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The effects of familism on intended care arrangements in the process of preparing for future care among one-child parents in urban China

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ABSTRACT
Guided by Sörensen and Pinquart's model of preparation for future care, this study investigated the relationship between familism and intended care arrangements. Ordinal logistic regression was performed on a sample of 516 urban Chinese one-child parents aged 45–65 with an equal gender ratio to examine the associations between five care expectations, familism (filial obligation and child gender) and future care planning constructs (awareness, information gathering and avoidance). Awareness and information gathering were positively associated with service-focused care arrangements. Avoidant planners were more inclined to rely on adult children. Participants with a stronger filial obligation had greater expectations for ageing at home with the aid of a spouse, siblings or helper. Child gender was not significantly associated with intended care arrangements. The model of preparation for future care was useful when predicting service-focused care arrangements. Familism was a powerful predictor of family-focused care arrangements. Females were more likely to rely on children regardless of child gender but less likely to rely on spouses and siblings. The study enriches researchers' understanding of urban Chinese older adults' intended care arrangements in the context of fading familism and single-child families.

KEY WORDS – familism, intended care arrangement, preparation for future care.

Introduction

According to the National Committee on Aging in China, the population of people aged 60 and over will grow from 212 million in 2015 to 418 million in 2035 and will reach 29 per cent of the national population by then

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(He 2015). The escalating needs of elder care will strain both individual families and social care systems. Modernisation and social changes have weakened the family's capacity to take care of its elders (Chen and Silverstein 2000). Without necessary resources (Taghizadeh Larsson and Osterholm 2014), sole reliance on family for elder care may no longer be a realistic option. Institutional care, however, is costly and is undesirable for most older persons (Sixsmith and Sixsmith 2008). A thorough understanding of older adults' intentions for future care arrangements will not only inform service providers in designing their services but also allow policy makers to project future care needs and facilitate better resource management at the community level. It is the aim of the present study to examine the cognitive processes and beliefs associated with older adults' intentions for future care arrangements.

Elder care arrangements and familism

Elder care includes a spectrum of medical and non-medical arrangements provided by professionals, family and friends, and delivered at home, in community centres or in institutional facilities (Robison *et al.* 2014). Although formal support and services allow older persons to maintain their independence, they are often underused in populations that have a strong belief in familism (Scharlach *et al.* 2006). The adherence to familism is also suggested to explain a less active engagement with elder care preparation (Pinquart, Sörensen and Davey 2003)

Familism is a family-specific form of collectivism (Kim, Knight and Longmire 2007). It refers to a person's attachment to his or her family, beliefs in loyalty and reciprocity, and prioritising of family interest over his or her own needs (Knight and Sayegh 2010; Sabogal *et al.* 1987). According to Losada *et al.* (2008), familism has three dimensions: familial obligation, family as referents and perceived support from the family. Familial obligation refers to the responsibilities of supporting family members in need (Losada *et al.* 2006). Based on the principle of familial obligation, elder care is an essential way for one to fulfil duties and maintain cultural inheritance (Scharlach *et al.* 2006). Older people with a strong familial obligation tend to distrust outsiders (John, Resendiz and de Vargas 1997) and use fewer formal services (Herrera *et al.* 2008). Family as referents sets the standard as to how life should be lived (Knight and Sayegh 2010). In contexts in which family care-giving is the norm, any alternative arrangements, such as moving into a nursing home, would be considered inappropriate practice (San Antonio and Rubinstein 2004). Perceived support from the family demonstrates one's confidence in relying on

family to solve problems. In China, there holds the old saying of raising sons for old-age support. Parents with more sons may have greater confidence in their family's capability of elder care in rural China.

Elder care arrangements in the Chinese context

Similar to the Latino cultural values on which much of the above literature is based, Chinese culture also prescribes family-based care for elders but usually parents count on the oldest son for elder care; daughters are considered outsiders after they get married (Ting and Chiu 2002). The adherence to familism is still prevalent in rural China where formal support and services are limited. In a longitudinal study involving 1,170 rural elders in Anhui Province, China, Cong and Silverstein (2012) found that parents favoured sons as care-givers on average but the importance of daughters in elder care was increasing.

Compared with rural elders, elders in urban China may have similar expectation for children to provide old-age support, but may have more receptive attitudes towards formal care. As a result of the One-Child Policy mandated from 1979 to 2015, one couple with only one child has become the prevalent family structure in urban China. When these one-child parents need elder care, their married adult children will have to take care of four ageing parents. Having realised the absolute shortage in family care resources, one-child parents may rely more on outside help and place equal expectations on their only sons and daughters (Downey, Condron and Yucel 2013). When older persons in the city of Nantong were asked to select one arrangement for future care, 31.2 per cent selected family care, 15.4 per cent went for institutional care and 53.4 per cent favoured community-based home care (Ge 2010). Studies in urban China also revealed that parents of older age, higher income and higher education had less expectation for family-focused care (Long and Feng 2007); and elders of worse health status were more likely to turn to institutional care (Zhang and Wei 2014).

