The Effects of Informal Social Support on Depressive Symptoms and Life Satisfaction in Dementia Caregivers in Hong Kong

非正式社交支持對香港失智症照顧者身心健康的影響

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Abstract

Objective: To explore the relative contributions of different types of informal social support towards the well-being of caregivers for patients with dementia in Hong Kong.

Participants and Methods: In this cross-sectional study, 134 caregivers for patients with dementia completed questionnaires assessing the informal social support available to them and its effect on their psychological well-being in terms of depressive symptoms and general life satisfaction.

Results: Informal social support was significantly associated with the well-being of caregivers for persons with dementia. The emotional support provided by spouses and children was found to have significant correlation with enhanced life satisfaction and decreased depressive symptoms in the caregivers.

Conclusions: Informal social support correlates strongly with psychological well-being in caregivers managing patients with dementia. Different sources and types of informal support can have differential effects on well-being.

Key words: Caregivers; Depressive disorder; Personal satisfaction; Social support; Stress, psychological

摘要

目的:研究非正式社交支持與失智症照顧者身心健康的關係。同時,探討哪一種非正式的社交 支持對照顧者有最大的影響。

參與者與方法:本橫斷面研究對象為134名失智症照顧者。他們分別接受問卷調查,內容包括不同 種類的支持,以及這些支持在抑鬱徵狀及對生活滿意程度兩方面的身心健康的影響。

結果:調查結果顯示,非正式的社交支持對照顧者的身心健康有着正面影響。而當中由伴侶或 子女所提供的精神上支持更能減少照顧者的抑鬱徵狀及提升對生活的滿意度。

結論:非正式的社交支持對維持失智症照顧者的身心健康有重大幫助,但不同人士所提供的非正式支持為照顧者帶來的影響存有差異。

關鍵詞:照顧者、抑鬱徵狀、個人滿意度、社會支持、心理壓力

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Introduction

Alzheimer's disease (AD) involves progressive degeneration of the brain, leading to impaired memory, thinking, behaviour, self-care and personality, and, eventually, death. In Hong Kong, approximately 60,000 people live with AD. This costs US\$1,129.7 million in 2005, including US\$260.6 million spent on home-based informal care.¹ The ecological theory was developed by Urie Bronfenbrenner² in the 1970s and has had a significant impact on the investigation of individual behaviour through multiple factors. According to this theory, every single person embeds into 4 layers: (1) the micro-system, the innermost layer; (2) the meso-system, the second layer; (3) the exo-system, the outer layer; (4) the macro-system, the outermost layer. In brief, the microsystem contains the structures with which the individual has direct contact, such as the family and school. The mesosystem refers to the connections between two or more micro-systems such as the family. The exo-system, which is a larger environmental system, exerts an indirect impact on the individual, and includes the social security and medical care systems. Lastly, the macro-system comprises the culture, the customs, and the legal, political, and economic systems, which in turn impact on all other systems. The emphasises ecological theory person-environmental exchanges across the lifespan. Through understanding the connections between caregivers and their different systems, professionals can better utilise the strengths of the systems and thereby choose the best possible interventions across the layers.

In the ecological theory, social support and its influence originate from different systems to exert impact on the individual. Social support has the potential to help us understand the dynamic interactions between the individual and the social environment.³ Albee⁴ argued for the prominent role of social support in his analyses linking prevention to the epidemiology of psychopathology. A negative correlation has been found between social support and depression in older adults and the caregivers of patients with dementia.^{5,6} It has been shown that the survival and quality of life of people with dementia is related to the well-being of their caregivers.⁷ Caregivers may experience adverse psychological, physical, social, and financial consequences. Many caregivers become socially isolated soon after adopting the caregiver role, leading to lower levels of psychological well-being.8,9

