Please Don't Make Me Ask for Help:

Implicit Social Support and Mental Health in Chinese Individuals Living with HIV

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Abstract

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China faces a growing HIV epidemic. Government resources have initiated successful efforts to curb transmission and provide medical care; however, psychosocial needs of HIV-positive individuals remain largely unaddressed. China is a setting with high HIV-stigma and few mental health resources. Research is needed that innovatively addresses this gap between patient mental healthcare and lack of sufficiently trained professionals, in a culturally acceptable manner acknowledging the environment of high societal stigma. The present study involves 120 HIV-positive Chinese-speaking adults receiving care at Beijing Ditan Hospital, who responded to measures of demographics, perceived explicit (which involves active disclosure of a problem and request for assistance) and implicit (no active disclosure) forms of social support, and mental health symptoms of depression, anxiety, quality of life, and overall mental health. Multiple linear regression was conducted controlling for various demographic variables, to predict mental health outcomes with subscales of

social support. Based on existing literature on social support use among Asian-American and other Asian populations, we hypothesized and found that after controlling for gender, age, and socio-economic status, implicit social support predicted mental health outcomes while explicit social support did not. Our results suggest a positive impact of implicit social support on the mental health outcomes of this population. The findings encourage recommendations for research on interventions focused on utilizing implicit social support (deliverable by peers, family, or paraprofessionals), which circumvents both issues of high stigma and low professional resources.

AIDS is a global pandemic, with 33 million people now living with HIV/AIDS (PLWHA; UNAIDS, 2010). PLWHA have widely been documented to be at increased risk for mental health problems such as depression, suicidality, and substance abuse (e.g. Stoskopf, Kim, & Glover, 2004; Jin et al., 2006; Klinkenberg & Sacks, 2004). It is important to know which factors are helpful to PLWHA in coping with the distress of having HIV.

Within the United States, social support, as defined by the perception that one is loved and cared for, esteemed and valued, and part of a network of communication and mutual obligations (Cobb, 1976), has been found to be helpful with coping and adjusting to stress by acting as a buffer against adverse mental and physical health effects of stress. Specifically in HIV-positive populations in the US, social support is associated with increased self-esteem (Zea, Reisen, Poppen, & Echeverry, 2005), decreased depression (Remien et al., 2006), and decreased perceived HIV-related stigma (Galvan, Davis, Banks, & Bing, 2008).

Outside the West however, there is less research on the psychological aspects of HIV. For example, in China, despite the increasing epidemic, mental health needs are seldom the focus of treatment and care. In 2009, an estimated 26,000 people died from AIDS in the country, causing it to be the leading cause of death among infectious diseases for the first time in China's history (UNAIDS, 2010; BBC News, McGivering, 2009). The government has made considerable progress in addressing the medical aspect of the epidemic (e.g., the Four Frees and One Care program has made HIV medication free and widely available; Zhang et al., 2009). However, the mental health aspects of PLWHA have largely been unaddressed. This is understandable in such settings with few mental health resources. Indeed, in China, there is approximately one certified psychologist per every 80,000 people, as estimated by the Chinese Society of Psychiatry (The Economist, 2007). In contrasted to approximately 1 psychologist for every 1,800 individuals in the United States for

reference (US Bureau of Labor Statistics, 2010), this low availability of trained mental health professionals presents a significant challenge in the effort to consider viable options to meet the serious mental health needs of Chinese individuals affected by HIV.

This health disparities gap between needs and resources, paralleled in many other low- and middle- income countries, has prompted the World Health Organization (WHO) to recommend professional "task-shifting", where when appropriate, specific healthcare tasks are delegated to less specialized workers (WHO, 2008). Under these guidelines, task shifting of providing psychosocial support for highly stigmatized HIV-positive individuals in China merits consideration.

One possible avenue lies in task-shifting provision of psychological assistance from mental healthcare providers to peers and family caregivers, to deliver in the form of social support. Given that the experience of feeling supported by one's social network does not require specialized education for the providers of social support, harnessing this tool may be a unique task shifting strategy.