Intended care arrangement as a step in the process of future care preparation

An intended care arrangement (ICA) is an initial expectation for old-age support and can be explained by the model of preparation for future care (PFC; Sörensen and Pinquart 2001). PFC is composed of five steps: awareness, information gathering, deciding on preference, concrete

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planning and avoidance. The first four steps are sequential behaviours in order of concreteness. Once older persons become aware of their potential care needs (awareness), they seek out information (information gathering), weigh different options, formulate their own preferences (deciding on preferences) and make concrete plans (concrete planning). According to the PFC model, an ICA formed after awareness and information gathering is an informed decision corresponding to the step of deciding on preferences. Concrete planning guided by a well-researched ICA is associated with lower levels of depression and anxiety after two years (Sörensen *et al.* 2012) and better adjustment to thinking about a potentially stressful situation (Delgadillo, Sörensen and Coster 2004) in response to a sudden need for intensive care. Older adults state that they feel that care-givers can make better informed decisions if they are aware of care recipients' PFC (Pinquart and Sörensen 2002).

Although many elders have thought about their future and considered that PFC may have advantages, few engage in concrete planning (Girling and Morgan 2014; Maloney *et al.* 1996; Sörensen and Pinquart 2000*b*). One reason for this has to do with the fifth aspect of PFC—avoidance. Initial awareness of care needs may cause negative arousal that narrows older adults' attention, diverts them from responding (Aspinwall 2011) and invites avoidance (Sörensen *et al.* 2008). Empirical findings indicate that people of stronger familial obligation are more likely to take avoidant coping (e.g., denial of a stressor) (Kim, Knight and Longmire 2007). An avoidant older person can still have an ICA, but it is based on limited information and potentially less rational.

Study aim and hypotheses

Few studies have examined the effects of familism on ICA planning (Kim, Knight and Longmire 2007), and none have been conducted with Chinese families, despite the challenges brought about by fading familism, smaller family sizes and China's distinction as home to the largest absolute number of older people in the world.

Guided by the PFC model (Sörensen and Pinquart 2001), the present study, therefore, examines preferences for certain ICAs in a representative sample of 516 one-child parents in urban China. The primary aim of this study is to examine the relationship between familism and ICAs from the perspective of PFC. The present study includes five ICAs and divides them into service-focused ICA and family-focused ICA. As per Ganong and Coleman's (2005) suggestions, the study measures familism with normative obligations rather than felt responsibilities as both constructs are similar but the

former one creates more emotional distance and reduces social desirability in responses. The study also includes three steps of PFC: awareness, information gathering and avoidance. The step of deciding on preference is excluded because it measures overlapping constructs with ICA. The step of concrete planning is dropped as the experts in the panel and participants in the pilot studies agree that planning behaviours such as 'writing down my care preferences' may be too early for middle-aged one-child parents.

As indicated in Figure 1, we hypothesise two pathways leading to distinct types of ICAs. We hypothesise that a service-focused ICA is formed following the steps of awareness and information gathering. Alternatively, we hypothesise that a family-focused ICA is associated with familism, child gender and avoidance. Though not illustrated in the figure, demographic characteristics are controlled for all analysis because of their associations with ICA found in previous studies.

Method

This article is part of the larger study 'Preparation for Future Care Needs Among the First Generation of One-child Parents in China'. The protocol was approved by the research ethics committee of the first author's affiliated university. Data were collected using a quota sampling strategy in Shanghai from June to August 2013. Permanent residents aged 45–65 (equal numbers of men and women) were approached by our partners in sub-district administration agencies in 11 districts and were invited to fill in a questionnaire at the scheduled time. During data collection, at least five trained researchers were on site to assist if participants needed an explanation, could not see the characters clearly or double-checked whether missed questions were left blank on purpose. Those who had more than one child, who had lost both parents or who had cognitive impairment were excluded by our partners before recruitment. A total of 580 participants were recruited and provided written consent. In all, 62 participants quit because of personal issues. Out of the 538 who completed the interview, 22 were excluded because of missing data. The subsequent analysis was conducted on the remaining 516 observations.

Measurements

Tools used in this study were validated through forward–backward translation, consultation with an expert panel and pilot testing.

ICA. Participants rated how likely they were to use each of five care arrangements: 1 (unlikely), 2 (somewhat likely) or 3 (very likely). The five

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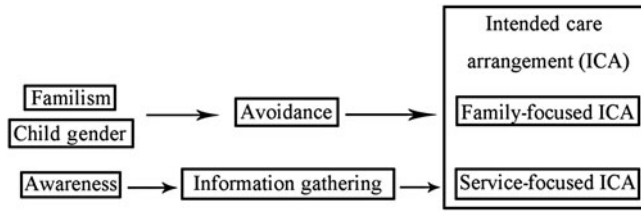

Figure 1. Conceptual model guiding the inquiry.

arrangements were not mutually exclusive and were (1) remain in your home and rely mainly on your spouse and siblings for care; (2) remain in your home and personally hire a domestic helper; (3) move in with and rely on your child for care; (4) remain in your home and use community-based services (*e.g.* senior meal delivery and community-based rehabilitation); and (5) move to an elder-care institution. The first three ICAs are family-focused and the other two ICAs are service-focused.