The caregiver role is crucial to community care of patients with dementia. Social support may relieve the burden on caregivers and help them adapt better to the caregiving role.¹⁰⁻¹² A recent meta-analysis of the dementia caregiver literature has established 2 major domains with important empirical influences on caregivers' adjustment in terms of burden and depression: firstly, the care demands posed by the care recipients' characteristics, and secondly the resources available to the caregivers.¹³ Successful interventions devised by clinicians and researchers reduced caregivers' distress, depression, psychological morbidity and delayed admissions to nursing homes, and improved patients' psychological well-being. Various task-specific and functionspecific models suggest that different sources of support serve different functions. Litwak¹⁴ advocated that various sources of support (e.g. friends versus spouse) typically provided different types of support (e.g. companionship versus housecleaning). Crohan and Antonucci¹⁵ found that family members often provided more instrumental support, whereas friends usually provided more emotional support and companionship. Weiss's functional-specificity model found that the individual's requirements for specific forms of support could be met only within certain relationships.¹⁶ When the same type of support was given by different sources, the impact was often not the same. In accordance with this theory, Simons¹⁷ asserted that it was merely the relationships between older participants and their spouses and children that determined feelings of security. Felton and Berry¹⁸ found that informational support to older adults contributed more to well-being when provided by kin than by non-kin, whereas emotional support contributed more to well-being when provided by kin than be en conducted in America and it is not clear whether it can be generalised to the Hong Kong Chinese population.

Hong Kong-based studies have illustrated the effectiveness of empowering caregivers through psychoeducational programmes involving both caregivers and patients.^{20,21} Factors contributing to subjective well-being have been found to be sensitive to cultural differences.²² No systematic attempts have been made to explore the relative significance of different kinds of informal social support according to the source (i.e. family versus friends) and functions (e.g. emotional versus instrumental) in Hong Kong. The present study aimed to investigate how different types of informal social support relate to caregiver well-being. We hypothesised that informal social support would predict higher levels of well-being in caregivers for patients with dementia. Moreover, the different types of support, classified according to source (spouse / children versus relatives / friends) and function (emotional versus instrumental) might have differential effects on the psychological outcomes measured in terms of depressive symptoms and general life satisfaction.

Methods

Participants

One hundred and thirty-four caregivers of patients with dementia (34 men and 100 women) were recruited from the Memory Clinic of the United Christian Hospital (at Yung Fung Shee Psychiatric Centre) and the Hong Kong Alzheimer's Disease Association - Jean Wei Centre. Seminars specially designed for the caregivers were arranged. All identified themselves as the primary family caregivers of the patients with AD, and indicated that they had given care to the patients for at least 6 months after the patient had been diagnosed with AD. Interviews were conducted either in the above settings or during home visits. All participants were able to read Chinese. Caregivers were excluded from the study if they exhibited evidence of significant intellectual impairment, suicidal ideation, or psychotic features. Written informed consent was obtained from all caregivers.

The care recipients were 134 patients with AD who were voluntarily recruited from the Memory Clinic of the United Christian Hospital (at Yung Fung Shee Psychiatric Centre) and the Hong Kong Alzheimer's Disease Association – Jean Wei Centre. They received either outpatient care or follow-up from these two centres. The AD diagnosis was established by senior psychiatrists from the respective centres, based on the diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders – 4th Edition.²³

Measures

Caregivers' demographic data included age, gender, educational level, number of siblings, number of children, income level, duration of and average number of hours spent in caregiving. Care recipients' characteristics included age, educational level, and cognitive functioning level. Administered in Chinese, the following questionnaires were used to assess caregivers' informal social support, depressive symptoms, and general life satisfaction.

Measures of Informal Social Support

The MacArthur Social Support Scale¹⁹ assesses the frequency of receipt of 3 categories of social support: emotional support, instrumental support and negative interaction involving conflict or excessive demands. The support evaluated was drawn from 2 sources: (1) spouse and children, and (2) relatives and friends. Since these sources come from informal social support systems, the above 3 categories of social support.

