



# Revista Latinoamericana de Psicología

[www.editorial.konradlorenz.edu.co/rlp](http://www.editorial.konradlorenz.edu.co/rlp)



ORIGINAL

## Depression and satisfaction in different domains of life in dual-earner families: A dyadic analysis

Berta Schnettler<sup>a, b, f, g</sup>, Edgardo Miranda-Zapata<sup>c, g</sup>, Klaus G. Grunert<sup>d</sup>, Germán Lobos<sup>e, f</sup>,  
María Lapo<sup>f</sup> y Clementina Hueche<sup>g</sup>

<sup>a</sup> Universidad de La Frontera, Facultad de Ciencias Agropecuarias y Forestales, Temuco, Chile

<sup>b</sup> Universidad de La Frontera, Scientific and Technological Bioresource Nucleus (BIOREN UFRO), Chile

<sup>c</sup> Universidad de La Frontera, Laboratorio de Investigación en Ciencias Sociales Aplicadas (LICSA), Núcleo Científico y Tecnológico en Ciencias Sociales, Temuco, Chile

<sup>d</sup> Aarhus University, MAPP Centre, Aarhus, Denmark

<sup>e</sup> Universidad de Talca, Programa de Investigación de Excelencia Interdisciplinaria en Envejecimiento Saludable (PIEI-ES), Talca, Chile

<sup>f</sup> Universidad Católica de Santiago de Guayaquil, Escuela de Economía, Guayaquil, Ecuador

<sup>g</sup> Universidad de La Frontera, Centro de Excelencia en Psicología Económica y del Consumo (CEPEC), Núcleo Científico y Tecnológico en Ciencias Sociales, Temuco, Chile

Received 8 April 2019; accepted 7 October 2019

### KEYWORDS

Subjective well-being,  
depression,  
spillover

**Abstract** This study explored the spillover and crossover associations between depression and satisfaction with life, food-related life, and family life in dual-earner families. Questionnaires were administered to 303 dual-earner couples with adolescent children in Temuco, Chile. Both members of the couple answered the Depression Subscale of the Depression Anxiety and Stress scale - 21, Satisfaction with Life scale, Satisfaction with Food-related Life scale, and the Satisfaction with Family Life scale. Using the actor-partner interdependence model and structural equation modeling, we found that a man's depression was negatively associated with his own levels of satisfaction with life, family life, and food-related life as well as with his partner's (the woman's) levels of satisfaction with life and family life. The woman's depression was negatively associated with her own levels of satisfaction with life, family life, and food-related life as well as with her partner's (the man's) satisfaction with family life, but not with his level of life satisfaction. No crossover effects were found between the two members of the couple's depression and their satisfaction with food-related life. These findings suggest that to enhance overall life satisfaction as well as satisfaction in the family and food domains in dual-earner families, interventions to reduce depression should include both partners.

© 2019 Fundación Universitaria Konrad Lorenz. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

\* Autor para correspondencia.  
e-mail: [berta.schnettler@ufrontera.cl](mailto:berta.schnettler@ufrontera.cl)

**PALABRAS CLAVE**

Bienestar subjetivo,  
depresión,  
*spillover*

### Depresión y satisfacción en diferentes dominios de la vida en familias con doble ingreso: Un análisis diádico

**Resumen** Este estudio exploró las asociaciones “*spillover*” y “*crossover*” entre la depresión y la satisfacción con la vida, con la alimentación y con la vida familiar en familias con doble ingreso. Se administraron cuestionarios a 303 parejas con doble ingreso e hijos adolescentes en Temuco, Chile. Ambos miembros de las parejas respondieron la subescala de Depresión de la Escala de Depresión, Ansiedad y Estrés - 21, Escala de Satisfacción con la Vida, Escala de Satisfacción con la Alimentación y la Escala de Satisfacción con la Vida Familiar. Usando el modelo de interdependencia actor-compañero y ecuaciones estructurales, se encontró que la depresión en los hombres se asoció negativamente con sus propios niveles de satisfacción con la vida, con la vida familiar y con la alimentación, así como con los niveles satisfacción con la vida y la vida familiar de su pareja (la mujer). La depresión en mujeres se asoció negativamente con sus propios niveles de satisfacción con la vida, con la vida familiar y con la alimentación, así como con la satisfacción de su pareja (el hombre) con la vida familiar, pero no con su nivel de satisfacción con la vida. No se encontraron efectos cruzados entre la depresión los miembros de la pareja y su satisfacción con la alimentación. Estos hallazgos sugieren que para mejorar la satisfacción con la vida en general, así como la satisfacción en los dominios de la familia y la alimentación en familias doble ingreso, las intervenciones para reducir la depresión deben incluir a los dos miembros de la pareja.