Familism. Familial obligation was measured by participants' expectations for children's responsibilities for six aspects of elder care. Participants were asked the following: 'Regardless of the sacrifices involved, how much responsibility should adult children with families of their own have to provide their parents with each of the following six supports?' Reponses followed a five-point Likert scale from 1 (not responsible at all) to 5 (fully responsible; Silverstein, Gans and Yang 2006). The scale was used in the University of Southern California Longitudinal Study of Generations and proved to be reliable. Higher scores indicate stronger beliefs in filial obligation ($\alpha = 0.82$). An example of a type of support is 'providing housing for elderly parents who are in need'.

Child gender. Though child gender (male or female) is a covariate in the study, its association with ICA has stronger roots in familism. In patriarchal societies, men are viewed as more influential than women, and the oldest son is obliged to take care of his biological parents (Guo, Chi and Silverstein 2013). Most parents in rural China favour sons (Cong and Silverstein 2012). Therefore, couples with a son may be more confident in their family's ability to solve problems and have higher perceived support from the family.

PFC. Three steps in the care planning process were measured with 11 items from the Preparation for Future Care Needs measure (Sörensen and Pinquart 2001) and one additional question reflecting familiarity with care-

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giving burden and services. Participants rated how true 12 statements were for them on a five-point Likert scale from 1 (not at all true of me) to 5 (completely true of me). Awareness was assessed with five items (α = 0.68; *e.g.* 'When I compare my health and capabilities with those of other people, I draw conclusions about my future needs'). Information gathering was assessed with four items (α = 0.70; *e.g.* 'I have been following the public discussion in the media to learn more about care options'). Avoidance was assessed with three items (α = 0.66; *e.g.* 'I try not to think about things like future loss of independence'). Higher scores indicate greater engagement with each aspect of PFC.

Covariates. We controlled for participants' demographic characteristics (age, gender, education and household income) and physical health (α = 0.71) as measured by the Physical Health Component Score of the 12-item Short Form Health Survey (SF-12; Lam *et al.* 2011).

Data analysis

Five ordinal logistic regression models were run using SPSS version 21. The outcome variables were the five types of ICA. Predictive variables were filial obligation, child gender, awareness, information gathering and avoidance. Covariates of demographic characteristics and physical health were controlled across all models. Odds ratios and 95 per cent confidence intervals were calculated for individual predictors. Chi-square tests and log likelihood were used to evaluate overall model fit. Nagelkerke's statistic was used to evaluate model goodness of fit (Peng, Lee and Ingersoll 2010). A non-significant result for the parallel lines test indicated that the proportional odds assumption was not violated (University of California, Los Angeles, Institute for Digital Research and Education 2015).

Results

A total of 516 people (257 males and 259 females) aged 45–65 (mean = 54.90 years, standard deviation = 5.41) participated in the study. Most (N = 421, 81.59%) had received further education after graduating from junior high school (nine years of education). They had an average monthly household income per capita of US $494, which was 15.46 per cent lower than the city-wide mean of US $585 (Survey Office of the National Bureau of Statistics in Shanghai 2014). Their demographic information is presented in Table 1.

Table 2 presents participants' endorsements of ICA. The most favoured arrangements were remaining at home with the aid of a spouse and siblings

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TABLE 1. *Demographic characteristics of the sample*

Characteristic	N (%)	Mean (SD)
Gender:		
Male	257 (49.8)	
Female	259 (50.2)	
Age		54.90 (5.41)
Education:		
Grade 9 or less	95 (18.4)	
Vocational school or more	421 (81.6)	
Monthly household income per capita (US$)		494.28 (194.46)
Child gender:		
Male	253 (49.03)	
Female	263 (50.97)	

Note: SD: standard deviation.

TABLE 2. *Intended care arrangements*

Arrangement	Unlikely	Somewhat likely	Very likely
		Percentages (N)	
Remain at home and rely mainly on spouse and siblings	15.5 (80)	41.5 (214)	43.0 (222)
Remain at home and hire a domestic helper	31.0 (160)	51.6 (266)	17.4 (90)
Move in with and rely on child	49.0 (253)	35.1 (181)	15.9 (82)
Remain at home and use community-based services	12.6 (65)	57.4 (296)	30.0 (155)
Move to an elder-care home	25.8 (133)	56.0 (289)	18.2 (94)

(43%) and using community-based services (30%), followed by moving to an institution (18.2%), hiring domestic helpers (17.4%) and relying on children (15.9%). Less than one-third of participants found care provided by persons other than family members to be unacceptable (12.6–31.0%).

Table 3 displays the results from the logistic regression. Significant model chi-square statistics showed that familism and PFC were reliable predictors of all five outcomes when covariates were controlled. The proportional odds assumption was valid, although the pseudo *R*-squared was quite low.

As hypothesised, using community-based services and using an institution were positively associated with awareness and information gathering. Relying on one's child was more prevalent among participants who actively avoided planning. Participants with stronger filial obligation had greater expectations of ageing at home with the aid of a spouse, siblings and helpers. Contrary to our hypothesis, child gender was not related to ICA preference.

