



# The impact of spousal bereavement on subjective wellbeing: Evidence from the Taiwanese elderly population



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## ABSTRACT

Bereavement is an inevitable event in our life. This paper employs the Taiwanese panel Survey of Health and Living Status of the Elderly (SHLSE) to evaluate the impact of losing a spouse on self-assessed health and subjective well-being measured by depression and life satisfaction. Propensity score matching methods are used to generate a hypothetical bereavement date and a weight for the non-bereaved to create a comparable non-bereaved cohort and a difference-in-differences (DiD) approach is used to estimate the impact of spousal bereavement.

The results show that spousal bereavement increases depression scale by 1.81 points but this increment decreases by 0.43 points every year after bereavement. It takes approximate 4 years to restore to the level prior to bereavement. We also examine the demographic and socioeconomic differences in the spousal bereavement impact and find that the spousal bereavement impact is greater on the bereaved in the higher income group in terms of self-assessed health and depression. Our results only represent a lower boundary of the possible impact of spousal bereavement on self-assessed health and subjective wellbeing due to data restrictions.

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## 1. Introduction

Losing a loved one is an unavoidable life event and impacts on one's life. Previous studies have developed theoretical frameworks illustrating the pathways through which losing a spouse impacts health (Stroebe et al., 2007, 2008). Many empirical studies draw attention to the effect of spousal bereavement on depression, mortality, and healthcare utilisation (Prigerson et al., 1995; Wilson, 2002; Elwert and Christakis, 2008; Espinosa and Evans, 2008; van den Berg et al., 2011; Guldin et al., 2012; Simeonova, 2013; Stephen et al., 2014). However, there are relatively limited studies examining this effect on self-assessed health and life satisfaction (Bratt et al., 2016). This paper focuses on the impact of spousal bereavement on self-assessed health, depression and life satisfaction to extend the literature.

Self-assessed health is an indicator of current underlying health and an independent predictor of future mortality (Idler and

Benyamini, 1997). Byles et al. (1999) find that recently widowed women have lower self-assessed health compared with married women. Depression and life satisfaction are defined respectively as affective and cognitive wellbeing (Diener et al., 2002; page 63). Depression is associated with greater psychosocial disability and suicidal behaviors as well as increased risk to physical health through pathways such as sleep disorders, lower immune function and increased chronicity and recurrence of other comorbidities (Prigerson et al., 2000; Hirschfeld, 2011; Stroebe et al., 2007; Hart et al., 2007; Buckley et al., 2010). Life satisfaction is a measure of apparent life quality (Veenhoven, 1996) and Bratt et al. (2016) find that losing a spouse has a negative effect on life satisfaction but this effect is small.

Spousal bereavement may have a heterogeneous effect on individuals with different demographic and socioeconomic characteristics. The effect of spousal bereavement may be greater on the younger (Lichtenstein et al., 1998; Seifter et al., 2014) and

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more educated groups (Manor and Eisenback, 2003; Möller et al., 2010) in terms of mortality and utilisation of inpatient care. However, differences in the impact of bereavement are not found when considering household size (Manor and Eisenback, 2003; Carr, 2004) and depending on race (Manor and Eisenback, 2003; Elwert and Christakis, 2006). In the period of acute grief, males are considered more vulnerable to health risks than females (Stroebe et al., 2001). In addition, widowers may be more likely to obtain insufficient caloric or nutrition due to the difficulties in cooking (Koehn, 2001; van den Berg et al., 2011) while widows, particularly with highly financial dependency on their spouse, may suffer greater poverty that is associated with higher morbidity and mortality (Benzeval and Judge, 2001; McGarry and Schoeni, 2005). Investigating the heterogeneous effect of spousal bereavement may help policy makers target their scarce resources, before bereavement or in the early stages of bereavement, to those most in need to improve their wellbeing.

The majority of these previous studies investigate the bereavement effect in Western societies but this effect may differ across cultures. For example, family ties are stronger in Chinese culture (Tseng and Wu, 1985) which may modify the impact of bereavement. In Chinese culture a joint household or a kinship family is common with adult children, particularly married children, usually living with their parents. If this is not the case, couples are usually linked to their parents by regular visits and remittances. Logan and Bian (2003) report that 69% of parents receive help and material goods from their adult children, 3% give help and material goods to their adult children, and 10% receive and give. Sharing the responsibility of caregiver and providing financial support (usually from adult children to parents) are two primary family characteristics that differ from Western families. This may mean that the Western findings from current bereavement studies do not reflect the impact of bereavement in Chinese cultures.