The emotional support was measured using 2 items: (1) "How often does / do your (spouse and children / relatives and friends) make you feel loved and cared for?" (2) "How often does / do your (spouse and children / relatives and friends) listen to your worries?" Each item was asked twice, targeting the source of support. Another 2 items assessed the extent to which the caregivers received instrumental support: (1) "How often can you count on your (spouse and children / relatives and friends) to help with daily tasks like shopping or help you with household tasks?" (2) "How often does / do your (spouse and children / relatives and friends) give you advice or information about medical, financial, or family problems?" Negative interaction was assessed by asking how often family or friends "demand so much" or "criticise the caregiver". The participants scored each item on a 5-point Likert Scale ranging from 0 (never) to 4 (frequently).

The scores for each type of support were summed up under the specific source (e.g. emotional support provided by spouse / children, emotional support provided by relatives / friends). For emotional support and instrumental support, higher total scores represented greater support given to the caregivers, whereas a lower total score for negative interaction also indicated better support for caregivers. The Chinese version was developed using parallel translation and back translation by a team consisting of a clinical psychologist, a sociologist, and 2 social workers, all being fluent in English and Chinese.

Centre for Epidemiological Studies Depression Scale

Depressive symptoms were assessed using Radloff's²⁴

Centre for Epidemiological Studies Depression (CES-D) Scale, which is a 20-item measure of depression used in the general population. It does not aim to detect general psychiatric disorders, but to measure the presence and severity of depressive symptomatology as well as the occurrence of each symptom in the past week (e.g. I feel lonely). According to Radloff,²⁴ scores of 16 and above are normally equated with clinical depression. The Chinese version of the CES-D has been validated by earlier studies.²⁵

General Life Satisfaction Scale

The General Life Satisfaction Scale (GLSS²⁶) is a brief scale containing 6 items. These items are used to measure a respondent's satisfaction with his / her current life. The first 5 items depict positive feelings that are (1) "My current life is similar to my ideal life", (2) "My current living conditions are very good", (3) "I am satisfied with my current life", (4) "Up to now, I have already experienced the most important things that I want from life", and (5) "If I had to live my life again, I would hope to maintain my current living circumstances". The respondents needed to rate each item on a 7-point Likert scale. The 6th item rated the respondent's general satisfaction with his / her whole life from 1 (very bad) to 7 (great pleasure). A higher total score implied greater satisfaction with life.

Procedure

Ethical approval was obtained from the Kowloon Central and Kowloon East Cluster Clinical Research Ethics Committee of the Hospital Authority. Interviewers were given interviewing skills training. Data were collected from September 2007 till March 2008. All caregivers were given a note explaining the objectives of the study and the contents of the questionnaires while they were attending medical appointments for the care recipients or social activities at the centres. All available caregivers were invited to participate. The refusal rate was 5%. Upon giving their informed consent, caregivers underwent structured interviews conducted before or after the medical appointments or social activities by a trained research assistant. The patients' most recent (within 3 months before the interview) Cantonese Mini-Mental State Examination²⁷ (CMMSE) scores were obtained from their medical records.

Statistical Analysis

The demographic characteristics of the primary caregivers are presented in Table 1. The mean scores for each category of informal social support (i.e. emotional support, instrumental support, and negative interaction) provided by each source (i.e. family: spouse / children versus relatives / friends) were individually calculated. The dimensionality of the 12 items from the MacArthur Social Support Scale was analysed using a maximum likelihood factor analysis. The caregivers' receipt of informal social support from significant others was assessed using the MacArthur Social Support Scale. Bivariate correlation analyses were

Characteristic	Mean (SD)
Age (years)	54.5 (13.2)
Gender (male / female)	34 / 100
Years in education	11.9 (4.9)
Number of siblings	2.7 (2.3)
Number of children	2.1 (1.6)
Duration of caregiving (years)	3.1 (2.2)
Average hours of caregiving	10.0 (9.5)
Total household income (in US\$ per month)	3000.9 (1202.8)
Emotional support of spouse and children	5.4 (2.0)
Emotional support of relatives and friends	4.2 (2.1)
Instrumental support of spouse and children	3.9 (2.3)
Instrumental support of relatives and friends	1.8 (1.9)
Negative interaction with spouse and children	2.0 (1.9)
Negative interaction with relatives and friends	1.0 (1.3)
CES-D total score	12.9 (9.3)
GLSS total score	25.1 (7.3)

Table 1. Characteristics of the caregivers (n = 134).