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TABLE 3. *Logistic regression models of intended care arrangements*

Independent variable	Remain at home and rely mainly on spouse and siblings	Remain at home and hire a domestic helper	Move in with and rely on child	Remain at home and use community services	Move to an elder-care home
	Odds ratios (95 per cent confidence interval)				
Demographics:					
Age	0.97	0.96**	0.99	0.97	0.96*
	(0.94–1.00)	(0.93–0.99)	(0.96–1.02)	(0.94–1.00)	(0.93–1.00)
Gender (0 = male, 1 = female)	0.70*	1.45*	1.99***	1.21	0.76
	(0.49–0.99)	(1.02–2.04)	(1.40–2.82)	(0.85–1.72)	(0.54–1.08)
Vocational education or more (1 = yes)	0.49***	1.14	1.16	0.86	0.89
	(0.33–0.72)	(0.77–1.68)	(0.78–1.73)	(0.58–1.28)	(0.60–1.32)
Monthly household income per capita	1.27	2.28***	0.91	1.32	1.09
	(0.82–1.96)	(1.46–3.56)	(0.58–1.42)	(0.84–2.08)	(0.70–1.70)
Physical health	0.99	0.99	0.98	0.99	0.97*
	(0.96–1.02)	(0.96–1.02)	(0.96–1.01)	(0.96–1.02)	(0.95–1.00)
Familism:					
Filial obligation	1.10***	1.04*	1.07***	1.03	1.00
	(1.06–1.14)	(1.00–1.07)	(1.03–1.11)	(1.00–1.07)	(0.97–1.04)
Child gender	1.32	1.20	1.00	0.93	0.91
	(0.94–1.85)	(0.86–1.69)	(0.71–1.40)	(0.66–1.31)	(0.65–1.28)
Preparation for future care:					
Awareness	0.99	1.00	0.99	1.11**	1.09**
	(0.93–1.06)	(0.94–1.07)	(0.93–1.05)	(1.04–1.18)	(1.03–1.16)
Information gathering	1.00	1.01	0.99	1.08*	1.07*
	(0.94–1.07)	(0.95–1.07)	(0.93–1.05)	(1.01–1.15)	(1.00–1.14)
Avoidance	1.05	0.96	1.12***	0.99	0.98
	(0.98–1.12)	(0.90–1.02)	(1.05–1.20)	(0.92–1.05)	(0.92–1.05)
Model summary:					

TABLE 3. (*Cont.*)

Independent variable	Remain at home and rely mainly on spouse and siblings	Remain at home and hire a domestic helper	Move in with and rely on child	Remain at home and use community services	Move to an elder-care home
χ^2 (df = 10, $p < 0.001$)	49.37	38.40	43.94	38.00	28.27
−2 log likelihood	996.53	1,000.49	993.38	930.93	983.67
Nagelkerke R^2	0.11	0.08	0.09	0.08	0.06

Note: df: degrees of freedom.
Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In our sample, older age was negatively associated with choosing a domestic helper and institutional care. Female participants preferred staying at home and receiving care from helpers and their children. However, females and participants with more education expressed weaker intentions of relying on a spouse and siblings for old-age support than males and participants with less education, respectively. Participants from wealthier households were more willing to hire a domestic helper. Better physical health was negatively linked with a preference for institutional care.

Discussion

This study investigated the relationship between familism and five potential care arrangements through the lens of the PFC model. The findings enhance researchers' understanding of care preferences in a population that prioritises family over individuals. We first hypothesised that service-focused ICAs would be a more conscious choice generated after awareness and information gathering. In previous studies, these two steps of PFC predicted more advanced planning in American and European populations (Mak and Sörensen 2012; Sörensen *et al.* 2008; Sörensen and Pinquart 2000*a*). Consistent with these findings, we found that awareness and information gathering were associated with greater expectations for using community-based services and elder-care homes. There are two plausible explanations for the non-significant associations between PFC and family-focused ICA. First, family has played a dominant role in elder care in Chinese families for centuries. It is such a deep-rooted norm that it has turned into a default expectation, thus not requiring awareness of care needs or conscious information gathering and decision making. Second, Chinese elders know exactly how their families are capable of providing care to them, but they may be unfamiliar with formal care services. Information gathering is essential for service selection, whereas counting on family does not require extra knowledge. We also hypothesised that avoidant participants would be likely to choose a family-focused ICA. This was confirmed by the positive association between avoidance and the arrangement of relying on one's child.

These preferences may have significant policy implications. Although family care sounds plausible, it is threatened by fading familism and smaller family sizes. Also, younger adults in modern China may value individualism over collectivism, and thus may not want to limit their personal lives for elder care (Zhang 2004). This may be especially true in the People's Republic of China. Out of 430 million households in the People's Republic of China, 330 million are single-child families because

of one-child policies (National Health and Family Planning Commission of the People's Republic of China 2014). By the time the participants in the current study need elder care, their married children may be faced with helping to care for four elders and two children or adolescents. Caregiving may become so demanding that families may be forced to resort to formal support.

We also hypothesised that familism would increase the likelihood of a family-focused ICA. As expected, participants with stronger filial obligation were in favour of care by family members and home-based care with domestic helpers. Hiring a domestic helper was so well accepted for four reasons. First, domestic help has been used for decades and is more popular than community-based services (Wu *et al.* 2005). Second, the service is delivered by one specific helper in the home, an environment familiar to the older person and in which he or she feels at ease. Third, domestic helpers usually live with older persons for a longer period of time and are regarded as quasi-family members. This is different from most in-home household and health services available in the Western world. Fourth, the services are sometimes paid for by adult children and are perceived as a way in which adult children can fulfil their traditional filial responsibilities (Chen 2015).

