Childlessness and Subjective Well-being in Chinese Widowed Persons

Sheung-Tak Cheng,1,2 Trista Wai Sze Chan,3 Geoff H. K. Li,1 and Edward M. F. Leung4

1Department of Psychological Studies, Hong Kong Institute of Education, Tai Po, New Territories, Hong Kong.
2Center for Psychosocial Health and Aging, Hong Kong Institute of Education, Tai Po, New Territories, Hong Kong.
3Department of Psychological and Brain Sciences, Indiana University, Bloomington.
4United Christian Hospital, Kwun Tong, New Kowloon, Hong Kong.

Objectives. This study examined the effect of childlessness on psychological well-being in widowhood taking into account the influences of social network variables.

Method. A total of 273 Chinese widowed individuals who were community dwelling formed the sample of this study. Sixteen percent (n = 44) were childless. Social network variables, instrumental activities of daily living, chronic illnesses, depressive symptoms, life satisfaction, positive affect, and negative affect were assessed.

Results. Childlessness was significantly associated with all outcomes of psychological well-being even after controlling for network size. After positive and negative exchanges were taken into account, the effect of childlessness on depression and life satisfaction became nonsignificant but remained significant on positive and negative affect. Furthermore, the effects of childlessness on depression and life satisfaction were significantly stronger in women than in men. Childlessness also had a stronger association with depression in those with functional impairments.

Discussion. Findings support the importance of children, and supportive exchanges with them, for the subjective well-being of Chinese widowed persons. Being women and having physical dependencies might amplify the effects of childlessness.

Key Words: Childlessness—Depression—Subjective well-being—Widowhood.

The loss of spouse is a major life event for most individuals. Consequently, widowhood is associated with mental health problems (Möller, Björkenstam, Ljung, & Yngwe, 2011). Studies generally indicate that men are more susceptible than women to the detrimental effects of widowhood, and they may have become more depressed before the actual loss (Lee & DeMaris, 2007), probably because they are more dependent on spouses for various kinds of support, than women (Cheng & Chan, 2006a).

According to the social convoy model (Kahn & Antonucci, 1980), personal networks are hierarchical structures that change with the individual’s development over time. At the loss of an intimate relationship, other network resources may be mobilized to provide assistance. Indeed, studies have shown that support exchanges with children and next of kin and nonfamily increase after spousal loss although these exchanges may decline after a certain period of time (Guiaux, van Tilburg, & van Groenou, 2007; Ha, 2008). However, support functions provided by different network members may not be the same. As postulated by the task-specificity model (Litwak, 1985), one tends to obtain, among other things, socializing activities from nonkin but day-to-day practical assistance and sick care from close kin. Because children and their immediate family members are often the remaining close kin, one wonders what effect widowhood might have on those without children.

Research in the West has found little effect of childlessness on the well-being of older adults (Koropeckyj-Cox, 1998). However, the small number of studies in Chinese populations has found consistently negative effects of childlessness. In a large population study in China (Zhang & Liu, 2007), childlessness was associated with higher loneliness and lower life satisfaction but was unrelated to anxiety or uselessness. The relationships with loneliness and anxiety disappeared after controlling for sociodemographic variables such as availability of pension or adequate medical services, suggesting that childlessness in China might be associated with deficits in certain types of support due to structural issues. However, the context of widowhood was not included in this study. In a representative sample of Hong Kong Chinese older adults, Chou and Chi (2004) found that, compared with married parents (i.e., with children), widowed persons were more likely to feel lonely but not depressed, and the effect on loneliness was much larger for those without children. However, the finding was somewhat ambiguous because their definition of childlessness included those whose children were abroad and those truly without children. Hence, whether childlessness is a risk factor for poor psychological well-being in widowed persons, especially Chinese who have traditionally placed an emphasis on having multigenerational families, is still unclear.
In addition, a common flaw in previous studies was the lack of control for the effect of network size (Chou & Chi, 2004; Dykstra & Wagner, 2007; Koropeckyj-Cox, 1998; Zhang & Hayward, 2001; Zhang & Liu, 2007). Understandably, those without children (and hence in-laws and grandchildren, etc.) tend to have smaller networks than those who have children (Dykstra & Wagner, 2007). Hence, any effect of childlessness would be confounded with that of network size. Equally unclear from the existing literature are the contributions of positive and negative exchanges, or lack of, to the relationship observed between childlessness and subjective well-being and whether the effect of childlessness depends on one’s health conditions and gender. Because sick care on a day-to-day basis is more difficult to be performed by network members other than children, it is possible that childlessness may have more pronounced effects on well-being for those with health issues. Moreover, although studies in the West have yielded conflicting findings as to whether men or women suffer more from childlessness (Hansen, Slagsvold, & Moun, 2009; Zhang & Hayward, 2001), it may be argued that childlessness is more an issue for the older cohort of Chinese women than for men because they are the ones to be blamed for infertility in the traditional culture (Zhang & Liu, 2007). Indeed, a survey of infertile couples in rural China found that a lot more women than men found childlessness to be a humiliating status (Lau et al., 2008).