Abbreviations: *SD* = standard deviation; *CES-D* = Centre for Epidemiological Studies Depression Scale; *GLSS* = General Life Satisfaction Scale.

conducted to examine the relationship between each category of support provided by a particular source and caregivers' psychological well-being in terms of depressive symptoms and life satisfaction. In order to investigate how well informal social support could predict the caregivers' psychological well-being, step-wise regression analyses were carried out. In this study, regression equations were established and tested for 2 dependent variables: one for depressive symptoms and the other for life satisfaction. Only those independent variables (i.e. a specific kind of social support provided by a particular source) significantly correlating with the dependent variables were considered in the statistical regression. Statistical significance was set at p < 0.05 level.

Results

Descriptive Analysis

The 134 caregivers participating in this study were 77 adult children (57.5%), 39 spouses (29.1%), 10 daughters- and sons-in-law (7.5%), 5 relatives (3.7%), 2 friends (1.5%) and 1 granddaughter (0.7%). The mean age of caregivers was 54.5 (standard deviation [SD], 13.2) years. Most were aged between 40 and 65 years (n = 96; 71.6%), and 30 were over 65 years (22.4%). They had been assisting the care-

Table 2. Characteristics of the patients with dementia (n = 134).

Characteristic	Mean (SD)
Socio-demographic	
Age (years)	80.0 (7.0)
Gender (male / female)	58 / 76
Years in education	6.6 (5.7)
Number of siblings	0.9 (1.4)
Number of children	3.7 (1.9)
Onset of dementia (years)	2.9 (1.9)
Cognitive functioning	
CMMSE score	14.8 (5.5)
Abbreviations: $SD = standard devia$	tion: CMMSE -

Abbreviations: SD = standard deviation; CMMSE = Cantonese Mini-Mental State Examination.

recipients for a mean of 3.1 (SD, 2.2) years and providing daily caregiving for a mean of 10.0 (SD, 9.5) hours. Among the caregivers, 57 were employed (42.5%) [Table 1]. As for the 134 patients with dementia, they had a mean onset period of 2.9 (SD, 1.9) years. Their mean age was 80.0 (SD, 7.0) with 130 patients aged 65 years or above (97.0%); 58 (43.3%) of them were male (Table 2).

The caregivers received greater emotional support from family (mean, 5.4; SD, 2.0) than relatives and friends (mean, 4.2; SD, 2.1). They obtained more instrumental support from family (mean, 3.9; SD, 2.3) than relatives and friends (mean, 1.8; SD, 1.9). The caregivers experienced more frequent negative interaction with family (mean, 2.0; SD, 1.9) than with relatives and friends (mean, 1.0; SD, 1.3). The caregivers were not classified as having clinical depression on the CES-D Scale (mean, 12.9; SD, 9.3). Their mean score for life satisfaction on the GLSS was 25.1 (SD, 7.3). The cognitive functioning of the patients with dementia was represented by the CMMSE score (mean, 14.8; SD, 5.5) in Table 2.

Factor Analysis

The Cronbach's alpha coefficient of the MacArthur Social Support Scale was 0.78. Four factors were rotated using a Varimax rotation procedure. The rotated solution, as shown in Table 3, yielded 4 interpretable factors: (1) emotional and instrumental support by relatives and friends, (2) emotional and instrumental support by spouse and children, (3) negative interaction with spouse and children, and (4) negative interaction with friends and relatives. Factor 1 was made up of items 2, 4, 6 and 8. Factor 2 was composed of items 1, 3, 5 and 7. Factor 3 consisted of items 9 and 11. Factor 4 included items 10 and 12. The percentages accounting for factor 1, factor 2, factor 3, and factor 4 items were 20.8%, 20.7%, 15.2%, and 13.9% respectively. Before running the correlations between the MacArthur social support variables and the CES-D and the GLSS, a factor analysis for social support subscales was adopted and referenced to the previous research.19