In patriarchal Chinese culture, sons are obliged to provide elder care. Therefore, one would expect parents of sons to be more confident of family-based old-age support and to be inclined to prefer family-focused care arrangements. However, we did not find evidence for this hypothesis. The non-significant association between child gender and family-focused care arrangements implies that nowadays daughters and sons may bear similar filial responsibilities in urban China. As a result of one-child policies initiated in 1979, parents often exhausted their resources to cultivate the only inheritor of the family (Zhan 2004). For the first time, urban daughters became competent through education and financial independence (Fong 2002). As a result, they now bear equal, if not greater, responsibility for supporting their parents as do sons. Even the traditional preference for sons is called into question, as daughters are more attentive to parents' emotional needs and no less capable than sons of providing financial and material support (Liu and Hennock 2008).

The associations between demographics and ICA yielded inconsistent results with previous studies. Older participants were less in favour of domestic services and elder-care homes than younger participants. This preference can be explained by traditional attitudes of lack of trust in non-family care-givers, crowded living environments, cost and gender inconvenience (*e.g.* personal hygiene assistance for male elders by female helpers; Zhan, Feng and Luo 2008; Zhan, Liu and Bai 2005). Female participants

were more likely to expect to use domestic helpers and children than their siblings and spouse. In a patriarchal society, providing hands-on care to family members is generally a woman's duty (Lee 2010). This may be part of the reason why females in this sample had less confidence in siblings and spouses providing care. Participants with more education tend to favour individualism (Kim, Knight and Longmire 2007) and are therefore less likely to rely on a spouse and siblings. It is not uncommon for Asian households that are financially able to hire live-in domestic helpers (Chau *et al.* 2012; Chou, Kröger and Pu 2014; Tang *et al.* 2009; Wee *et al.* 2014). Thus, in the present sample, households with more financial resources were more likely to foresee hiring domestic helpers to provide care. As with findings in other studies, people in poor physical health tended to endorse the use of elder-care homes.

The study has four limitations. First, we cannot establish causality between familism and ICA because of the cross-sectional nature of the study design. The PFC model suggests that planning is an unfolding process and has feedback loops. It is possible that older persons may alter their expectations and their value of familism after careful evaluation of their individual needs and family capability. For instance, an older man who realises that his adult child is not capable of providing care to him may lower his expectations of this child, which in turn may change his values of familism. It is also possible that the older man will lower his expectations of his own child but still uphold his own general beliefs.

Second, although we did not hypothesise a path from familism to awareness and information gathering, it is possible that someone who believes in familism becomes aware of future care needs and then gathers information. However, we did not find significant associations between filial obligation and these two aspects of PFC through bivariate correlation analysis in this sample. One possible explanation for this is that familism is multi-dimensional and prescribes norms for both parents and children. The present study measured children's responsibilities for providing elder care for parents; future studies may consider the relationship between other dimensions of familism and PFC.

Third, we did not differentiate between the various types of community-based services and elder-care homes. Herrera *et al.* (2008) suggested examining different types of community services separately, as barriers to their use may vary for the same respondent. In China, a general term like *elder-care home* may be poorly defined (Feng *et al.* 2011). In many cases, even professionals find the distinctions between different types of care homes blurred (Wong and Leung 2012). A more nuanced analysis may find that familism predicts preferences for selected community-based services or that PFC predicts some family-based preferences.

Fourth, our participants were single-child parents in urban China. The results may not be applied to urban participants with multiple children or rural participants with limited formal care support and services. Future researchers may also be interested in the associations between ICA and other factors such as predisposing characteristics, enabling resources and needs proposed in Anderson's (1995) model.

Despite these limitations, this study expands the application of PFC by explicitly linking PFC steps to specific ICAs, rather than just process outcomes. Our results suggest that awareness and information-gathering dimensions of the PFC model are predictive of service-focused ICA in single-child Chinese families, even after familism is controlled for. However, for the family-focused ICA of living with an adult child, only avoidance of thoughts about future care—and no other PFC process variables—was predictive after familism was controlled. Thus, in the context of high familism and available family resources, active PFC may be a less relevant construct than in a less family-focused context, and avoidance may be a more salient motivation.

Results from the present study also raise two important issues that should be addressed in future studies. First, awareness in the context of PFC measures whether an individual realises the potential for requiring personal care in the future and pays attention to information about these needs. The construct does not capture whether the individual realises the widening gap between his or her family's capacity to provide care and his or her growing need for care. It is possible for an individual to be aware of his or her personal needs yet unaware of the limited capacity of the family to provide care. Realisation of the discrepancies between ideal and realistic family support may cause stress, especially when older adults need intensive care (Losada *et al.* 2010). Identifying these individuals and educating them about their options may help to adjust their expectations to the realities of their situation. Second, although information gathering facilitates more concrete planning in PFC, it does not necessarily lead to greater reliance on services. In a study comparing various ethnic groups in the United States, older Chinese Americans were found to be most informed of the available services in the community compared with other minority groups. However, Chinese Americans in this study still turned to family for support, perhaps because the formal services were not culturally appropriate or because using them at all conflicted with their cultural familism beliefs (Scharlach *et al.* 2006).