This study utilizes a community sample of Hong Kong Chinese older adults with a substantial proportion of widowed persons. We examined the associations between childlessness and well-being after taking into account the effects of network size and positive and negative exchanges with family and nonfamily members. Interactions between childlessness on the one hand and gender and ill-health on the other were also investigated. We hypothesized associations between childlessness and poorer well-being, which would be stronger for women and those with functional impairments.

**Method**

Data came from a social network study of 1,005 older Hong Kong Chinese intended to contrast the social network characteristics in different family compositions. Roughly equal numbers of community-dwelling married, never married, divorced/separated, and widowed older persons were recruited through referrals and advertisements in nongovernmental organizations (Cheng, Lee, Chan, Leung, & Lee, 2009; Cheng, Li, Leung, & Chan, 2011). Twenty-seven percent (n = 273) were widowed and formed the sample for this study. Participants were interviewed individually at home or at social centers for older persons. They had a mean age of 74.1 years (SD = 8.14 years, range = 60–97) and 59% were women. They had been widowed for an average of 14.1 years (SD = 13.6). Sixteen percent (n = 44) were childless and 45% of those with children lived with any child. For the whole sample, 52% lived alone. Typical of this cohort, 38% had no formal education and another 40% had primary education only. Thirty-four percent received public assistance targeted for the lowest income bracket.

**Measures**

**Network size.**—Participants responded to the social convoy questionnaire (Kahn & Antonucci, 1980), Chinese version (Cheng et al., 2009), which shows three concentric circles drawn around a center labeled “me.” They were asked to place network members so important that it was difficult to imagine life without them into the inner circle, those very important but not as close into the middle circle, and people not yet included but nonetheless close and important enough into the outer circle.

**Positive and negative exchanges.**—Participants provided ratings, on a scale of 1 = never to 5 = always, about each network member as to the degree to which the following positive and negative interactions (substantive themes italicized in parentheses) had occurred. Negative exchanges (α = .75) were summed from four items (conflicts, excessive demands, annoying attitudes and behaviors, and unfulfilled promises) for each network member. Positive exchanges (α = .88) were summed from 14 items tapping (a) received emotional support (confiding, showing affection, paying respect, and showing appreciation), (b) provided emotional support (confiding and consoling), (c) received instrumental support (sick care, assistance with daily activities, advice and guidance, and financial aid), (d) provided instrumental support (assistance with chores and everyday problems), and (e) companionship (common activities and common topics for conversation). These five aspects were highly intercorrelated (r = .74–.94) and have been found to tap a common higher order factor in the larger sample (Cheng et al., 2009). More details about the measures can be found in Cheng et al. (2009, 2011). To avoid confounding with network size, scores were averaged across family and nonfamily network members.