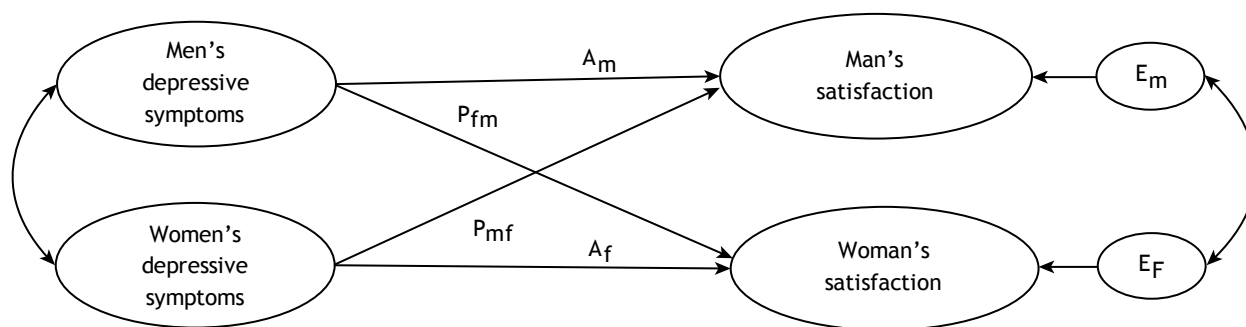
© 2019 Fundación Universitaria Konrad Lorenz. Este es un artículo Open Access bajo la licencia CC BY-NC-ND (<http://creativecommons.org/licenses/bync-nd/4.0/>).

The total estimated number of people in the world living with depression increased by 18.4% between 2005 and 2015. The total number of people in the world living with depression in 2015 was estimated to be 322 million. The prevalence is higher in women and during adulthood. Prevalence also varies by region: 48.16 million (15%) of the people with depression live in the Americas. In Latin America, Chile ranks fourth among the countries with the most cases of depression (WHO, 2017). In this context, mental health problems have been the greatest cause of sick leave among Chilean employees in recent years, underscoring the high prevalence of depression linked mainly to demands at work and at home (SIS, SUSESO, FONASA, 2017). Mental health problems may not only affect dual-earner couples' overall well-being, but also their family relationships (Grimaldo & Reyes Bossio, 2015; Levin & Kirby, 2012; Lu et al., 2018; Reali, Soriano, & Rodríguez, 2016; Suzuki et al., 2018) and eating habits (Horodynski et al., 2018; Levin & Kirby, 2012; McCurdy, Gorman, Kisler, & Metallinos-Katsaras, 2014; Pickett & McCoy, 2018).

Based on the systems theory (Becvar & Becvar, 1998) and the family systems-illness model (Rolland, 1994), Li and Johnson (2018) suggest that depression is an interpersonal event rather than an individual problem. In fact, there is evidence for associations of depressive symptoms between both partners within a couple (Li & Johnson, 2018; Proulx, Buehler, & Heather, 2009). At the same time, the family systems theory (Kerr & Bowen, 1998) addresses the interdependence between individuals and how individuals involved in reciprocal family relationships influence each other's thoughts and emotions (Bakker & Demerouti, 2013; Kenny, Kashy, & Cook, 2006). Similarly, according to the “*spillover-crossover*” model (Bakker & Demerouti, 2013), positive or negative experiences in one life domain can be transmitted to other domains. *Spillover* refers to the transmission of strain or positive experiences in one domain of an individual's life to another, whereas *crossover* involves

the transmission of strain or positive experiences from one domain to another. However, the strain of positive experiences crosses over between people closely sharing the same environment (Matias et al., 2017). While some studies have focused on unidirectional crossover from husbands to wives, others have explored bidirectional crossover from husbands to wives and from wives to husbands (Westman & Bakker, 2008). The bidirectional crossover influence is especially important in the case of dual-earner couples who share work and family experiences (Matias et al., 2017) and where the interdependence is recognised between individuals, structures, and processes (Kerr & Bowen, 1998). Westman and Vinokur (1998) proposed that crossover occurs directly when experiences, affective states, and resources are transmitted between the partners through empathy, while indirect crossover occurs through social interactions between partners. An example of the basic model for spillover-crossover involving depression and satisfaction is illustrated in Fig 1.