Items	Factor loadings								
	Emotional and instrumental support by friends and relatives	Emotional and instrumental support by spouse and children	Negative interaction with spouse and children	Negative interaction with friends and relatives					
 How often does/ do your [spouse and children] make you feel loved and cared for? 	0.11	0.88	-0.12	0.05					
2. How often does/ do your [relatives and friends] make you feel loved and cared for?	0.77	0.24	-0.08	0.02					
3. How often does/do your [spouse and children] listen to your worries?	0.15	0.84	-0.20	0.12					
4. How often does/do your [relatives and friends] listen to your worries?	0.84	0.06	-0.13	0.09					
5. How often can you count on your [spouse and children] to help with daily tasks like shopping, or help you with household tasks?	0.30	0.58	0.33	-0.26					
6. How often can you count on your [relatives and friends] to help with daily tasks like shopping, or help you with household tasks?	0.64	0.23	0.22	0.14					
7. How often does/do your [spouse and children] give you advice or information about medical, financial, or family problems?	0.10	0.74	0.25	-0.05					
8. How often does/do your [relatives and friends] give you advice or information about medical, financial, or family problems?	0.77	0.03	0.30	0.09					
9. How often does/do your [spouse and children] make too many demands on you?	0.12	0.00	0.83	0.22					
10. How often does/do your [relatives and friends] make too many demands on you?	0.17	0.10	0.22	0.84					
11. How often does/do your [spouse and children] criticize you?	0.00	0.10	0.80	0.26					
12. How often does/do your [relatives and friends] criticize you?	0.10	-0.09	0.25	0.85					

Table 3. Factor analysis of the MacArthur Social Support Scale (n = 134).

Correlation Analysis

With respect to depressive symptoms in caregivers, the emotional support from spouse / children (r = -0.28, p < 0.01), emotional support of relatives / friends (r = -0.22, p < 0.01), and instrumental support of relatives / friends (r = -0.23, p < 0.01) had significantly negative associations with

Table 4. The bivariate correlation between informal social support and depressive symptoms and life satisfaction.

MacArthur Social Support Scale	CES-D	GLSS
Emotional support of spouse and children	-0.28*	0.35*
Emotional support of relatives and friends	-0.22*	0.25*
Instrumental support of spouse and children	-0.16	0.26*
Instrumental support of relatives and friends	-0.23*	0.11
Negative interaction with spouse and children	0.10	-0.30*
Negative interaction with relatives and friends	-0.10	-0.21*

Abbreviations: CES-D = Centre for Epidemiological Studies Depression Scale; GLSS = General Life Satisfaction Scale. * p < 0.01.

 $p^{\dagger} p < 0.05.$

= 0.25, p < 0.01), as well as instrumental support from family (r = 0.26, p < 0.01) had positive relationships with the GLSS mean score. In contrast, a negative interaction with family (r = -0.30, p < 0.01) and relatives / friends (r = -0.21, p < 0.05) correlated negatively with the GLSS mean score (Table 4).

Regression Analysis

For depressive symptoms, only 3 variables — "emotional support of family", "emotional support of relatives / friends", and "instrumental support of relatives / friends" — were entered into the analysis with the CES-D score as the dependent variable. As shown in Table 5, "emotional support of spouse / children" ($\beta = -0.24$, p < 0.01) and "instrumental support of relatives / friends" ($\beta = -0.19$, p < 0.03) reaching statistically significant levels were included in the full model. The full model was significant (F [2, 131] = 8.25, p < 0.01) and explained 11% of the variance ($R^2 = 0.11$). The largest R^2 change occurred in the first step of the

regression equation (R^2 change = 0.08; F [1, 132] = 11.04, p < 0.01). The emotional support provided by spouse / children (t = -2.91, p < 0.01) was the most significant correlate predicting depressive symptoms in caregivers.