At the same time, there is less research on the effects of social support in HIV-positive populations in China. One study of HIV-positive adults by Sun and colleagues (2007) found, paradoxically, that while participants reported moderately high levels of social support (as measured by the Perceived Social Support Scale), they continued to report high psychological distress (measured by the Symptom Checklist SCL-90). Literature on social support from the field of social psychology suggests a possible explanation for this seeming confound. Many researchers have documented cultural differences in social support seeking. In the US, Asian Americans appear to utilize less social support than European Americans (Sasaki & Kim, 2008; Taylor, Sherman, Kim, Jarcho, Takagi, & Dunagan, 2004). Similarly, cross-national studies comparing samples of European Americans and Chinese (Chu, Kim, & Sherman, 2008), Korean (Kim et al., 2008a), and Japanese

(Hashimoto et al., 2007) participants found that comparatively, European Americans seek more social support. Kim and colleagues (Kim, Sherman, & Taylor, 2008b) hypothesized that a primary reason why this discrepancy exists may be an artifact of the methodology used in the studies. Specifically, the studies assessed only explicit seeking and receiving of social support, which requires active disclosure and discussion of problems.

Other studies that include implicit social support, defined as the emotional comfort one obtains from social networks without disclosing problems, have suggested that implicit social support use may be more beneficial for Asians and Asian Americans compared to European Americans. For example, Kim et al. (2008a) conducted a daily diary study with college students in Korea and the US, in which participants recorded their daily stressors, social support accessed, and mood and life satisfaction. The results revealed that Korean students reported using implicit social support to a greater extent than European Americans. Furthermore, among Koreans, both implicit and explicit support predicted better wellbeing while only explicit support was predictive for European Americans. In another study distinguishing between forms of social support, Taylor and colleagues (Taylor, Welch, Kim, & Sherman, 2007) conducted the Trier Social Stress Task (Kirschbaum, Pirke, & Hellhammer, 1993) with Asian American and European American participants, provided both explicit and implicit social support, and assessed physiological stress indicators such as heart rate, blood pressure, and salivary cortisol levels. They found that Asians and Asian Americans benefited more both psychologically and biologically from implicit social support than explicit social support, while the reverse was true for European Americans. Surprisingly, among Asians and Asian Americans, mobilizing explicit social support actually exacerbated their emotional and biological distress.

Researchers have theorized (e.g., Wang, Shih, Hu, Louie, & Lau, 2010; Taylor et al., 2007; Kim, Sherman, Ko, & Taylor, 2006) that in cultures valuing interdependent harmony, such as China, soliciting social support may be perceived as disrupting social networks. In such collectivistic cultures where relationships involve social obligation (Adams & Plaut, 2003), members may be less likely to recruit social support due to interdependent relationship concerns (Kim et al., 2008a). Indeed, these findings provide evidence for cultural differences in utility of various forms of social support and suggest that culturally specific matching of explicit or implicit support may lead to better outcomes.

Therefore, in an effort to consider innovative task shifting strategies to address the gap between the low availability of professional mental healthcare providers and the high need for psychosocial support among Chinese PLWHA, we sought to understand how social support operates in this population. Specifically, we predict that implicit social support will be associated with better mental health outcomes, while explicit social support will not significantly predict better mental health outcomes among Chinese PLWHA.

METHODS

Participants and Procedures

The study was conducted in China at Beijing Ditan Hospital, a premier AIDS treatment facility affiliated with Capital Medical University. Data were collected between December 2006 and April 2008 as part of an efficacy trial of a nurse-delivered HIV medication adherence intervention (see Simoni et al., 2010). For the present study, eligible participants were HIV-positive, Mandarin-speaking adults over age 18, receiving care at Ditan Hospital; individuals who were cognitively impaired or actively psychotic were excluded. Upon providing written informed consent, participants

completed an hour-long interviewer-administered survey for which they were reimbursed RMB100 (approximately $12). All study procedures were approved by the Institutional Review Boards of the University of Washington, Ditan Hospital, and the China Center for Disease Control.

Demographic characteristics of the final sample are presented in Table 1. Among the total sample of 120 participants, 81.7% were male with a mean age of 36.3 years (*SD* = 8.0; range = 20.1 – 54.5). Participants' primary methods of HIV transmission included having sex with men who have sex with men (MSM) – 43.3%, selling blood – 18.3%, having sex with commercial sex workers – 16.7%, and blood transfusions – 15.0%.

Measures

Sociodemographic variables

Sociodemographic variables assessed were sex, age, marital status, sex of sexual partner, education, employment, and annual household income. Participants also reported their HIV transmission route and most recent CD4 count.