Several studies have assessed the association between a couple's depression and their well-being based on the spillover-crossover model, mainly regarding marital satisfaction, and these have shown different association patterns. With a sample of older couples, Wang, Wang, Li and Miller (2014) found that husbands' marital satisfaction was significantly associated with their wives' depressive symptoms, but not vice versa. For a sample of couples in which the man has coronary syndrome, Dekel et al. (2014) reported that, for one member of the couple, marital satisfaction was associated with their own and with their partner's depressive symptoms. Maroufizadeh, Hosseini, Foroushani, Omani-Samani, and Amini (2018) found that men and women's marital satisfaction was associated with their own depression level, whereas only men's marital satisfaction was associated with their partner's depression level in infertile couples. Similarly, Li and Johnson (2018) found that each member of the couple's satisfaction with their relationship



**Figure 1.** Basic actor-partner interdependence model of depressive symptoms and satisfaction.

$A_m$ : actor effect of man's depressive symptoms on his own satisfaction (man spillover);  $A_f$ : actor effect of woman's depressive symptoms on her own satisfaction (woman spillover);  $P_{fm}$ : partner effect of man's depressive symptoms on woman's satisfaction (man crossover);  $P_{mf}$ : partner effect of woman's depressive symptoms on man's satisfaction (woman crossover);  $E_m$  and  $E_f$ : residual errors on satisfaction for the man and woman, respectively.

was associated with their own depression, although only the woman's satisfaction was associated with her partner's depression. With a sample of male and female survivors of terror attacks and their spouses, Weinberg, Besser, Zeigler-Hill, and Neria (2018) found that the level of marital satisfaction reported by unexposed spouses was negatively associated with their own trauma-related symptoms (including depression) as well as with the symptoms reported by the survivors. It is noteworthy, however, that most of these results were obtained in couples experiencing particularly stressful situations in their lives.

To the best of our knowledge, there are no studies that have assessed the associations between depression and overall life satisfaction as well as between depression and satisfaction in other life domains from a dyadic point of view while addressing both spillover and crossover effects between the two members of dual-earner couples in normal conditions. Therefore, the aim of the present study was to explore the spillover and crossover associations between depression and subjective well-being in dual-earner parents in Chile, a developing country in Latin America.

In this paper, we specifically concentrate on the relationships between couples' depression and their overall life satisfaction as well as their satisfaction in the domains of family and food. The focus on the family domain is due to its relevant contribution to adults' well-being in different countries (Botha & Booysen, 2014; Hsieh & Li, 2019; Loewe, Bagherzadeh, Araya-Castillo, Thieme, & Batista-Foguet, 2014; Schnettler, Miranda-Zapata et al., 2017; Schnettler et al., 2018ab). In addition, assessing the associations between depression and satisfaction with family life is particularly relevant in this study given that in Latin American culture the family is central for the individual, more so than for groups in other cultural contexts (Terrazas-Carrillo, McWhirter, & Muetzelfeld, 2016). Likewise, there is also evidence showing that higher satisfaction in the food domain is positively associated with well-being (Liu & Grunert, 2019; Schnettler, Lobos et al., 2017; Schnettler et al., 2018ab), healthy eating habits and lower rates of being overweight and obesity in adults (Schnettler, Lobos et al., 2017; Schnettler et al., 2018c). This is important because Chile ranked second among the OECD countries with the highest proportion of obese adults in 2017 (34.4%) (OECD, 2017).

Regarding spillover between depression and overall life satisfaction, it has been well established that depression

is negatively related to an individual's overall life satisfaction in different cultures (Gabriel, Untas, Lavner, Koleck, & Luminet, 2016; Heinitz, Lorenz, Schulze, & Schorlemmer, 2018; Lu et al., 2018; Wang & Peng, 2017). Regarding spillover of mental health problems to other life domains, depression has been negatively related to satisfaction in the family domain (Grimaldo & Reyes Bossio, 2015; Lu et al., 2018; Reali et al., 2016; Suzuki et al., 2018). In addition, a higher number of days with mental health problems and depression has been related to lower levels of satisfaction in the food domain (Schnettler et al., 2015; Schnettler, Grunert et al., 2017; Seo, Cho, Kim, & Ahn, 2013).