Our findings showed that urban females were more likely to choose family-based options. According to Goode (1963), modernisation shifts the emphasis of elder care at home from patrilineal to conjugal bonds. Patrilineal bonds remained strong in our sample, as women expressed

higher expectations for care from their adult child. One-child policies left women no choice but to rely on daughters as much as on sons. We can infer that the non-significant association between child gender and ICA was due not to lowered expectations for sons but to heightened expectations for daughters. This is consistent with the previous finding that daughters were playing an increasingly important role in elder parents' support networks (Cong and Silverstein 2012). Although spousal care has received growing recognition among urban Chinese residents (Li *et al.* 2012), we did not find a strong reliance on the conjugal bond for elder care in this study. There are three potential reasons for female participants' reluctance to rely on husbands. First, women in patriarchal societies traditionally are subservient to men. They may not expect their husband to provide hands-on care for them. Second, because it is common for women to assume the role of care-giver, they may doubt that their husbands are capable of providing care. Third, women generally have a longer life expectancy than men (United Nations 2013). As a result, women in the present study may not have considered future care by their husband a feasible option.

Conclusions

This study aimed to understand ICAs in the context of fading familism and smaller families in urban China using a PFC framework. We found that familism was a powerful predictor of a family-focused ICA. Women from single-child households adjusted their care expectations from sole reliance on sons to equal reliance on sons and daughters. With regard to service-focused care arrangements, these single-child Chinese families reported increased awareness and information gathering, which allow them to develop informed preferences. Because avoidance was positively associated with relying on one's child for elder care, we conclude that avoidant families may need assistance in developing awareness of expected needs, understanding available options and developing realistic care expectations. However, based on previous findings linking high awareness to higher distress (Steele, Pinquart and Sörensen 2003), interventions should emphasise helping older adults advance towards more concrete planning steps, so the risks of excessive worry and depressive symptoms are lower.

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References

Anderson, R. M. 1995. Revisiting the behavioral model and access to medical care: does it matter? *Journal of Health and Social behavior*, **36**, 1, 1–10.

Aspinwall, L. G. 2011. Future-oriented thinking, proactive coping, and the management of potential threats to health and well-being. In Folkman, S. (ed.), *The Oxford Handbook of Stress, Health, and Coping*. Oxford University Press, New York, 334–65.

Chau, P. H., Woo, J., Kwok, T., Chan, F., Hui, E. and Chan, K. C. 2012. Usage of community services and domestic helpers predicted institutionalization of elders having functional or cognitive impairments: a 12-month longitudinal study in Hong Kong. *Journal of the American Medical Directors Association*, **13**, 2, 169–75.

Chen, L. 2015. Deciding to institutionalize: caregiving crisis, intergenerational communication, and uncertainty management for elders and their children in Shanghai. *Journal of Gerontological Social Work*, **58**, 2, 128–48.

Chen, X. and Silverstein, M. 2000. Intergenerational social support and the psychological well-being of older parents in China. *Research on Aging*, **22**, 1, 43–65.

Chou, Y.-C., Kröger, T. and Pu, C.-Y. 2014. Models of long-term care use among older people with disabilities in Taiwan: institutional care, community care, live-in migrant care and family care. *European Journal of Ageing*, **12**, 2, 95–104.

Cong, Z. and Silverstein, M. 2012. Parents' preferred care-givers in rural China: gender, migration and intergenerational exchanges. *Ageing & Society*, **35**, 5, 727–52.

Delgadillo, L., Sörensen, S. and Coster, D. C. 2004. An exploratory study of preparation for future care among older Latinos in Utah. *Journal of Family and Economic Issues*, **25**, 1, 51–78.

Downey, D .B., Condron, D. J. and Yucel, D. 2013. Number of siblings and social skills revisited among American fifth graders. *Journal of Family Issues*, **36**, 2, 273–96.

Feng, Z., Zhan, H. J., Feng, X., Liu, C., Sun, M. and Mor, V. 2011. An industry in the making: the emergence of institutional elder care in urban China. *Journal of the American Geriatrics Society*, **59**, 4, 738–44.

Fong, V. L. 2002. China's one-child policy and the empowerment of urban daughters. *American Anthropologist*, **104**, 4, 1098–109.

Ganong, L. and Coleman, M. 2005. Measuring intergenerational obligations. *Journal of Marriage and Family*, **67**, 4, 1003–11.

Ge, W. Y. 2010. She qu ju jia yang lao fu wu diao cha yu si kao [A survey concerning home-based service in the community]. *China Statistics*, **11**, 50–2.

Girling, L. M. and Morgan, L. A. 2014. Older women discuss planning for future care needs: an explanatory framework. *Journal of Aging and Health*, **26**, 5, 724–49.

Goode, W. J. 1963. *World Revolution and Family Patterns*. Free Press Glencoe, Oxford.

Guo, M., Chi, I. and Silverstein, M. 2013. Sources of older parents' ambivalent feelings toward their adult children: the case of rural China. *Journals of Gerontology: Psychological Sciences and Social Sciences*, **68B**, 3, 420–30.

