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A gendered analysis of symptom severity and perceived social support of Hong Kong Chinese parents with depression

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ABSTRACT

This paper reports on significant gender differences in psychological distress and perceived social support (PSS) among a clinical sample of Hong Kong Chinese depressed parents ($N_{\text{men}} = 17$, $N_{\text{women}} = 94$; 73.8% belonging to 30–50 age group). Men's mental health and PSS were found to relate to their employment status, while women's to family income and family origin. PSS had positive effects on psychological well-being of both genders, while gender-specific effects were found for some subtypes of PSS. The results of our study contributed a gendered perspective and validated the importance of PSS to understanding and helping depressed parents' recovery.

KEYWORDS

Depression; perceived social support; Chinese parents; women immigrants

Introduction

Depression is characterized by clinical symptoms, such as excessive unhappiness, disturbed sleep and/or appetite, and loss of energy; it causes significant distress/impairment in various aspects of the individual's psychosocial functioning (American Psychiatric Association [APA], 2013), and also negatively influences both individual family members' wellbeing and overall family functioning. The World Health Organization (2017) reported that 4.4% of the world's population suffered from depression in 2015, with prevalence higher among females (5.1%) than males (3.6%) and peaking in older adulthood (65 and above). In Hong Kong, the prevalence of common mental disorders (CMD, referring to a range of depressive and anxiety disorders) among people aged 16–75 was 13.3%, with mixed anxiety and depressive disorder (MADD) (6.9%) ranking first among the different kinds of CMD (Lam et al., 2015). The number of patients with depression receiving psychiatric services via the Hospital Authority has been increasing (from 48,900 in 2011–12 to 61,100 in 2015–16) (HKSAR Government, 2017). As in the rest of the world, more women than men in Hong Kong suffer from depression; however, age has a different effect on MADD, with the prevalence of CMD and

MADD peaking among the 26–45 age group (Lam et al., 2015) instead of among the elderly. This demographic is usually referred to as the “stressed sandwich generation” (Bowen & Riley, 2005) – adults who have established their careers and families and who are caring for both young children and aging parents. They are highly likely to be overloaded physically and psychologically because of their multiple social roles (i.e., employees and carers) and the occurrence of various negative life events. Parenting stress, marital problems, unemployment, financial difficulties, long working hours, health problems, and bereavement are general risk factors in this group, leading to mental health problems such as depression and related disorders (Lam et al., 2015; Ma, Wong, Lau, & Lai, 2011; Virtanen et al., 2011). Moreover, these adults usually do not experience one stressor in isolation but instead face multiple disadvantages at once.

Gender and depression

Studies on the occurrence and chronicity of depression among adults suggest that the above factors may affect men and women differently. Mothers usually have higher parenting stress than fathers, and marital/family problems and spouse departure contribute to women’s depression more than to that of men (possibly because women tend to be more relationship-oriented), while employment and financial pressures are more depressogenic for men than for women (probably because of men’s traditional role, in many cultures, as the family breadwinner) (Kessler, 2003). Evidence shows a positive association between long working hours and depression/anxiety, especially for married women and people experiencing financial difficulties (Ju et al., 2018; Virtanen et al., 2011).

Gender differences in depression have been thoroughly studied from the perspectives of biology (i.e., hormones and personality traits), psychology (i.e., ways of coping with stress) and sociology (i.e., social roles and socialization experiences), with increasing emphasis on the interplay of multiple characteristics (Ballou & Brown, 2002). The accumulating evidence of the intersectionality of gender with socio-economic characteristics such as class, employment, education, race/ethnicity in depression (Jack & Ali, 2010) suggests the importance both of employing a feminist lens and of considering the social-cultural context in understanding and treating depression, especially for married people with children who have multiple social roles and thus multifaceted interactions with society.

Hong Kong is a society with an advanced knowledge-based economy but with conventional values on family life and gender roles: married women do far more of the household chores and the caregiving for the young and the elderly than do men, while suffering institutional and practical discrimination in the workplace (Equal Opportunities Commission, 2018; Ho, 2001).

Therefore, a feminist perspective that recognizes the sociocultural roots of (women's) psychological distress, the power structures in interpersonal relationships and in larger systems, and the intersectionality between gender and various socio-demographic characteristics (Ballou & Brown, 2002) is a must in examining adult depression in Hong Kong. The long-lasting and increasing cross-border tension and political conflicts with mainland China (Lee & Chou, 2018; Zhang, 2020) also prompted this research to consider migration status while examining the condition of depressed people in Hong Kong, as immigrants have been taking up almost 40% of its population since 1995, with the majority of them coming from mainland China (HKSAR Government, 2017; Macrotrends, 2020). Most of them are mainland women (i.e., 77.8% of mainland immigrants in 2006 were female), who have been reunited with their Hong Kong spouses under the one-way permit policy since 1997 (The Hong Kong Council of Social Service, 2012). Most mainland migrants experience multiple disadvantages in Hong Kong society: lower incomes, poorer education, fewer labor- and housing-market opportunities, and adaptation difficulties (Law & Lee, 2006). Although migration was not significantly correlated with depression in the study by Lam et al. (2015), an earlier study (Chou, 2012) pointed to this connection.