**Subjective well-being** was measured by (a) the five-item Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), rated from 1 = strongly disagree to 7 = strongly agree (α = .70), (b) the positive affect (6 items; α = .86) and negative affect (6 items; α = .86) subscales of the Chinese Affect Scale (Cheng, 2004), rated on a five-point scale of 1 = rarely to 5 = often against the past week, and (c) a 4-item version of the Geriatric Depression Scale (0 = no, 1 = yes; α = .74), which was found to be equally predictive of clinical diagnosis as the 15-item and 30-item versions (Cheng & Chan, 2004; Cheng et al., 2010). Confirmatory factor analysis showed that these four measures tapped a common higher order construct of well-being (Cheng et al., 2011). Despite confirmatory factor analysis showing that they tap an overarching construct, components of subjective
well-being are often analyzed separately (Cheng et al., 2009, 2011) as results might differ somewhat across the well-being indicators.

In addition, participants provided demographic information, whom they were living with, time since widowhood, and diagnosis of 21 chronic illnesses. Instrumental activities of daily living (IADLs) were measured with the Lawton and Brody (1969) scale; because this was a healthy sample, we coded those with any impairment (11%) as 1 and those without as 0. (Activities of daily living were also measured but were not used in this study due to lack of variation in this healthy sample.) Finally, financial strain was measured using three items taken from Cheng and Chan (2006b): (a) Do you have difficulty paying bills? (b) Do you have money left at the end of the month? and (c) Do you have enough pocket money to spend? A score of 1 was given to those who reported difficulty to any of the items (25%), and the rest were scored 0.

**Results**

As expected, childlessness was inversely related to number of immediate kin ($r = -0.47, p < .001$) and positive exchanges with them ($r = -0.73, p < .001$), with moderate to strong correlations. Due to collinearity concerns, all family members (whether immediate or extended) were grouped together in subsequent analysis. It was found that childlessness was negatively correlated with network size ($r = -0.21, p < .001$) and positive ($r = -0.44, p < .001$) and negative ($r = -0.32, p < .001$) exchanges with family members, but not with exchanges in the nonfamily domain. Those childless were also more likely to live alone ($\chi^2(1) = 19.12, p < .001$). In addition, women (point-biserial $r = .21, p < .001$) and older individuals ($r = .26, p < .001$) were more likely to have been widowed for longer periods of time. Women also tended to have larger networks than men (point-biserial $r = .19, p < .001$).

In the main analysis, we regressed well-being measures on the following variables in order of entry: (a) age, gender, living alone, childlessness, length of widowhood, number of chronic illnesses, IADL impairment, financial strain, and network size; (b) positive and negative exchanges with family and nonfamily; and (c) the product terms of childlessness $\times$ gender, childlessness $\times$ chronic illnesses, and childlessness $\times$ IADL impairment. Because living alone and length of widowhood were not significant in all models, they were removed to avoid overcorrecting the coefficients for the other variables. The results are presented in Table 1.

Prior to entering the social exchange variables, childlessness was a significant predictor of all the well-being measures, after controlling for network size and the other variables. Hence, the effects of childlessness on subjective well-being could not be attributed to just having smaller networks. After relationship quality in terms of positive and negative exchanges was taken into account, childlessness was no longer a significant predictor for depression and life satisfaction but remained significant for positive and negative affect. In accounting for depression and life satisfaction, however, interactions between childlessness on the one hand and gender and IADL impairment on the other were found. The coefficients suggested that the detrimental effects of childlessness were more pronounced for women; women without children had more depressive symptoms and lower life satisfaction than their male counterparts. Moreover, childlessness was associated with higher depression when there were IADL impairments.