As for crossover effects, some studies have shown that depression affects the family's and especially the partner's well-being (Fowler & Gasiorek, 2017; Marguerite et al., 2017). Although the relationship through crossover between depression and well-being in different life domains remains under-investigated, studies have shown that depressive symptoms negatively affect family interaction (Lu et al., 2018; Reali et al., 2016; Suzuki et al., 2018). Taking into account that individuals involved in reciprocal family relationships influence each other's thoughts and emotions (Kerr & Bowen, 1998), it is to be expected that one member of the couple's depression may not only affect their own satisfaction with family life (spillover effect), but also the other member of the couple's satisfaction with family life through a crossover effect (Bakker & Demerouti, 2013). Likewise, there is evidence indicating that depression is related to unhealthy eating habits and less frequent family meals (Horodyski et al., 2018; Levin & Kirby, 2012; McCurdy et al., 2014), which have been associated with lower satisfaction with food-related life in adult samples (Schnettler, Lobos et al., 2017; Schnettler et al., 2018c). Given that there is evidence indicating that family members influence each other's eating habits (Schnettler, Lobos et al., 2017), it is possible to expect that one member of the couple's depression may not only affect their own satisfaction with food-related life (spillover effect), but also the other member of the couple's satisfaction with food-related life through a crossover effect (Bakker & Demerouti, 2013).

Therefore, based on the systems theory (Becvar & Becvar, 1998), the family systems-illness model (Rolland, 1994), the family systems theory (Kerr & Bowen, 1998), the spillover-crossover model (Bakker & Demerouti, 2013), and the aforementioned empirical background, we

propose the following hypotheses (see the hypothesized model in Fig. 2):

H1: Men’s depressive symptoms are negatively associated with his life satisfaction (spillover effect).

H2: Men’s depressive symptoms are negatively associated with his family life satisfaction (spillover effect).

H3: Men’s depressive symptoms are negatively associated with his food-related life satisfaction (spillover effect).

H4: Men’s depressive symptoms are negatively associated with his partner’s life satisfaction (man crossover effect).

H5: Men’s depressive symptoms are negatively associated with his partner’s family life satisfaction (man crossover effect).

H6: Men’s depressive symptoms are negatively associated with his partner’s food-related life satisfaction (man crossover effect).

H7: Women’s depressive symptoms are negatively associated with her life satisfaction (spillover effect).

H8: Women’s depressive symptoms are negatively associated with her family life satisfaction (spillover effect).

H9: Women’s depressive symptoms are negatively associated with her food-related life satisfaction (spillover effect).

H10: Women’s depressive symptoms are negatively associated with her partner’s life satisfaction (woman crossover effect).