Depression and social support

Social support has been viewed as a factor both preventing the onset of depression and facilitating recovery, and perceived social support (PSS) was more negatively correlated with depression in comparison with received support, because it is the perceived availability of support from loved ones that can buffer the worries of life problems and daily hassles (Ibarra-Rovillard & Kuiper, 2011).

Different types (i.e., emotional, instrumental, informational, and companionship) and sources (i.e., family, friend, social services) of social support might have different effects on depression, and this may also be affected by differences in stressors, gender, age and cultural backgrounds. For example, Grav, Hellzèn, Romild, and Stordal (2012) revealed a greater need for *emotional* support among women but a greater need of *tangible* support among men (especially elderly men) in a community sample in Norway (N = 40,659). Similar results were found in one study of mainland Chinese elderly (Community sample, N = 209) (Wang & Zhao, 2012), but not in another study of mainland Chinese depressive elderly (N = 100) (Wang, Miller, & Zhao, 2014). Leung, Chen, Lue, and Hsu (2007) found that emotional support from the family was more important than instrumental support in buffering the anxiety and depression symptoms of a group of Taiwanese elderly with cognitive impairment (N = 865). As for the function of different sources of PSS for depressed people, the findings are also mixed. Wang and Zhao (2012)

reported significant negative relation of the elderly's depression to the degree of PSS from family, friends and significant others, especially friends' support. Studies on adolescents have demonstrated the robust effect of family support in protecting against depression (Stice, Ragan, & Randall, 2004), in particular, for those who are under high stress (Cheng, 1997). For new immigrants, social support plays a critical role in alleviating individuals' psychological distress and also in moderating the effect of perceived discrimination on depression (Chou, 2012), with sense of community connection being the most effective source of PSS for adult women (Wu & Chow, 2013).

Gender differences in the effect of social support on depression have also been found in some studies, with low social support having a greater negative impact on coping for women than for men (Boughton & Street, 2007). The availability of and satisfaction with close support have also been shown to have a significant mitigating effect on women's depression; for men, living in a marital relationship, absence of negative social interactions and the number of friends or acquaintances are significant predictors for recovery from depression (Boughton & Street, 2007).

The literature indicates the different characteristics of depressed women and men. However, the evidence is mixed, and no study has been developed in a Chinese context to investigate the condition of middle-aged depressed parents from a feminist perspective, or to explore the protective role of PSS (of different types and sources) in parental depression. To fill the knowledge gap, this study examined the psychological condition and PSS of a group of HK Chinese parents with depression, in order to address three research questions: (1) What demographic characteristics are related to the severity of the psychological distress and to the PSS of depressed parents? (2) How is depression related to the different types and sources of PSS? (3) Does the relationship between depression and PSS differ according to gender?

Three sets of hypotheses were formulated for testing: (1) both the severity of psychological distress and the level of PSS would differ significantly according to the selected demographic characteristics, namely gender, age, education, employment, marital status, family income and family of origin; (2) the severity of psychological distress would be negatively correlated with the degree of both overall PSS and PSS of each type and source; (3) there would be gender differences on the associations between the depression severity and the different types and sources of PSS.

Method of the study

Participants

Participants in this study were recruited through four psychoeducational talks for people with depression and their family members, held from 2016

to 2019. The talks were jointly organized by the authors and a collaborating social service agency and were targeted at Chinese families with parent(s) in recovery from depression. The participants attended the talks voluntarily, wishing to learn ways of coping with their own depression or that of the family member. A total of 240 people attended the talks and completed the questionnaire, but only half of them met the study's inclusion criteria: (1) having received a clinical diagnosis of depression; (2) able to understand either Cantonese (Hong Kong's local dialect) or Mandarin (the national language of mainland China); and (3) having at least one child under the age of 20. Ineligible participants and those whose questionnaires had too much missing data (more than half of the total items) were excluded.

Table 1 presents the 111 valid cases (94 women and 17 men) used in this analysis. Most of them were aged 41–50 (38.7%) and 31–40 (35.1%), and the average number of children per family was 1.73, with the majority (44.1%, $n = 49$) having two children. Participants' marital status varied, with the majority (51.4%, $n = 57$) still married. Most of the participants had completed secondary education (65.7%, $n = 73$) and about one-fifth (18%, $n = 20$) had a college education or more. There were more participants not working (unemployed or retired) (55.9%, $n = 62$) than those who had full- or part-time jobs (42.3%, $n = 47$). 66.6% of the participants ($n = 74$) came from low-income families, with median monthly household income lower than US\$2,293, which was between the HK poverty lines for 3-person (US\$1,933) and 4-person households (US\$2,564) (Census and Statistics Department, 2018). Most of them were Hong Kong natives (57.7%), with 29.7% coming from mainland China and 12.6% unknown due to missing data.

Gender differences were insignificant for all socio-demographic characteristics, except employment status and place of family of origin. The majority of the male participants had full-time jobs (58.8%, $n = 10$), while over half of the female participants were unemployed (61.7%, $n = 58$), with $X^2 = 27.053$, $p < .001$. Among the 97 participants who gave the place of their family of origin, there were significantly more women (34%, $n = 32$) than men (5.9%, $n = 1$) born in mainland China, with $X^2 = 6.583$, $p < .05$.