This paper attempts to answer three specific questions. First, what impact does spousal bereavement have on the self-assessed health and subjective wellbeing (depression and life satisfaction) of elderly populations in Taiwan? Second, is the bereavement effect alleviated over time and how long does it take for the bereaved to recover? Third, is the effect on the bereaved with different demographic and socioeconomic characteristics identical? This paper contributes to the literature by answering these questions in a Chinese culture society to provide a cross-cultural comparison.

Estimating the effect of spousal bereavement, however, is difficult. The difference in outcomes between the bereaved and non-bereaved may result from other underlying differences, for instance, demographic characteristics, health status, socioeconomic status, social network and support, religion, shared lifestyle and environmental risks of residential region, rather than the bereavement itself (Klein, 1992; van den Berg et al., 2011). This paper uses a Taiwanese longitudinal dataset and a difference-in-differences (DiD) method to control for time-invariant factors in the bereaved group and common time-variant factors in both bereaved and non-bereaved groups. In addition before implementing DiD, we employ propensity score matching methods to generate hypothetical bereavement dates and weights for the non-bereaved to make the non-bereaved group more comparable to the bereaved group to minimize the potential bias.

The paper is organised as follows. Section 2 provides a brief review of the Taiwanese system and healthcare provision while Section 3 introduces the longitudinal data. Section 4 describes the analysis strategy and section 5 presents the empirical results. The final section explains the implications of the results for policy and further research.

## 2. Healthcare and bereavement in an ageing Taiwan

To set the scene we provide a review of the employment and healthcare environment for the older population in Taiwan as both of these aspects are likely to play a role in determining the impact of bereavement on a surviving spouse. Taiwan has entered an ageing society since 1993 with 7.1% of population aged 65 years or older and this proportion rose to 10.2% in 2007.<sup>1</sup> To enable universal and affordable access to healthcare, the Taiwanese Government implemented the National Health Insurance (NHI), an enforced health insurance scheme, in 1995. The NHI was found to have increased life expectancy (Wen et al., 2008) and reduced household precautionary savings, particularly for households with the smallest savings (Chou et al., 2003). In 2002 the mean life expectancy at birth in Taiwan was 69.1 years old; similar to neighbouring advanced countries such as South Korea (67.8 years old) and Singapore (70.1 years old).<sup>2</sup> However, the participation in the 2004 labour market for those aged 50 years or older was lower than both countries (Taiwan: 38.45% – male: 54.21% vs. female: 22.69%; South Korea: 55.33%; Singapore: 43.93%) due to the retirement system and obstacles for older individuals looking to return to the labour market after losing a job. These obstacles are attributable to fast industrial changes, slow updating of new skills, and age discrimination.<sup>3</sup> Wang (2005) finds that the early withdrawal from the labour market is one of the key reasons for poverty in later life. After the implementation of some social security schemes, Wang and Cheng (2007) find a downward trend of poverty in older ages between 1995 and 2004.

By 2011, about 32% of the Taiwanese population aged 65 years or older had experienced spousal bereavement. Among this bereaved population, the percentage of males and females was 22% and 78%, respectively.<sup>4</sup> Chiang et al. (2006) and Liu (2009) point out that in Taiwan about 34.2% of the older suicidal population is bereaved and the suicide rate of widows is higher than that of non-widows. Mental disorders in old age are easily ignored and even when detected, medical treatment is basic with few psychological interventions subsidized in the current healthcare system (Juang and Tsai, 2008). Chan et al. (2006) find that the medical costs of treating adult depression in Taiwan between 2000 and 2002 increased continuously and the average cost in three years was US\$116.67 million, about 1.2% of total national healthcare expenditure. Understanding the impact of bereavement in Taiwan and providing additional services may minimize its impact and assist the bereaved in living healthy and fulfilling lives for their remaining years.

## 3. Data

The data for the subsequent analyses are taken from the Survey of Health and Living Status of the Elderly (SHLSE). SHLSE is a longitudinal survey designed to measure the changes in health and living status of the elderly in Taiwan. It included six waves (1989, 1993, 1996, 1999, 2003, and 2007) at the time of study. The first survey consists of 4049 respondents aged 60 years or older (one respondent per household). In order to replenish the sample, the 1996 survey adds a new cohort of 50–66 year-olds and the 2003

<sup>1</sup> Statistical Yearbook of Interior. Available on <http://sowf.moi.gov.tw/stat/year/elist.htm>.

<sup>2</sup> The world health report 2004, WHO.

<sup>3</sup> Ministry of Labor. (2014). Strategy to improve labour participation of the elderly. Technical Report. Series No. PG10401-0347.

<sup>4</sup> Annual Statistic Report 2009, Ministry of Interior. Available on <http://sowf.moi.gov.tw/stat/year/y02-03.xls>

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