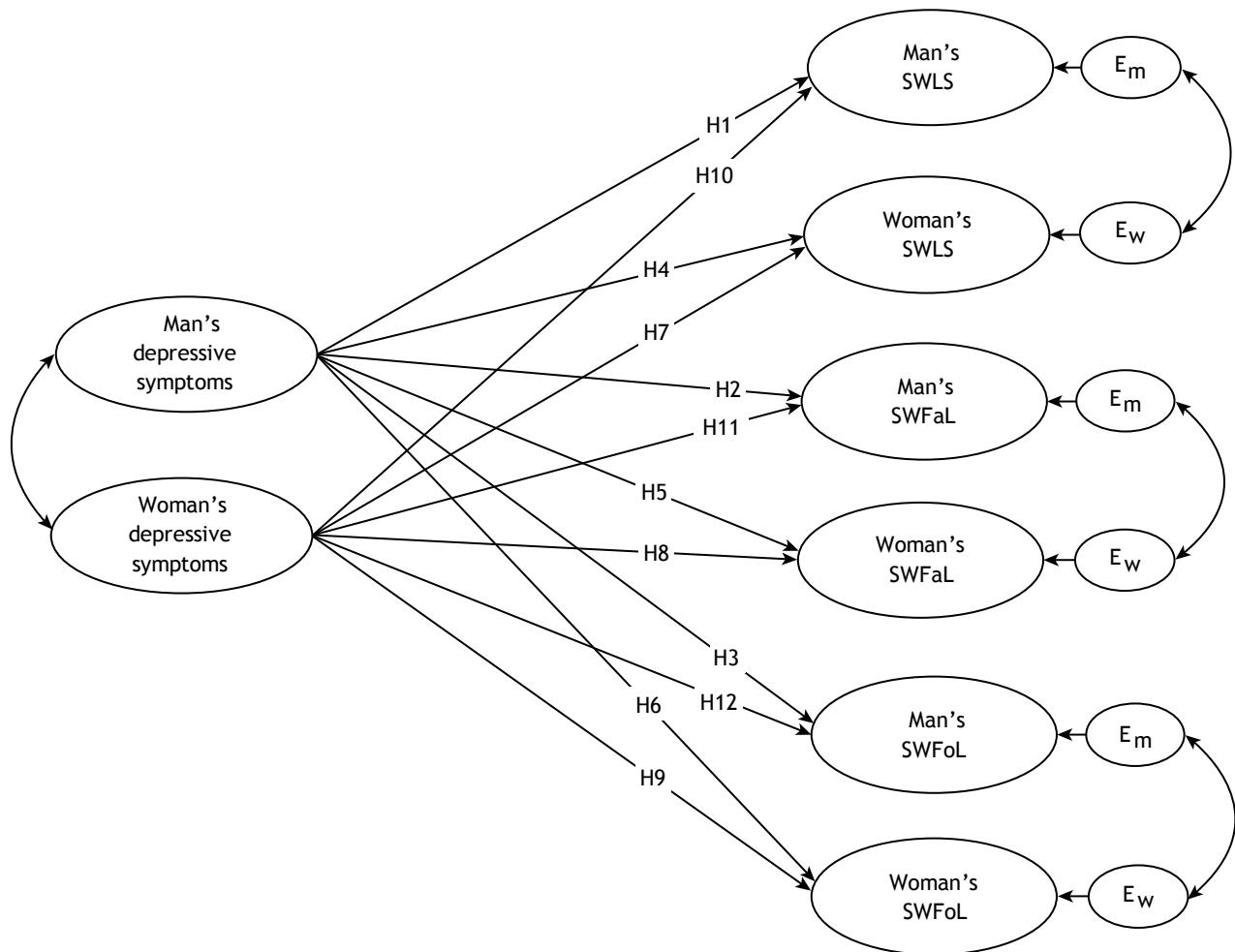
H11: Women’s depressive symptoms are negatively associated with her partner’s family life satisfaction (woman crossover effect).

H12: Women’s depressive symptoms are negatively associated with her partner’s food-related life satisfaction (woman crossover effect).

**Method**

**Sample and procedure**

Convenience non-probability sampling was used to recruit a sample of 303 dual-earner couples with adolescent children in Temuco, Chile, resulting in a total of 303 responses from both women and men. Participants were recruited through their children from seven schools that serve socioeconomically diverse populations. Parents were contacted by trained interviewers who explained the study objectives and the strictly confidential treatment of the information obtained. After participants signed the informed consent forms, the questionnaires were administered to



**Figure 2.** Hypothesized actor-partner interdependence model of the effect of depression on Satisfaction with Life Satisfaction (SWLS), Satisfaction with Family Life (SWFaL) and Satisfaction with Food-related Life (SWFoL) in dual-earner parents.  $E_m$  and  $E_w$ : residual errors on satisfaction for the man and woman, respectively.

both members of the couple by a trained interviewer. The study was conducted between May and August 2017, and the study design was approved by the Ethics Committee of the Universidad de La Frontera (005/2016). A pilot test of the questionnaires was conducted with twenty couples following the same recruitment method.

Table 1 shows the sociodemographic characteristics of the sample and both members of the couple's average scores on the SWLS, SWFoL, SWFaL, and depression subscale from the DASS-21.

## Measures

The following instruments were answered by both members of the couples:

- *Depression Anxiety and Stress Scale - 21* (DASS-21): DASS-21 (Lovibond & Lovibond, 1995) is a 21-item measure containing three scales. In this study, only the Depression subscale was used. It consists of seven items (e.g.: "I could not seem to experience any positive feeling"). The Spanish version of the Depression scale from the DASS-21 was used, which has shown good internal consistency in previous studies in Chile (Antúnez & Vinet, 2012). Respondents were asked to use a 4-point severity

or frequency scale to rate the extent to which they have experienced each state over the past week (0: did not apply to me at all; 3: applied very much to me or most of the time). In this study, the subscale of Depression (Cronbach's  $\alpha$  women = 0.893, men = 0.889) showed good internal reliability.