Data collection

With informed consent, participants were asked to complete a self-administered standardized questionnaire at the beginning of each talk. The first author helped less-educated participants with the task, if needed, by reading out the questions verbatim. The ethical approval was obtained from the Ethics Committee of The Chinese University of Hong Kong.

Table 1. Socio-demographic background of parents (N = 111).

	Overall (N = 111)		Male (N = 17)		Female (N = 94)		Chi square(gender difference)
	(N)	%	(N)	%	(N)	%	
Age							5.892
<30	(1)	0.9	(0)	0	(1)	1.1	
31–40	(39)	35.1	(3)	17.7	(36)	38.3	
41–50	(43)	38.7	(6)	35.2	(37)	39.3	
>51	(28)	25.2	(8)	47.1	(20)	21.3	
Family of origin							6.583*
Hong Kong (Native)	(64)	57.7	(15)	88.2	(49)	52.1	
Mainland China (Non-native)	(33)	29.7	(1)	5.9	(32)	34.0	
Missing	(14)	12.6	(1)	5.9	(13)	13.8	
Child number							.284
1	(40)	36.0	(6)	35.3	(34)	36.2	
2	(49)	44.1	(7)	41.2	(42)	44.6	
3 or more	(12)	10.8	(2)	11.8	(10)	10.6	
Missing	(10)	9.0	(2)	11.8	(8)	8.5	
Marital status							.142
Married	(57)	51.4	(13)	76.5	(44)	46.8	
Divorced	(37)	33.3	(4)	23.5	(33)	35.1	
Widowed	(7)	6.3	(0)	0.0	(7)	7.4	
Others (separated)	(7)	6.3	(0)	0.0	(7)	7.4	
Missing	(3)	2.7	(0)	0.0	(3)	3.2	
Educational background							3.084
Primary or below	(15)	13.5	(2)	11.8	(13)	13.8	
Junior secondary	(32)	28.8	(6)	35.3	(26)	27.7	
Senior secondary	(41)	36.9	(3)	17.7	(38)	40.4	
Higher education or above	(20)	18.0	(4)	23.6	(16)	17.0	
Missing	(3)	2.7	(2)	11.8	(1)	1.12	
Employment							27.053***
Full time	(24)	21.6	(10)	58.8	(14)	14.9	
Part time	(23)	20.7	(4)	23.5	(19)	20.2	
Retired	(3)	2.7	(2)	11.8	(1)	1.06	
Unemployed	(59)	53.2	(1)	5.9	(58)	61.7	
Others or missing	(2)	1.8	(0)	0.0	(2)	2.1	
Monthly household income							.214
<HK\$8,000 (<US\$1019)	(31)	27.9	(2)	11.8	(29)	34.5	
HK\$8,000 (US\$1019) – HK\$18,000 (US\$2293)	(43)	38.7	(9)	52.9	(34)	40.4	
HK\$18,000 (US\$2293) – HK\$28,000 (US\$3567)	(9)	8.1	(1)	5.9	(8)	9.5	
HK\$28,000 (US\$3567) – HK\$38,000 (US\$4841)	(7)	6.3	(3)	17.7	(4)	4.8	
>HK\$38,000 (>US\$4841)	(10)	9.0	(1)	5.9	(9)	10.7	
Missing	(1)	0.9	(1)	5.9	(0)	0.0	

Measures

Standardized scales were used to assess the participants' psychological distress and perceived social support in addition to the sociodemographic data.

The *Brief Symptom Inventory (BSI)*, adapted from the Derogatis Symptom Checklist revised (SCL-90-R), is a widely used instrument with high validity and reliability to assess self-reported psychological distress and symptoms in both clinical and community populations across different societies (Derogatis & Savitz, 2000; Wang, Kelly, Liu, Zhang, & Hao, 2013). The short version adopted in this study has 18 items (BSI-18 for short) and measures the three most common types of psychological distress – anxiety, somatization and depression – with each subscale consisting of six items. Respondents were

asked to rate on a 5-point Likert scale (from 0 = not at all to 4 = extremely) how distressed they had felt by each symptom during the past week. The internal consistency reliability for the BSI-18 ranges from .74 to .90 (Wang, Zhao, Liu, & Ma, 2012). Its reliability in this study was high, with Cronbach's $\alpha = .96$.

The *Perceived Social Support Scale (PSS)* was modified from the scale that Ma (1996) developed to identify cancer patients' PSS, both overall and four subtypes (emotional, informational, affiliation, and tangible), from three sources (family, friends and medical professionals). The original scale had a highly satisfactory reliability, with Cronbach's α ranging between .83 and .90. The modified scale also measured overall PSS and the four subtypes of support, but from four sources: family, friends, medical services, and social services. Participants responded on a 4-point Likert scale (1 = strongly dissatisfied/not helpful at all to 4 = strongly satisfied/very helpful). Higher scores thus denoted greater satisfaction or helpfulness. In this study, the reliability of the PSS-overall scale (Cronbach's $\alpha = .94$) and of the four subscales was highly satisfactory: family (Cronbach's $\alpha = .90$), friends (Cronbach's $\alpha = .94$), medical-service providers (Cronbach's $\alpha = .852$) and social-service providers (Cronbach's $\alpha = .92$).