<table>
<thead>
<tr>
<th>Table 1. Regression of Subjective Well-being Measures on Sociodemographic, Health, and Social Network Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Gender (women)</td>
</tr>
<tr>
<td>Childless</td>
</tr>
<tr>
<td>Chronic illnesses</td>
</tr>
<tr>
<td>IADL impairment&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Financial strain&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>Network size</td>
</tr>
<tr>
<td>PE—family</td>
</tr>
<tr>
<td>NE—family</td>
</tr>
<tr>
<td>PE—nonfamily</td>
</tr>
<tr>
<td>NE—nonfamily</td>
</tr>
<tr>
<td>Childless $\times$ Gender</td>
</tr>
<tr>
<td>Childless $\times$ IADL impairment</td>
</tr>
<tr>
<td>$R^2$</td>
</tr>
</tbody>
</table>

**Notes.** Figures shown are standardized regression coefficients. PE = positive exchanges; NE = negative exchanges; IADL = instrumental activities of daily living. M1, M2, and M3 refer to the sequential order in which variables were added to the equation, with M being the abbreviation for “model.”

* = not impaired; 1 = impaired.

0 = no strain; 1 = some strain.

*p < .05. **p < .01. ***p < .001.
Findings concerning the social exchange measures showed that the main determinants of well-being were positive and negative exchanges with family members. Positive exchanges with nonfamily members were also important for positive affect. In addition, women reported more positive affect than men, but there were no other independent effects of gender on well-being. Age was associated with less negative affect and more positive affect and life satisfaction. Financial strain and health measures also showed expected relationships with well-being measures.

**Discussion**

The overall pattern of findings suggests that childlessness is a risk factor for poor subjective well-being in Chinese older adults. Its effects on well-being could not be accounted for by a smaller network size. Even after controlling for social exchange measures, it remained a significant factor in explaining positive and negative affect; in fact, its unique effect on negative affect was the largest among all the predictors (Table 1). The fact that childlessness became nonsignificant as a predictor for depression and life satisfaction, after controlling for social exchanges with family members, suggested that some of its associations with these two well-being measures were due to the lack of quality support exchanges within the family. Although we were not able to analyze exchanges with immediate kin and extended family members separately, because childlessness was not associated with decreased positive exchanges with the extended family and because positive and negative exchanges had opposing influences on well-being, the disadvantage of childless individuals could be attributed primarily to the lack of positive exchanges with immediate kin. (Note also that negative exchanges with family was not a significant factor in depression and negative affect.) These findings were consistent with the observation that Chinese persons tend to rely on their families for emotional and practical assistance (Cheng et al., 2009, 2011) and to emphasize having filial children (Cheng & Chan, 2006b). There was also some evidence that childlessness might be more problematic for those with IADL impairments because the missing support from offspring might be most critical when one was ill or physically dependent.

We found little evidence for widowers to report poorer subjective well-being than widows. In fact, our data showed that widows who were childless reported higher depression and lower life satisfaction than widowers without children although the effect sizes were small. Gender also had a main effect on positive affect, favoring widows. In other words, widows reported slightly more positive affect than widowers in general but were also more depressed and less satisfied with their lives when being childless. There are two possible explanations. First, widowers may disengage from relationship goals after spousal loss (Cheng & Chan, 2006a), but widows would continue to cultivate shared activities and positive interactions with friends and family members, leading to higher positive affect. Second, however, not having children, and in many cases infertility, may be stigmatizing for women given the traditional emphasis on them to procreate for the husband’s family (Zhang & Liu, 2007). Being childless may be more a regret for women than for men among the Chinese, making them more susceptible to dissatisfaction and depression. The differential effects of childlessness on men and women await further research.

This study suffered from three limitations. First, the cross-sectional design precludes inference on causality. Second, the number of childless individuals was relatively small, which might have affected the power to detect effects. Third, the findings may not be generalizable to the younger cohorts in which more couples are childless by choice. Nevertheless, the study provides empirical support for the importance of children in adjusting to widowhood in Chinese older persons.

**Funding**

The preparation of this manuscript was supported in part by Competitive Earmarked Research Grant No. CityU1495/05H of the Research Grants Council of Hong Kong to S.-T. Cheng.

**Correspondence**

Correspondence should be addressed to Sheung-Tak Cheng, PhD, Department of Psychological Studies, Hong Kong Institute of Education, 10 Lo Ping Road, Tai Po, N.T., Hong Kong. E-mail: takcheng@ied.edu.hk.

**References**


