity. What greater exaltation of aesthetics and beauty, than to die at a festive time! Moreover, Mexican holidays are a time of remembrance and sharing with one's community; thus, by dying not on any day, but during a 'time of remembrance', the dead prevent themselves from fading into oblivion and remain in the memories of their loved ones.

An important methodological issue related with theoretical saturation and sample size emerged during this research. In this study theoretical saturation was observed with only seven interviews, because the majority of information was acquired with the first four interviews, and there was excessive replication of data with the subsequent interviews. Although there aren't guidelines or tests to define the sample size required (Morse, 1995), any experiences suggest that saturation is possible with small sample sizes. According to Bertaux (1981) the smallest acceptable sample size in qualitative studies is fifteen; Kuzel (1992) recommended six to eight interviews when individuals are similar; Guest et al. (2006) in an empirical exploration determined that 12 interviews is sufficient, although within the first six interviews was obtained the bulk of information, and Romney, Batchelder, and Weller (1986) — with foundations in consensus theory — indicated that only four

interviews are required if they are "experts" in the domain of inquiry. Since our study was mixed, the quantitative phase allowed us to identify the deceased during days with excess in mortality and to reduce the heterogeneity among individuals. Thus, to use quantitative approaches is an effective method to reduce the required sample size in qualitative studies.

In conclusion, our results provide information about the important effects of holidays, culture, and religiosity on mortality patterns, and contribute to a better understanding of the relationship between mortality, the nature of death, and holidays. Our findings suggest that, in Yautepec, death can be interpreted as a beautiful process not just because of biomedical and care factors, and not just for the dying person, but because of cultural and religious beliefs that extend to family and community contexts and constitute the health/illness/death process. Further research is needed to explore this process in other similar contexts and to address the following topics: the relevance of social support to the family as the main caregiver; the particularities of Mexican and Latin American homes as care-giving contexts; and the gender-specific particularities of death expectations. Finally, these results emphasise the importance of collaborative work between disciplines, as in cultural epidemiology, to extend the foundation of research about death, which has typically been limited to anthropological research in Mexico.

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