Data analysis

Descriptive results were summarized by percentage, means and frequency. Independent samples t-test, and ANOVA were performed to examine whether the mean scores of BSI and PSS differed according to participants' socio-demographic characteristics. The interrelationships of BSI and PSS were assessed through Pearson's correlation analysis, and multiple regression analysis was carried out to further examine the potential moderating effect of gender on this correlation.

Results of the study

Difference of psychological distress according to the sociodemographic characteristics

Results of the descriptive analysis showed that participants in general had slight or moderate psychopathological symptoms, with mean scores of BSI_overall and scores on the three dimensions (BSI_Anxiety, BSI_Somatization, BSI_Depression) all below 2 (Table 2). Independent sample t-tests showed significant gender differences in overall BSI ($t = -4.033$, $p < .001$) and in the subtypes (BSI_Anxiety: $t = -3.937$, $p < .001$; BSI_Somatization: $t = -3.166$, $p < .01$; BSI_Depression: $t = -2.695$, $p < .05$), with women having more psychological symptoms than men (Table 2). One-

Table 2. Gender difference on psychological symptoms and PSS.

	Overall (N = 111)	Male (N = 17)	Female (94)	
	Mean (SD)	Mean (SD)	Mean (SD)	<i>t</i> (two-tailed significance)
BSI_overall	1.51 (.79)	0.99 (.53)	1.61 (.80)	-4.033***
BSI_Anxiety	1.67(.98)	1.06 (.62)	1.78 (.99)	-3.937***
BSI_Somatization	1.29 (.79)	0.83 (.62)	1.37 (.79)	-3.155**
BSI_Ddepression	1.58 (.87)	1.09 (.81)	1.67 (.85)	-2.695*
PSS_overall	2.71 (.57)	2.96 (.73)	2.67 (.53)	1.790
PSS_family	2.55 (.69)	2.94 (.37)	2.47 (.72)	2.428**
PSS_friend	2.71 (.56)	2.73 (.56)	2.70 (.56)	.170
PSS_medical	2.80 (.47)	2.73 (.35)	2.81 (.48)	-.543
PSS_social	2.86 (.54)	2.92 (.70)	2.85 (.51)	.461
PSS_information	2.86 (.46)	2.95 (.61)	2.84 (.43)	.901
PSS_emotion	2.85 (.51)	2.90 (.44)	2.84 (.52)	.469
PSS_tangible	2.75 (.63)	3.04 (.69)	2.70 (.61)	1.905
PSS_affiliation	2.60 (.63)	2.76 (.61)	2.57 (.64)	1.053

* $p < .05$, ** $p < .01$, *** $p < .001$.

PSS_overall: the overall score of the scale of perceived social support; PSS_family: the subscale of PPS from family; PSS_friend: the subscale of PPS from friend; PSS_medical: the subscale of PPS from medical professionals; PSS_social: the subscale of PPS from social service agency; 3.Family functioning: the mean score on general family functioning scale (GFFS).

way ANOVA of the data showed significant differences in BSI according to respondents' employment status ($F = 4.466$, $p < .01$), family of origin ($F = 10.740$, $p < .01$) and household income ($F = 3.762$, $p < .01$) (Table 3). The post-hoc tests revealed that those without employment, or whose family of origin was non-native, or who had monthly household incomes lower than US\$2,319, had significantly more psychological distress, in contrast to those with full-time employment, or who were native to HK, or who had monthly household incomes higher than US\$3,608. Two separate sets of one-way ANOVA, controlling for gender, revealed that employment status had a predictive effect only on men's psychological distress ($F = 3.615$, $p < .05$), while household income and place of origin influenced the psychological distress only of women ($F = 2.664$, $p < .05$; $F = 5.124$, $p < .05$ respectively) (Table 3).

Perceived social support and sociodemographic characteristics

Tables 2 and table 4 summarize the participants' PSS from different sources and of different types. In general, the participants were slightly satisfied with overall PSS (PSS_overall) ($M = 2.71$, $SD = 0.57$), with no gender difference (Table 2). Participants' PSS from family, friends, medical services and social services (PSS_family, PSS_friends, PSS_medical services, and PSS_social service) ranked in descending order, with PSS_family significantly lower than that from all other sources (Table 4). Gender difference was prominent for PSS_family ($t = 2.428$, $p < .01$), with fathers' higher than mothers'. Fathers' PSS_family was the highest among the four sources, while the situation was reversed for mothers. As for the types of PSS, affiliation support was significantly lower than the three other types in general, though with significant

Table 3. ANOVA analysis of the demographic characteristics of BSI and PSS.