Social support

Social support was assessed using a Chinese adaptation (Yu, Lee, & Woo, 2004) of the Medical Outcome Study – Social Support Scale (MOS-SSS), a psychometrically validated multidimensional measure for perceived social support of patients with chronic disease (Sherbourne & Stewart, 1991). The survey assesses perceived availability of support ("How many times in the last 3 months have the following types of support been available to you if you need it?") with a five-point scale from 0 (none of the time) to 5 (all of the time)". It includes four domains: 1) emotional/informational support (eight items; e.g., someone to offer advice, guidance, and feedback, someone to listen to you when you need to talk); 2) tangible support (four items; e.g., someone to

take you to the doctor, someone to help with daily chores if you are sick); 3) affectionate support (three items; e.g., someone to love you and make you feel wanted"; and 4) positive social interaction (four items; e.g., someone to have a good time with, someone to get together with for relaxation). *Explicit* social support is used to describe the first three domains, because in order to receive emotional/informational, tangible, or affectionate social support, one typically has to explicitly disclose the nature of the problem and directly ask for assistance. Social support in the form of positive social interaction is termed *implicit* as it is assumed to be obtainable without direct disclosure of a problem but instead by simply experiencing shared enjoyable activities.

The original English version of the MOS-SSS had internal consistency over .91 for each subscale in the norming sample of $N = 2987$ patients with chronic conditions in the US (Sherbourne & Stewart, 1991). Using our sample and Chinese translation of the scale, Cronbach's alphas were as follows: positive social interaction subscale $\alpha = .84$, emotional/informational support subscale $\alpha = .81$, tangible support subscale $\alpha = .79$, and affectionate support subscale $\alpha = .49$. Due to low reliability (Cronbach, 1951) in the affectionate support subscale, it was not used in subsequent analyses. Upon inspection of the survey instrument, translation errors were found in the affectionate support items, which explained the low reliability of the subscales.

Mental Health Indicators

Depressive symptoms. A previously validated and abbreviated Chinese version of the Center for Epidemiological Studies Depression Scale (CES-D 10-item) routinely used as a screening measure to examine prevalence of psychological distress in community samples was used to assess depressive symptoms (Dai et al., 1999). Aggregate scores range from 0 – 30, with a threshold of 10 or above indicating presence of possible clinical depression. Cronbach's alpha in our sample was $\alpha = .77$.

Anxiety symptoms. Anxiety symptoms were assessed using the Substance Abuse and Mental Illness Screener, a non-diagnostic screener validated in HIV+ patients for which positive screening requires further psychiatric evaluation (Pence, Gaynes, Whetten, Eron, Ryder, & Miller, 2005). Anxiety symptoms assessed included those indicating presence (categorical; yes or no) of possible panic attacks, generalized anxiety disorder, and post-traumatic stress disorder. Total scores ranged from 0 (no positive screen) to 6 (all symptoms endorsed).

Quality of life and *general mental health summary score*. Quality of life and the general mental health summary score was assessed using the Medical Outcomes Study – HIV (MOS-HIV) survey (Wachtel, Piette, Mor, Stein, Fleishman, & Carpenter, 1992; Wu, Hays, Kelly, Malitz, & Bozzette, 1997), a psychometrically validated measure to assess dimensions of health. The MOS-HIV health survey contains 35 questions and is used worldwide to assess quality of life in PLWHA. The raw item scores of each subscale are summed and transformed into a total score ranging from 0 – 100, where higher scores indicate better health.

RESULTS

Preliminary analyses

Skew and kurtosis were examined for all variables of interest. Assumptions of parametric data were met, prompting no further corrections. The mean, standard deviations, and ranges of the main variables are presented in Table 2. On the brief 10-item CES-D, 54.2% of the sample obtained a score of 10 or above, indicating the presence of "significant depressive symptomatology". Furthermore, 30.8% of the sample screened positive for generalized anxiety disorder, and 42.9% screened positive for panic attacks. Participants' mean quality of life and mental health summary scores were 48.7 and 44.2, respectively, out of a possible 100. For social support, participants most

commonly endorsed that perceived availability was "some of the time" for each of the 18 items.

Pearson Product-Moment Correlations

Bivariate correlations between variables of interest are included in Table 2. As expected, the three subscales of social support (i.e., emotional support, tangible support, and positive social interaction) were significantly inter-correlated, as were the measures of mental health (i.e., anxiety, depressive symptomatology, quality of life, and the mental health summary score); *p's* < .01). Interestingly, while two items measuring socio-economic status (education and income) were significantly correlated, employment was not. This could possibly be due to the high unemployment rate in the sample, where compromised physical health and fear of stigma may inhibit full engagement in the workplace.