- *Satisfaction with Life Scale* (SWLS): SWLS (Diener, Emmons, Larsen, & Griffin, 1985) is a scale composed of five items grouped into a single dimension that is used to evaluate overall cognitive judgments about a person's own life (e.g.: "In most ways my life is close to my ideal"). The Spanish version of the SWLS was used (Schnettler, Miranda, Sepúlveda, & Denegri, 2011), which has shown good internal consistency in previous studies with adults in Chile (Schnettler, Grunert et al., 2017; Schnettler, Lobos et al., 2017; Schnettler, Miranda-Zapata et al., 2017; Schnettler et al., 2018abc). Respondents were asked to indicate the degree to which agreement with each statement using a 6-point Likert scale (1: completely disagree; 6: completely agree). In this study the SWLS showed good internal reliability in both subsamples (Cronbach's  $\alpha$  women = 0.890, men = 0.893).

- *Satisfaction with Food-related Life* (SWFoL): SWFoL (Grunert, Dean, Raats, Nielsen, & Lumbers, 2007) is a scale consisting of five items grouped into a single dimension

Table 1 Sample characteristics (n = 303)

Characteristic	Total sample
Woman's age [Mean (SD)]	40.9 (7.4)
Man's age [Mean (SD)]	43.2 (7.2)
Number of family members [Mean (SD)]	4.3 (1.1)
Number of children [Mean (SD)]	2.4 (1.0)
Socioeconomic status (%)	
High and upper-middle	11.2
Middle-Middle	20.8
Lower-Middle	37.0
Low	21.5
Very low	9.6
Satisfaction with life (SWLS) [Mean (SD)]	
Woman	24.9 (4.2)
Man	25.2 (3.9)
Satisfaction with family life (SWFaL) [Mean (SD)]	
Woman	25.0 (4.5)
Man	25.4 (4.3)
Satisfaction with food-related life (SWFoL) [Mean (SD)]	
Woman	23.5 (4.6)
Man	24.2 (4.1)
Depression [Mean (SD)]	
Woman	1.9 (4.6)
Man	1.9 (3.3)

that is used to evaluate a person's overall assessment of their food and eating habits (e.g.: "*Food and meals are positive elements*"). The Spanish version of the SWFoL was used (Schnettler et al., 2011), which has shown good internal consistency in previous studies with adults in Chile (Schnettler, Grunert et al., 2017; Schnettler, Lobos et al., 2017; Schnettler, Miranda-Zapata et al., 2017; Schnettler et al., 2018abc). Respondents were asked to indicate their degree of agreement with each statement using a 6-point Likert scale (1: completely disagree; 6: completely agree). In this study, the SWFoL showed good internal reliability (Cronbach's  $\alpha$  mothers = 0.888, fathers = 0.883).

- *Satisfaction with Family Life* (SWFaL) scale. This scale, proposed by Zabriskie and McCormick (2003), is an adaptation of the SWLS (Diener et al., 1985), in which the words "family life" replace the word "life" in each of the five original items of the SWLS. The Spanish version of the SWFaL was used (Schnettler, Miranda-Zapata et al., 2017), which has shown good internal consistency in previous studies with adults in Chile (Schnettler, Lobos et al., 2017; Schnettler, Miranda-Zapata et al., 2017; Schnettler et al., 2018ac). Respondents were asked to indicate their degree of agreement with each of the statements using a 6-point Likert scale (1: completely disagree; 6: completely agree). In this study, the SWFaL showed good internal reliability (Cronbach's  $\alpha$  women = 0.888, men = 0.916).

The discriminant validity of the SWLS, SWFoL, and SWFaL was previously demonstrated in samples of adults in Chile (Schnettler, Miranda-Zapata et al., 2017; Schnettler et al., 2018a).

Both members of the couple were asked their age. Women were asked about the number of family members and the number of children in their family. Education level and occupation of the head of the household were used to determine socioeconomic status (SES) (Adimark, 2004).