Variable	Brief Symptom Inventory (BSI_overall)				Perceived Social Support (PSS_overall)					
	Sum of Squares	df	Mean Square	F	Sig.	Sum of Squares	df	Mean Square	F	Sig.
Employment	7.505	3	2.502	4.466	.005	3.443	3	1.148	3.775	.013
Education	1.578	4	.394	.634	.64	2.176	4	.544	1.708	.154
Household income	8.381	4	2.095	3.762	.007	.756	4	.189	.566	.688
Marital status	2.625	3	.875	1.419	.241	.46	3	.153	.459	.712
Age	6.707	5	1.341	2.245	.055	.570	5	.114	.341	.887
Family of origin	6.497	1	6.497	10.740	.001	.970	1	.970	3.107	.081
<i>Female participants</i>										
Employment	3.054	3	1.018	1.664	.180	.228	3	.076	.258	.856
Education	1.048	4	.262	.413	.799	1.213	4	.303	1.063	.380
Household income	6.060	4	1.515	2.664	.038	.258	4	.064	.209	.933
Marital status	1.587	3	.529	.826	.483	.281	3	.094	.318	.813
Age	3.537	5	.707	1.111	.360	.257	5	.051	.173	.972
Family of origin	3.296	1	3.296	5.124	.026	.726	1	.726	2.705	.104
<i>Male participants</i>										
Employment	2.031	3	.677	3.615	.043	4.783	3	1.594	6.330	.009
Education	1.621	3	.540	2.313	.132	1.878	3	.626	1.121	.391
Household income	1.650	4	.412	1.644	.232	.506	4	.127	.239	.910
Marital status	.296	1	.296	1.066	.318	1.112	1	1.112	2.243	.158
Age	1.695	4	.424	1.836	.187	2.953	4	.738	1.605	.248
Family of origin	.946	1	.946	4.481	.053	.005	1	.005	.009	.926



Table 4. The difference between different sources and types of perceived social support.

	Overall					Male					Female					
	Mean	(SD)	t	df	Sig	Mean	(SD)	t	df	Sig	Mean	(SD)	t	df	Sig	
Set 1	PSS_family	2.54	(.69)	-2.26	82	.026	2.98	(.36)	1.438	10	.181	2.47	(.70)	-3.008	71	.004
	PSS_friend	2.69	(.57)	-0.765	95	.446	2.73	(.56)	-0.454	10	.659	2.69	(.58)	-0.684	84	.496
Set 2	PSS_medical	2.79	(.48)	-3.335	87	.001	2.70	(.36)	2.997	11	.012	2.80	(.49)	-4.287	75	.000
	PSS_social	2.83	(.51)	-4.128	92	.000	2.74	(.41)	0.104	13	.919	2.84	(.53)	-4.687	78	.000
Set 3	PSS_Family	2.56	(.70)	-1.391	85	.168	3.03	(.31)	-0.219	9	.832	2.49	(.72)	-1.409	75	.163
	PSS_medical	2.78	(.49)	-2.272	88	.026	2.73	(.35)	-1	10	.341	2.79	(.51)	-2.051	77	.044
Set 4	PSS_family	2.54	(.69)	-0.197	107	.844	2.93	(.38)	0.504	15	.622	2.47	(.71)	-0.507	91	.614
	PSS_Social	2.83	(.54)	1.819	99	.072	2.91	(.73)	-0.994	13	.338	2.81	(.51)	2.323	85	.023
Set 5	PSS_friend	2.70	(.56)	4.577	100	.000	2.66	(.53)	1.71	14	.109	2.78	(.49)	4.229	85	.000
	PSS_medical	2.77	(.48)	1.779	100	.078	2.70	(.38)	-1.764	13	.101	2.83	(.44)	2.426	86	.017
Set 6	PSS_friend	2.70	(.56)	5.562	101	.000	2.73	(.56)	1.544	14	.145	2.82	(.52)	5.351	86	.000
	PSS_social	2.84	(.46)	3.303	97	.001	2.89	(.54)	2.756	12	.017	2.81	(.51)	2.605	84	.011
Set 1	PSS_information	2.86	(.48)				2.95	(.61)				2.71	(.60)			
	PSS_emotion	2.86	(.48)				2.90	(.44)				2.86	(.49)			
Set 2	PSS_information	2.84	(.47)				2.93	(.65)				2.83	(.44)			
	PSS_tangible	2.76	(.62)				3.04	(.69)				2.71	(.60)			
Set 3	PSS_information	2.84	(.45)				2.95	(.64)				2.82	(.42)			
	PSS_affiliation	2.62	(.62)				2.76	(.61)				2.59	(.62)			
Set 4	PSS_emotion	2.83	(.52)				2.89	(.47)				2.82	(.52)			
	PSS_tangible	2.75	(.63)				3.04	(.69)				2.70	(.61)			
Set 5	PSS_emotion	2.82	(.51)				2.89	(.45)				2.81	(.52)			
	PSS_affiliation	2.60	(.63)				2.76	(.61)				2.57	(.64)			
Set 6	PSS_tangible	2.74	(.63)				3.04	(.72)				2.70	(.61)			
	PSS_affiliation	2.60	(.64)				2.78	(.64)				2.57	(.64)			

Table 5. The difference between HK native and immigrant women on psychological symptoms and perceived social support.