He, Y. 2015. Lao lin wei yu ce dao 2035 nian wo guo lao nian ren kou jiang nian jun zeng zhang yi qian wan zuo you [National Committee on Aging in China predicted the average annual growth in elder population to be ten million from 2015 to 2035]. *News Broadcast*, 8 November, China National Radio, Beijing, China. Available online at http://china.cnr.cn/NewsFeeds/20151108/t20151108_520436518.shtml [Accessed 9 December 2015].

Herrera, A. P., Lee, J., Palos, G. and Torres-Vigil, I. 2008. Cultural influences in the patterns of long-term care use among Mexican American family caregivers. *Journal of Applied Gerontology*, **27**, 2, 141–65.

John, R., Resendiz, R. and de Vargas, L. W. 1997. Beyond familism? Familism as explicit motive for eldercare among Mexican American caregivers. *Journal of Cross-cultural Gerontology*, **12**, 2, 145–62.

Kim, J. H., Knight, B. G. and Longmire, C. V. 2007. The role of familism in stress and coping processes among African American and White dementia caregivers: effects on mental and physical health. *Health Psychology*, **26**, 5, 564–76.

Knight, B. G. and Sayegh, P. 2010. Cultural values and caregiving: the updated sociocultural stress and coping model. *Journals of Gerontology: Psychological Sciences and Social Sciences*, **65B**, 1, 5–13.

Lam, E. T., Lam, C. L., Fong, D. Y. and Huang, W. W. 2011. Is the SF-12 version 2 Health Survey a valid and equivalent substitute for the SF-36 version 2 Health Survey for the Chinese? *Journal of Evaluation in Clinical Practice*, **19**, 1, 200–8.

Lee, K. S. 2010. Gender, care work, and the complexity of family membership in Japan. *Gender & Society*, **24**, 5, 647–71.

Li, L. W., Long, Y., Essex, E. L., Sui, Y. and Gao, L. 2012. Elderly Chinese and their family caregivers' perceptions of good care: a qualitative study in Shandong, China. *Journal of Gerontological Social Work*, **55**, 7, 609–25.

Liu, M. and Hennock, M. 2008. Playing with the old blood rules. *Newsweek*, **151**, 11, 16.

Long, S. Q. and Feng, X. T. 2007. Cheng shi ju min de yang lao yi yuan ji qi ying xiang yin su-Dui jiang su si cheng lao nian sheng huo zhuang kuang de diao cha fen xi [Urban residents' aged-care selection and its affecting factors – an investigation of elder life in four cities in Jiangsu Province]. *Social Sciences in Nanjing*, **1**, 98–105.

Losada, A., Knight, B. G., Marquez-Gonzalez, M., Montorio, I., Etxeberria, I. and Penacoba, C. 2008. Confirmatory factor analysis of the Familism Scale in a sample of dementia caregivers. *Aging & Mental Health*, **12**, 4, 504–8.

Losada, A., Marquez-Gonzalez, M., Knight, B. G., Yanguas, J., Sayegh, P. and Romero-Moreno, R. 2010. Psychosocial factors and caregivers' distress: effects of familism and dysfunctional thoughts. *Aging & Mental Health*, **14**, 2, 193–202.

Losada, A., Robinson Shurgot, G., Knight, B. G., Marquez, M., Montorio, I., Izal, M. and Ruiz, M. A. 2006. Cross-cultural study comparing the association of familism with burden and depressive symptoms in two samples of Hispanic dementia caregivers. *Aging & Mental Health*, **10**, 1, 69–76.

Mak, W. and Sörensen, S. 2012. Trajectories of preparation for future care among first-degree relatives of Alzheimer's disease patients: an ancillary study of ADAPT. *The Gerontologist*, **52**, 4, 531–40.

Maloney, S. K., Finn, J., Bloom, D. L. and Andresen, J. 1996. Personal decisionmaking styles and long-term care choices. *Health Care Financing Review*, **18**, 1, 141–55.

National Health and Family Planning Commission of the People's Republic of China 2014. *Zhong Guo Jia Ting Fa Zhan Bao Gao 2014* [*China's Family Development Report 2014*]. China Population Publishing House, Beijing.

Peng, C.-Y. J., Lee, K. L. and Ingersoll, G. M. 2010. An introduction to logistic regression analysis and reporting. *Journal of Educational Research*, **96**, 1, 3–14.

Pinquart, M. and Sörensen, S. 2002. Factors that promote and prevent preparation for future care needs: perceptions of older Canadian, German, and U.S. women. *Health Care for Women International*, **23**, 6/7, 729–41.

Pinquart, M., Sörensen, S. and Davey, A. 2003. National and regional differences in preparation for future care needs: a comparison of the United States and Germany. *Journal of Cross-cultural Gerontology*, **18**, 1, 53–78.

Robison, J., Shugrue, N., Fortinsky, R. H. and Gruman, C. 2014. Long-term supports and services planning for the future: implications from a statewide survey of baby boomers and older adults. *The Gerontologist*, **54**, 2, 297–313.

Sabogal, F., Marin, G., Otero-Sabogal, R., Marin, B. V. and Perez-Stable, E. J. 1987. Hispanic familism and acculturation: what changes and what doesn't? *Hispanic Journal of Behavioral Sciences*, **9**, 4, 397–412.

San Antonio, P. M. and Rubinstein, R. L. 2004. Long-term care planning as a cultural system. *Journal of Aging & Social Policy*, **16**, 2, 35–48.