Regression Analyses

Four separate hierarchical multiple linear regression analyses were run, one for each of the four mental health outcomes. In each regression, the first step included age, gender, income, education, and employment, and the second step included the three social support subscales entered separately.

As seen in Table 3 and 4, all four F-tests of overall fit with both levels of predictors entered were statistically significant at the $p < .05$ level at least. Specifically, for: 1) depressive symptomatology, $F(3, 111) = 5.58$, $p < .001$; 2) anxiety, $F(3, 111) = 2.86$, $p < .05$; 3) quality of life, $F(3, 111) = 2.84$, $p < .05$; 4) mental health summary score, $F(3, 111) = 3.97$, $p < .01$. In terms of individual parameters, as hypothesized, the social support subscale of positive social interaction emerged as a unique predictor accounting for variance in mental health indicators. Specifically, for 1) depressive symptomatology, the social support subscale of positive social interaction emerged as a

significant predictor, $t(119) = -3.39$, $p < .001$) above and beyond the variance accounted for by age, gender, income, education, and employment. Furthermore, as hypothesized, the two other social support subscales of emotional support and tangible support were not significant predictors. A similar pattern emerged for the other mental health indicators of anxiety, quality of life, and the mental health summary score, with positive social interaction accounting for more variance than did the other social support subscales, although only trending towards statistical significance: anxiety ($p = .06$), quality of life ($p = .07$), and mental health summary score ($p = .08$).

DISCUSSION

In one of the few studies examining behavioral aspects of HIV in China, we found that among a sample of HIV-positive outpatients in Beijing, implicit social support (which does not require direct disclosure) was more strongly related to mental health than explicit social support (which does require disclosure). Specifically, a series of multiple linear regressions indicated, as hypothesized, that implicit social support in the form of positive social interaction emerged as a reliable predictor of variance in the mental health outcomes of depressive symptomatology, anxiety, quality of life, and a summary score of mental health, while the two types of explicit social support (emotional/ informational and tangible support) did not.

Our findings are theoretically aligned with emerging research on social support among Asian and Asian American populations, where less social support is explicitly sought and utilized, compared to European American populations (e.g., Kim et al., 2008a, 2008b; Sasaki & Kim, 2008; Taylor et al., 2004). Additionally, Asian and Asian American participants appeared to benefit more from implicit social support that does not require active disclosure, and can in fact be further distressed by activating explicit social support (Taylor et al., 2007).

Our findings are encouraging and particularly relevant for implications for future intervention for Chinese HIV-positive individuals, as China is a high HIV-related stigma setting (Burki, 2011) with low mental health resources. For example, a 2008 survey of more than 6000 urban Chinese residents on their attitudes toward HIV found that 48% of respondents indicated they would not eat with someone who had HIV, and 30% thought that children with HIV should not be allowed to attend the same schools as uninfected children (CHAMP, 2008). Given the climate of HIV-relate stigma, overall rates of self-disclosure of HIV status are understandably low. While we could not find population-representative studies of disclosure rates in China, small-scale and population-specific studies, such as one by Ko et al., (2007) of 105 PLWHA in Taiwan (a culturally similar country), reported a mean disclosure rate of 27% to all identified persons. Disclosure rates reported by studies vary widely, as some query whether disclosure to anyone has ever occurred, while others ask questions that are more open-ended about whom PLWHA have disclosed to, such as partners, family members, or close friends. With our current sample, we asked, "Do any of the people in your household know your HIV status", with 16% of respondents answering "No", 26% - "Some know", and '41 % - "All know". In summary, much fewer than half of HIV-positive individuals have fully disclosed their HIV status to their friends and family, implying that seeking explicit social support for needs related to HIV may be particularly difficult, as they would have to disclose the nature of their request and distress.

Furthermore, China is a low mental health resource setting, whose HIV-positive population would greatly benefit from efforts to task shift provision of psychosocial assistance from scarce professionals to more readily available peers, friends, and family. Low rates of disclosure mean that seeking explicit forms of social support to assist in HIV-related distress would consequently be more difficult as well as potentially less rewarding due to later consequences. This may explain the

seemingly confounding findings by Sun et al. (2007) as discussed in the introduction where a sample HIV-positive participants in China reported moderately high levels of social support and high psychological distress. This study used the Perceived Social Support scale, which only measures explicit and not implicit social support. Therefore, our findings suggesting that implicit social support predicts better mental health outcomes are encouraging in that a non-disclosure-dependent form of social support will be more palatable and practical in such a high stigma setting.