	Overall (N = 94)		Native (N = 49)		Immigrant (N = 32)		t	df	Sig.
	Mean	(SD)	Mean	(SD)	Mean	(SD)			
BSI_overall	1.61	(.80)	1.45	(.79)	1.86	(.81)	-2.264	79	.026
BSI_Anxiety	1.78	(.99)	1.63	(1.04)	2.08	(.94)	-1.953	79	.054
BSI_Somatization	1.37	(.79)	1.21	(.69)	1.60	(.94)	-1.968	49	.055
BSI_Depression	1.67	(.85)	1.51	(.86)	1.92	(.87)	-2.077	79	.041
PSS_overall	2.67	(.53)	2.78	(.47)	2.58	(.58)	1.645	78	.104
PSS_family	2.47	(.72)	2.66	(.64)	2.25	(.73)	2.435	68	.018
PSS_friend	2.70	(.56)	2.85	(.38)	2.44	(.71)	2.660	32	.012
PSS_medical	2.81	(.48)	2.87	(.44)	2.80	(.50)	.648	72	.519
PSS_social	2.85	(.51)	2.87	(.32)	2.91	(.64)	-.354	41	.725
PSS_information	2.84	(.43)	2.90	(.28)	2.81	(.50)	.857	44	.396
PSS_emotion	2.84	(.52)	2.87	(.45)	2.86	(.60)	.069	78	.945
PSS_tangible	2.70	(.61)	2.77	(.54)	2.62	(.69)	1.031	72	.306
PSS_affiliation	2.57	(.64)	2.65	(.57)	2.49	(.72)	1.071	73	.288

* $p < .05$, ** $p < .01$, *** $p < .001$.

gender effects. Men's scores on the four types of PSS were similar, while women perceived significantly lower affiliation support than all other types of PSS, with informative support being their source of most satisfaction.

ANOVA analysis showed the differentiating power of employment on PSS ($F = 3.775$, $p < .05$) (Table 3), and a post-hoc Tukey test showed that retired people had significantly higher PSS than all other groups, while people without employment had the lowest PSS. Controlling for gender, the effects of employment on PSS_overall were found only in fathers ($F = 6.330$, $p < .05$) (Table 3). Place of family of origin was found to be an important factor that differentiated mothers' PSS_family and PSS_friends, with native mothers scoring significantly higher than non-native mothers, with $t = 2.435$ and 2.660 , respectively, $p < .05$ (Table 5).

Gender effect and the inter-correlation between PSS and psychological distress

Pearson's correlation analysis showed that PSS_overall and PSS_family were negatively correlated with overall psychological distress ($r = -.329$, $p < .001$; $r = -.403$, $p < .001$) and all its three subtypes, with the correlation between PSS_family and depressive symptoms the strongest ($r = -.464$, $p < .001$) (Table 6). PSS_friends was negatively correlated with overall psychological distress ($r = -.231$, $p < .05$) and depressive symptoms ($r = -.275$, $p < .01$). PSS_medical services was negatively correlated only with the depressive dimension ($r = -.199$, $p < .05$), while PSS_social services had no correlation with overall or either dimension of psychological distress. All four types of PSS were negatively correlated with overall psychological distress and depressive symptoms. The study found a negative association between anxiety symptoms and emotional support ($r = -.201$, $p < .05$), but no association of different types of PSS with somatization symptoms.

Table 6. The correlation between perceived social support and psychological distress.

All cases (N = 111)					
	BSI_overall	BSI_anxiety	BSI_Somatization	BSI_Depression	
PSS_overall	-.329**	-.251**	-.247*	-.389***	
PSS_information	-.208*	-.143	-.149	-.271**	
PSS_emotion	-.259**	-.201*	-.149	-.349***	
PSS_tangible	-.203*	-.149	-.185	-.216*	
PSS_affiliation	-.255**	-.180	-.194	-.314**	
PSS_family	-.403***	-.332**	-.299**	-.464***	
PSS_friend	-.231*	-.182	-.177	-.275**	
PSS_medical	-.195	-.170	-.158	-.199*	
PSS_social	-.079	.012	-.042	-.189	
Female participant (N = 94)					
PSS_overall	-.310**	-.246*	-.259*	-.346**	
PSS_information	-.204*	-.149	-.133	-.276**	
PSS_emotion	-.258*	-.211*	-.167	-.327**	
PSS_tangible	-.158	-.114	-.161	-.163	
PSS_affiliation	-.249*	-.186	-.189	-.305**	
PSS_family	-.366**	-.298**	-.287**	-.429**	
PSS_friend	-.253*	-.207	-.182	-.306**	
PSS_medical	-.219*	-.200	-.183	-.210	
PSS_social	-.066	.019	-.042	-.166	
Male participant (N = 17)					
PSS_overall	-.332	-.114	-.018	-.493	
PSS_information	-.175	-.013	-.157	-.202	
PSS_emotion	-.247	-.014	.092	-.515*	
PSS_tangible	-.263	-.109	-.107	-.320	
PSS_affiliation	-.144	.092	-.088	-.277	
PSS_family	-.383	-.199	.095	-.605*	
PSS_friend	.009	.164	-.128	-.013	
PSS_medical	-.087	.147	.074	-.355	
PSS_social	-.116	.077	.023	-.277	

* $p < .05$, ** $p < .01$, *** $p < .001$.**Table 7.** Multiple regression analysis on psychological distress (BSI).