The second regression was conducted to look into the predictors of life satisfaction for caregivers. All informal social support factors except "instrumental support of relatives / friends" were considered at this statistical stage with the dependent variable being the GLSS score. The regression results informed us that 3 variables reached a statistically significant level in the full model. These were "emotional support of spouse / children" ($\beta = 0.28$, p < 0.01), "negative interaction with spouse / children" ($\beta = -0.30$, p < 0.01), and "emotional support of relatives / friends" ($\beta = 0.18$, p < 0.03). Overall, the full model was significant (F [3, 130] = 12.96, p < 0.01) and explained 23% of the variance ($R^2 = 0.23$). The largest R^2 change occurred in the first step of the regression equation (R^2 change = 0.12; F [1, 132] = 17.90, p < 0.01). The R^2 change became smaller (0.08) when "negative interaction with spouse / children" was added and even smaller (0.03) when "emotional support of relatives / friends" was included. Again, the factor of emotional support provided by spouse / children (t = 3.38, p < 0.01) was the most significant correlate predicting life satisfaction in caregivers.

Discussion

This study explored the relative significance for primary family caregivers of patients with dementia in Hong Kong of different kinds of informal social support according to their source (i.e. family versus friends) and functions (e.g. emotional versus instrumental). The results supported our hypotheses that informal social support would contribute to better psychological well-being among the caregivers. Support serving various functions and coming from different sources exerted different effects on the caregivers' depressive symptoms, as well as their life satisfaction levels.

Regardless of the function of social support, family (i.e. spouse / children) furnished the primary family caregivers of patients with dementia with greater support than did relatives / friends. Of 6 informal social support factors derived from the MacArthur Social Support Scale,

Table 5. Stepwise regression with study variables regressed on caregiver depressive symptoms (n = 134).

Variable		Ste	ep 1		Step 2				
	В	SE	β	t	В	SE	β	t	
Emotional support of spouse and children	-1.28	0.38	-0.28	-3.32*	-1.12	0.39	-0.24	-2.91*	
Instrumental support of relatives and friends					-0.94	0.42	-0.19	-2.26†	
	$R^2 = 0.08$	<i>R</i> ² change 11.	e = 0.08, F(0.04)	(1, 132) =	$R^2 = 0.11, R^2$ change = 0.04, $F(2, 131) = 8.25^*$				

Abbreviations: B = unstandardised coefficient; SE = standard error; β = standardised coefficient; t = t-value.

* p < 0.01.

p < 0.03.

Table 6. Stepwise regression with study variables regressed on caregiver life satisfaction (n = 134).

Variable	Step 1				Step 2				Step 3			
	B	SE	β	t	B	SE	β	t	B	SE	β	t
Emotional support of spouse and children	1.25	0.30	0.35	4.23*	1.21	0.28	0.33	4.26*	1.00	0.30	0.28	3.38*
Negative interaction with spouse and children					-1.08	0.30	-0.29	-3.64*	-1.15	0.30	-0.30	-3.90*
Emotional support of relatives and friends									0.62	0.28	0.18	2.25†
	$R^2 = 0.12, R^2$ change = 0.12, F (1, 132) = 17.90 [*]			$R^2 = 0.20, R^2$ change = 0.08, $F(2, 131) = 16.41^*$			$R^2 = 0.23, R^2$ change = 0.03, $F(3, 130) = 12.96^*$					

Abbreviations: B = unstandardised coefficient; SE = standard error; β = standardised coefficient; t = t-value. * p < 0.01.

p < 0.01.

"emotional support of spouse / children" and "instrumental support of relatives / friends" correlated significantly with depressive symptoms in caregivers. In contrast, caregiver life satisfaction was predicted by "emotional support of spouse / children", "negative interaction with spouse / children", as well as "emotional support of relatives / friends". It is noted that emotional support given by family made the largest unique statistically significant contribution to the psychological well-being of the caregivers. A higher level of emotional support from the family considerably contributed to lower levels of depressive symptoms and enhanced general life satisfaction.