In addition to the possibility of harnessing the relatively simple strategy of increasing positive social interactions such as relaxing and doing enjoyable and fun things with members in one's social network via general recommendations to improve wellbeing for HIV-positive Chinese patients, consideration for research on incorporating positive social interaction in structured behavioral interventions may also be warranted. For example, a third wave cognitive-behavioral treatment for depression, Behavioral Activation (BA) (Martell, Dimidjian, & Herman-Dunn, 2010), may be particularly well suited for distressed Chinese individuals. BA, a brief structured treatment, is based on activating clients using CBT strategies to behave in ways that increase rewarding experiences in their lives, thus promotes engagement in one's world. Many of these strategies, such as "Structure and schedule activities that follow a plan, not a mood" (BA Principle 4), "Emphasize activities that are naturally reinforcing" (BA Principle 6), and "Don't just talk, do!" (BA Principle 9), capitalize on positive social interaction without disclosure. This suggests the possibility for treatments such as BA, which focus on rewarding action instead of extended disclosure and insight (e.g. psychodynamic or cognitive therapy), to be highly successful with the Chinese population. Future research may consider the cultural adaptation of treatments such as BA for this population.

There are several limitations to the present study. First, the small sample of $N = 120$ was a convenience sample, collected at Ditan Hospital in Beijing, which is a premier infectious disease

hospital in the country. While a wide representation of residence was found in the sample, as HIV+ individuals in China often have to travel to major cities in order to receive healthcare, the sample likely represents those who have the physical resources to be in the capital city. Furthermore, significant differences in mental health and social support have been found between rural and city dwellers (Sun et al., 2007); thus it is recommended that the analyses be replicated with a more nationally representative sample of HIV-positive individuals. Additionally, as the present study involved secondary data analysis of a cross-sectional survey, we cannot infer causality. Finally, although the measures used were psychometrically validated in English, as demonstrated with our social support scale, more psychometric studies need to be conducted on the Mandarin versions of the scales.

Despite these limitations, our findings should provide an impetus to further investigate the specificity of efficacy of social support for certain populations who are in need of distress reduction. There is a long history of research on social support indicating its ability to buffer against adverse mental and physical effects of stress. However, which specific aspects of social support are useful (and not detrimental) for specific cultural groups with unique constellations of problems, warrants further investigation. Additionally, once specific modalities of support are delineated, research is necessary on how to capitalize on the pathways, for example training HIV-positive peers to provide social support (Simoni, Nelson, Franks, Yard, & Lehavot, 2011).

Better understanding the mechanisms of social support will allow for targeted intervention recommendations when considering the specific needs of a population, which will lead to a better likelihood of success and improved outcomes, especially for those like HIV-positive Chinese individuals living in a socio-cultural context of high stigma and few mental health resources.

Table 1

Socio-Demographic Characteristics of People Living with HIV/AIDS in Beijing, China (N = 120)

Characteristic	n (%)
Sex	
Female	22 (18.3)
Male	98 (81.7)
Age (in years)	
20 – 25	10 (8.3)
26 – 30	21 (17.5)
31 – 35	27 (22.5)
36 – 40	28 (23.3)
41 – 45	16 (13.3)
46 – 50	8 (6.7)
51 – 55	10 (8.3)
Marital status	
Married or steady partner	66 (55.0)
Single, never married	35 (29.2)
Other (divorced, widowed, separated)	19 (15.8)
Sexual partner	
Same sex	26 (21.7)
Opposite sex	57 (47.5)
Both	24 (20.0)
None	6 (5.0)
Refuse to answer	7 (5.8)
Education	
Primary or lower	23 (19.2)
Middle school graduation	23 (19.2)
High school graduation	28 (23.3)
Professional/vocational training school	17 (14.2)

Above high school (college & post-college)	29 (24.2)
Employment	
Full time	49 (40.8)
Part time	13 (10.8)
Unemployed	53 (44.2)
Annual household income (RMB)	
≤ 2,000	69 (57.5)
2,001 – 5,000	37 (30.8)
≥ 5,000	13 (10.8)
HIV transmission route	
Blood transfusion	18 (15.0)
Injection drug use	1 (0.8)
Selling blood	22 (18.3)
Sex with commercial sex workers	20 (16.7)
Sex with MSM	52 (43.3)
Sex with men who injected drugs	2 (1.7)
Most recent CD4 count	
< 200	70 (58.1)
200 – 350	35 (29.1)
351 – 500	6 (5.0)
501 – 1000	5 (4.3)
Unknown	4 (3.4)