Variables	Model 1					Model 2				
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Gender (dummy)	.398	.208	.176	1.914	.058	-.219	.268	-.159	-.818	.415
PSS_overall	-.411	.127	-.298	-3.245	.002	1.113	.905	.493	1.231	.221
Interaction effect	-	-	-	-	-	-.247	.304	-.332	-.813	.418
<i>F ratio</i>	8.407***					5.807**				
<i>Adjusted R²</i>	.122					.119				

* $p < .05$, ** $p < .01$, *** $p < .001$.

Almost all of the above significant correlations between PSS and BSI were repeated among women participants; for male participants, only PSS_emotion ($r = -.515$, $p < .05$) and PSS_family ($r = -.605$, $p < .05$) were found to be significantly associated with depressive symptoms. To examine the moderating effects of gender on the relationship between PSS and BSI, two multiple-regression analyses on the psychological distress (BSI) were carried out, with gender and PSS_overall as the independent variables (IV) in Model 1, and the interaction effect of these two variables as the third IV in Model 2. The results revealed significant predicting effects of the two models, with $F = 8.407$, $\text{Adjusted } R^2 = .122$,

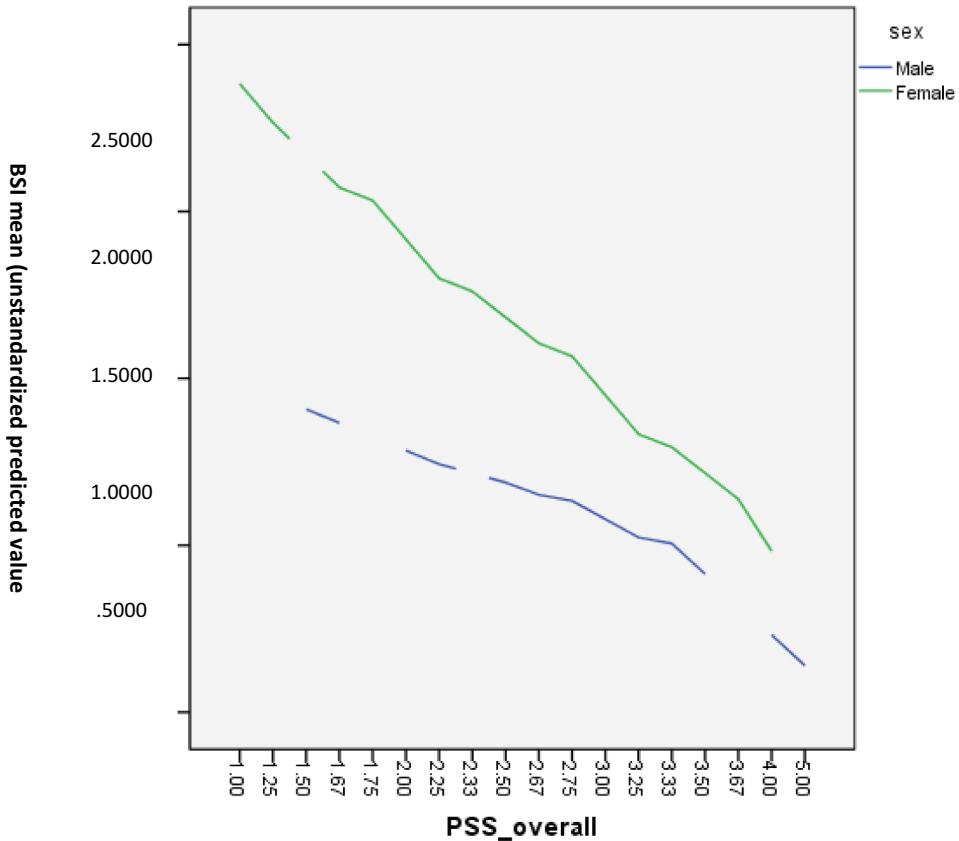


Figure 1. Analysis of the moderating effect of gender on the association between perceived social support and psychological distress.

$p < .001$ and $F = 5.807$, Adjusted $R^2 = .119$, $p < .01$, respectively. However, only the major effect of PSS_overall was validated, as shown in Table 7 and Figure 1.

Discussion

This study was designed to examine the gender differences and socio-demographical variations in perceived social support and the severity of psychological distress, as well as the potential moderating effect of gender on the correlation between PSS and psychological distress, among Hong Kong Chinese parents diagnosed with depression. It revealed the coexistence of both depression and anxiety symptoms among this population, and confirmed the assumed differentiating effects of gender, employment, household income, and place of family of origin on the severity of these parents' psychological distress. In line with previous studies (Chou, 2012; Ma, Lai, & Lo, 2017), mothers who were unemployed, were from low-income family or were mainland migrants tended to have higher psychological distress than did their

counterparts. The hypothesized gendered effects of the above variables on psychological distress were also confirmed, with employment status significantly related to men's mental health, and household income and place of origin closely associated with that of women. Age, education and marital status were not found to be significant identifiers of psychological distress in either gender group. This was probably because people of different ages or education levels had their own ways of coping, and because "being married" could be simultaneously positive and negative factors in one's psychological distress, as a spouse could be a source of support and/or distress (Cairney, Boyle, Offord, & Racine, 2003).