Scharlach, A. E., Kellam, R., Ong, N., Baskin, A., Goldstein, C. and Fox, P. J. 2006. Cultural attitudes and caregiver service use: lessons from focus groups with racially and ethnically diverse family caregivers. *Journal of Gerontological Social Work*, **47**, 1/2, 133–56.

Silverstein, M., Gans, D. and Yang, F. M. 2006. Intergenerational support to aging parents: the role of norms and needs. *Journal of Family Issues*, **27**, 8, 1068–84.

Sixsmith, A. and Sixsmith, J. 2008. Ageing in place in the United Kingdom. *Ageing International*, **32**, 3, 219–35.

Sörensen, S., Duberstein, P. R., Chapman, B., Lyness, J. M. and Pinquart, M. 2008. How are personality traits related to preparation for future care needs in older adults? *Journals of Gerontology: Psychological Sciences and Social Sciences*, **63B**, 6, P328–36.

Sörensen, S., Mak, W., Chapman, B., Duberstein, P. R. and Lyness, J. M. 2012. The relationship of preparation for future care to depression and anxiety in older primary care patients at 2-year follow-up. *American Journal of Geriatric Psychiatry*, **20**, 10, 887–94.

Sörensen, S. and Pinquart, M. 2000*a*. Preparation for future care needs by West and East German older adults. *Journals of Gerontology: Psychological Sciences and Social Sciences*, **55B**, 6, S357–67.

Sörensen, S. and Pinquart, M. 2000*b*. Vulnerability and access to resources as predictors of preparation for future care needs in the elderly. *Journal of Aging and Health*, **12**, 3, 275–300.

Sörensen, S. and Pinquart, M. 2001. Developing a measure of older adults' preparation for future care needs. *International Journal of Aging and Human Development*, **53**, 2, 137–65.

Steele, M., Pinquart, M. and Sörensen, S. 2003. Preparation dimensions and styles in long-term care. *Clinical Gerontologist*, **26**, 3, 105–22.

Survey Office of the National Bureau of Statistics in Shanghai 2014. *2013 Nian 1–4 Ji Du Cheng Shi Ju Min Jia Ting Ren Jun Shou Zhi Qing Kuang [Urban Household Income and Expenditure of the 1st to 4th Quarters in 2013]*. Available online at http://www.stats-sh.gov.cn/sjfb/201401/266445.html [Accessed 9 June 2014].

Taghizadeh Larsson, A. and Osterholm, J. H. 2014. How are decisions on care services for people with dementia made and experienced? A systematic review and qualitative synthesis of recent empirical findings. *International Psychogeriatrics*, **26**, 11, 1849–62.

Tang, C. S.-K., Wu, A. M. S., Yeung, D. and Yan, E. 2009. Attitudes and intention toward old age home placement: a study of young adult, middle-aged, and older Chinese. *Ageing International*, **34**, 4, 237–51.

Ting, K. F. and Chiu, S. W. K. 2002. Leaving the parental home: Chinese culture in an urban context. *Journal of Marriage and Family*, **64**, 3, 614–26.

United Nations 2013. *Word Population Ageing 2013*. United Nations, New York.

University of California, Los Angeles, Institute for Digital Research and Education 2015. *SPSS Data Analysis Examples Ordinal Logistic Regression*, 4 June. Available online at http://www.ats.ucla.edu/stat/spss/dae/ologit.htm [Accessed 9 November 2015].

Wee, S. L., Liu, C., Goh, S. N., Chong, W. F., Aravindhan, A. and Chan, A. 2014. Determinants of use of community-based long-term care services. *Journal of the American Geriatrics Society*, **62**, 9, 1801–3.

Wong, Y. C. and Leung, J. 2012. Long-term care in China: issues and prospects. *Journal of Gerontological Social Work*, **55**, 7, 570–86.
Wu, B., Carter, M. W., Goins, R. T. and Cheng, C. 2005. Emerging services for community-based long-term care in urban China: a systematic analysis of Shanghai's community-based agencies. *Journal of Aging & Social Policy*, **17**, 4, 37–60.
Zhan, H. J. 2004. Socialization or social structure: investigating predictors of attitudes toward filial responsibility among Chinese urban youth from one- and multiple-child families. *International Journal of Aging and Human Development*, **59**, 2, 105–24.
Zhan, H. J., Feng, X. T. and Luo, B. Z. 2008. Placing elderly parents in institutions in urban China: a reinterpretation of filial piety. *Research on Aging*, **30**, 5, 543–71.
Zhan, H. J., Liu, G. and Bai, H.-G. 2005. Recent development in Chinese elder homes: a reconciliation of traditional culture. *Ageing International*, **30**, 2, 167–87.
Zhang, F. Q. 2004. Economic transition and new patterns of parent–adult child coresidence in urban China. *Journal of Marriage and Family*, **66**, 5, 1231–45.
Zhang, W. J. and Wei, M. 2014. Cheng shi lao nian ren de ji gou yang lao yi yuan ji ying xiang yin su yan jiu-Yi bei jing shi xi cheng qu wei li [A study on factors associated with preferences for institutional care of the elderly in urban China: evidence from Xicheng District of Beijing]. *Population & Economics*, **6**, 22–34.

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