Bronfenbrenner's ecological theory² proposed that a person is living within the context of a system that is full of relations forming his / her environment. The theory has defined complex layers of the environment, and each layer has an effect on the individual. This theory emphasises exchanges occurring between the person and his environment throughout the life course, and is supported by our current study. The psychological well-being of caregivers managing patients with dementia was influenced by the social support provided by their families and also friends, who are located in the innermost layer of the system. Our findings agree with Albee's study⁴ showing that social support has a prominent role in the prevention of psychopathology, and they also concur with studies^{28,29} suggesting that elderly Hong Kong people receiving better social support are likely to report fewer depressive symptoms and higher levels of life satisfaction.

Emotional and instrumental supports serve the caregivers in quite different ways. Emotional support is essential for meeting the caregivers' sentimental needs. These caregivers are often burdened with heavy loads of distress, resulting in unfavourable physical, psychological, and financial consequences. Baumgarten et al³⁰ found that depressive symptoms are 2 times more common among caregivers than non-caregivers. In Hong Kong, about 46.7% of Alzheimer's caregivers have depressive symptoms.³¹ Many studies have documented that caregiver depressive

symptoms attributed to the provision of care are associated with increased psychological distress caused by the strain of witnessing and adapting to the family member's cognitive, behavioural, and personality changes.^{32,33} Providing emotional support to the caregivers, such as showing regard for their feelings, can make them feel being loved and cared for, and thus relieve the psychological distress induced by caregiving. Instrumental support fulfilled the caregivers' practical life needs, offering caregivers assistance with daily life, for instance, help with household chores and advice on medical and financial issues. Instrumental support helped reduce caregivers' physical strains and psychological distress. Our results suggest that emotional support benefits caregiver well-being to a greater extent than does instrumental support.

The source of support also has a significant effect on the psychological well-being of the caregivers. Even when the same type of support (e.g. emotional) was provided to the caregivers, the different sources of support had dissimilar effects on their well-being. The outcomes of this study confirm Weiss's functional-specificity model, which advocates that an individual's requirements for specific forms of support can be only fulfilled by certain relationships. In this study the caregivers receiving increased levels of emotional support from their spouses / children (but not from relatives / friends) and instrumental support from relatives / friends (but not from spouses / children) tended to develop fewer depressive symptoms. Negative interactions with spouses / children (but not relatives / friends) could lead to poorer satisfaction with life. Too many demands and criticisms from family members undoubtedly impair caregivers' lives. One source of conflict between caregivers and family members is differences in beliefs about the disability of the patient, especially its seriousness, and suitable coping strategies. Disagreements over the amount and quality of caregiving given to the patient are also sources of distress.³⁴ It appears that the support given by the spouse and children play a significant role in promoting the psychological well-being of caregivers and was more important than the support offered by relatives and friends.

There may be cultural differences in the effectiveness of informal social support. Antecedent research¹⁸ has found that the emotional support provided by non-kin rather than by kin contributed more to the well-being of American older adults. In contrast, our study has shown that the emotional support provided by spouses / children had a significant contribution to the psychological well-being of caregivers in Hong Kong. This might be related to differences between western and Chinese culture. Chinese culture emphasises family relations, with the spouse and the children being regarded as core family members. Chinese caregivers might pay more attention to the emotional support given by core family members than that from non-core relatives / friends. Consequently, caregivers might rely on the emotional support offered by core family members to enhance their well-being.^{20,21}

Use of a cross-sectional study design imposed a methodological limitation on our research because it could not affirm the causality between informal social support and depressive symptoms and general life satisfaction. Future research may benefit from adopting a longitudinal approach to examine causality. Moreover, this study only assessed how the informal social support provided by family and friends might influence the psychological well-being of the caregivers. There are certainly other factors affecting the interpretation of the results. These include selection bias and the sampling frame, as data were collected from 2 sites. Moreover, the physical and mental condition of the patients and caregivers may have been confounding variables affecting the results.

To conclude, these findings have highlighted how the psychological well-being of caregivers for patients with dementia can be influenced and enhanced by particular types of informal social support. The emotional support given by the spouse and children was the most influential determinant.

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