Table 2

Correlations Among Study Variables

Variables	*M* (*SD*)	Possible range	1	2	3	4	5	6	7	8	9
1. Education	4.2(1.8)	1-8	-								
2. Income	2.7(1.7)	1-8	.51**	-							
3. Employment	1.1(1.0)	0-3	.16	.24**	-						
4. Mental health summary	44.2(11)	0-100	.31**	.27**	.10	-					
5. Anxiety	2.3(.9)	0-5	-.29	-.02	.26**	-.56**	-				
6. Depressive symptoms	10.1(5.8)	0-30	-.15	.14	.04	-.72**	.50**	-			
7. Quality of life	48.7(23.3)	0-100	.25	.26	.17	.68**	-.35**	-.55**	-		
8. Emotional/ informational support	11.9(5.5)	0-32	.06	.59	.24	.24	-.30**	.18	-.26*	-	
9. Tangible support	8.8(4.0)	0-16	-.04	.15	-.18	.24	-.27**	-.19	.18	.37**	-
10. Positive social interaction	5.6(2.7)	0-16	.55	.08	-.15	.40**	-.39**	-.34**	.29**	.63**	.42**

Note: * $p < .05$. ** $p < .01$.

1. Education discretely coded 0 – 8, from no formal schooling – post college graduate.
2. Income discretely coded 0 – 8, from RMB 0 – RMB 5000+ per month.
3. Employment discretely coded 0 – 3, from none – full time.
4. Mental health summary from Medical Outcomes Study-HIV.
5. Anxiety: Substance Abuse and Mental Illness Symptoms Screener.
6. Depressive symptoms: Center for Epidemiologic Studies Depression Scale (CES-D).
7. Quality of life: Medical Outcomes Study-HIV

8 – 10. Emotional/informational, tangible, and positive social interaction: Medical Outcomes Study – Social Support Survey.

Table 3

Predictors of Depressive and Anxiety Symptoms

	Depressive Symptoms					Anxiety				
Predictor	B	*SE*	*t*	ΔR^2	*F*(df)	B	*SE*	*t*	ΔR^2	*F*(df)
Level 1				0.06	1.32 (5, 114)				0.29	3.81 (5, 114)**
Age	-0.07	0.07	-0.73			0	0.01	0.19		
Education	-0.64	0.34	-1.46			-0.22	0.07	-2.69*		
Income	-0.05	0.35	-0.64			0.07	0.08	0.94		
Employment	-0.10	0.16	-0.51			0.04	0.03	1.59		
Gender	1.55	1.4	0.1			0.54	0.28	1.83		
Level 2				0.14	5.58 (3, 111)***				0.12	2.86 (3, 111)*
Emo/info	0.14	0.13	1.09			0.03	0.03	1.09		
Tangible	-0.10	0.15	-0.66			-0.04	0.03	-1.36		
Pos. interaction	0.85	0.25	-3.39***			-0.12	0.06	-1.91 †††		

***$p < .001$, ** $p < .01$, *$p < .05$, $^{\dagger\dagger\dagger}p = .06$, $^{\dagger\dagger}p = .07$, $^{\dagger}p = .08$

Table 4

Predictors of Quality of Life and Mental Health Summary Score

	Quality of Life					Mental Health Summary Score				
Predictor	B	*SE*	*t*	ΔR^2	*F*(df)	B	*SE*	*t*	ΔR^2	*F*(df)
Level 1				.11	1.95(5, 114)				0.12	2.28 (5, 114)*
Age	-.06	0.32	-0.59			0.37	0.27	1.05		
Education	2	0.17	1.12			1.73	1.47	1.05		
Income	1.64	1.64	1.38			0.30	1.42	0.72		
Employment	1.02	0.76	0.91			0.54	0.66	1.40		
Gender	-2.76	7.30	-0.26			14.92	6.31	-2.15		
Level 2				0.09	2.84 (3, 111)*				0.12	3.97 (3, 111)**
Emo/info	0.09	0.58	0.15			0.05	0.50	0.09		
Tangible	0.65	0.71	0.92			1.01	0.61	1.64		
Pos. interaction	2.09	1.16	1.81††			1.78	1	1.78†		

***$p < .001$, ** $p < .01$, *$p < .05$, $^{\dagger\dagger\dagger}p = .06$, $^{\dagger\dagger}p = .07$, $^{\dagger}p = .08$

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