The hypotheses that PSS of depressed parents would differ according to the selected socio-demographic characteristics were mostly refuted, except (1) gender difference, on the availability of and satisfaction with PSS and (2) employment status, on fathers' PSS. In this clinical sample, mothers perceived less and lower satisfaction with support from friends and family than fathers did. With reference to Boughton and Street (2007)'s suggestion on the critical importance of informal support in preventing and treating women's depression, the mothers' lack of family and friend support, as well as their dependence on medical and social services, could be a consequence and also a cause of their depressive condition. The effects of employment status evidenced the multiple benefits (i.e., increased resources, social network and support, sense of efficacy and meaning of life) of employment beyond simply earning an income (Chiu & Wan, 2015), and its particular importance for men's mental health and social support. The significantly lower family and friend support of migrant mothers demonstrated the negative effect of migration on the availability of informal support, suggesting the necessity of a feminist perspective and an intersectional analysis of the various social-demographic characteristics in understanding depression.

This study evidenced the significant effect of PSS on psychological distress, and the effects of PSS of different sources and types on the different dimensions of psychological stress were enlightening. In general, family support was negatively associated with psychological distress in every way, and friends' support was negatively associated with general and the depression dimension of psychological distress. For both women and men, family stood out as the most influential source of PSS, while emotional support was the type of PSS most influential on their depressive symptoms, indicating the crucial importance of informal support in helping people (especially mothers) with depression, while the status quo of this clinical sample was that relational and affiliation support was the most unavailable and unsatisfactory.

In summary, the results both highlight the contributions of a gendered perspective in understanding depressed parents' situation and lend empirical evidence to support the direct positive effect of PSS on people's psychological wellbeing. This study points out the importance of the availability of and

satisfaction with emotional and affiliative support, and support from family members and friends, which is in line with Ibarra-Rovillard and Kuiper (2011)'s view that depressed individuals' perception of the extent to which their relationship partners support or undermine their basic psychological and circumstantial needs is the key to deciding the effectiveness of the support.

This study provides a useful reference for policymakers and helping professionals in delineating strategies for the recovery of depressed parents. First, the results help identify people with higher psychological distress, and also highlight the intersectionality of the multiple stressors of individuals. For example, the comparatively more severe psychological symptoms of non-native born mothers illuminate the interplay of the multi-level challenges faced by these women in society, including (1) higher possibility of marital or in-law conflicts and social discrimination, because of different lifestyles or political stances (Ma, Wan, Xia, Yau-Ng, & Yiu, 2019); (2) greater likelihood of facing economic difficulties and unemployment due to their lower education and barriers to the local labor market (Law & Lee, 2006); (3) the sense of loss and loneliness accompanying migration, accompanied by the need for more emotional and affiliation support; (4) social expectations of being a virtuous wife and a good mother, while facing a lack of knowledge and resources in the community (Yuen, 2019); and (5) low availability and accessibility of support from friends and from family of origin, with perceived difficulties in adapting to and building connections in the new society (Chou, 2012). The increasingly severe cross-border conflicts in recent years may have made the situation even worse (Zhang, 2020). These oppressions pile up and interplay, leading to overwhelming effects on individuals' well-being if overlooked.

Second, the revealed effects of different sources and types of PSS on psychological distress point a way to developing a family-centered, relation-oriented, and community-based empowering approach in helping Chinese parents with depression, beyond individually based treatments comprising medication and cognitive-behavioral therapy (Ballou & Brown, 2002). Family members and friends need to be more empathetic toward those with depression and to appreciate the greater importance of emotional support and affiliative support in helping those with depression. They could pay more attention to emotional needs, accompanying the person in seeking professional help and receiving services, in addition to providing information or tangible help. Mental-health professionals should have a contextualized understanding of depression, shifting their treatment/service from an individual perspective to a holistic one. Policy and service efforts should be made to remove barriers in the way of building social networks, to foster mutual support and mutual aid among these distressed people, and to facilitate their community connections. A family-centered and community-based approach such as (multiple) family therapy may be an alternative, as it involves the whole family, responds to emotional and relational needs, and makes use of

and promotes mutual help within and beyond the community of several families with one common pathology (Ma et al., 2019).

Despite the contributions this study makes in understanding and planning services for depressed parents, it has the following limitations: (1) the sample was relatively small, and (2) women were over-represented in the sample; and (3) information regarding the non-native born parents' duration of residence in Hong Kong was missing, so specific analysis on the potential impact of this factor on psychological distress, PSS or family functioning was not possible. Future studies should recruit a larger sample and further examine the influence of gender differences and migration history on psychological distress. A qualitative study that looks into the subjective experiences of depressed parents would be illuminating for an in-depth understanding of the specific characteristics and needs of this target population.

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