## Data analysis

Descriptive analyses were conducted using SPSS v.23. To test the spillover-crossover between depression, life satisfaction, satisfaction with family life, and with food-related life, the actor-partner interdependence model (APIM) with distinguishable dyads was assessed using structural equation modelling (SEM) (Kenny et al., 2006). The APIM uses the dyadic interaction as the unit of analysis (Kenny et al., 2006), so that each partner's depression was viewed as potentially associated with satisfaction with life, family life, and food-related life experienced by both partners. In the APIM framework, each dyad member is considered to be an actor as well as a partner in the analysis (Kenny et al., 2006). The associations between the satisfaction with life, family life and food-related life of one member of the dyad with his/her own depression are referred to as "actor effects" (spillover). The associations between the levels of satisfaction with life, family life, and food-related life of one member of the dyad with the depression by the other member of the dyad are referred to as "partner effects" (crossover). The APIM controls for the extent to which one partner's depression is affected by the other partner's depression and vice versa through a correlation between independent variables of each member of the dyad (the man's

depression and the woman's depression). The APIM also includes correlations between the residual errors of the dependent variables of each member of the dyad, which controls for other sources of interdependence between partners (Kenny et al., 2006).

SEM was conducted using MPlus 7.11. Parameters of the structural models were estimated using the robust unweighted least squares (ULSMV). Considering the ordinal scale of the items, the polychoric correlation matrix was used to perform the SEM analysis. The Tucker-Lewis index (TLI), the comparative fit index (CFI), and the root mean square error of approximation (RMSEA) were used to determine the model fit of the data. The TLI and CFI indicated a good fit with a value above 0.95. A good fit is found when the value of the RMSEA is lower than 0.06 (Hu & Bentler, 1999; Marsh, Hau, & Grayson, 2005).

## Results

Table 2 shows the correlations for the variables included in the present study. The women's and men's depression were positively associated with each other ( $p \leq 0.01$ ). The woman's depression correlated negatively with her own satisfaction with life, family life, and food-related life ( $p \leq 0.01$ ) as well as with her partner's satisfaction with life, family life ( $p \leq 0.01$ ), and food-related life ( $p \leq 0.05$ ). The man's depression correlated negatively with his own satisfaction with life, family life, and food-related life ( $p \leq 0.01$ ) as well as with his partner's satisfaction with family life ( $p \leq 0.05$ ). Other correlations of note are that the woman's satisfaction with life was positively associated with her own satisfaction with family life and food-related life ( $p \leq 0.01$ ), while the woman's satisfaction with family life was positively associated with her own satisfaction with food-related life ( $p \leq 0.01$ ). Similar results were obtained for the men ( $p \leq 0.01$ ). The woman's satisfaction with life correlated positively with her partner's satisfaction with life ( $p \leq 0.01$ ). Similar results were obtained for women's and men's satisfaction with family life ( $p \leq 0.01$ ) as well as between women's and men's satisfaction with food-related life ( $p \leq 0.01$ ). It should be noted that most of the aforementioned correlations were of medium strength.

The model that assessed the APIM association between the two members of a dual-earner couple's depression and their levels of satisfaction with life, family life, and food-related life had fit indices that showed a good fit with the data (CFI = 0.975; TLI = 0.973; RMSEA = 0.024). A significant correlation (covariance) was found between the depression level of both members of the couple ( $r = 0.488$ ,  $p \leq 0.01$ ) as well as between the residual errors of each member of the couple's satisfaction with life ( $r = 0.394$ ,  $p \leq 0.01$ ), family life ( $r = 0.513$ ,  $p \leq 0.01$ ), and food-related life ( $r = 0.558$ ,  $p \leq 0.01$ ).

As shown in Table 2, the path coefficients indicate that men's depression was negatively associated with their own levels of satisfaction with life ( $\gamma = -0.179$ ,  $p \leq 0.05$ ), family life ( $\gamma = -0.252$ ,  $p \leq 0.01$ ), and food-related life ( $\gamma = -0.214$ ,  $p \leq 0.05$ ); thus, the hypotheses is supported that a man's depressive symptoms associated negatively with his life satisfaction (H1), family life satisfaction (H2), and food-related life satisfaction (H3). Path coefficients also indicate that the man's depression was negatively associated with his partner's satisfaction with family life ( $\gamma = -0.183$ ,

Table 2 Correlations of the study variables.

	Woman depression	Woman SWLS	Woman SWFaL	Woman SWFoL	Man depression	Man SWLS	Man SWFaL	Man SWFoL
Woman depression	-							
Woman SWLS	-0.289**	-						
Woman SWFaL	-0.253**	0.624**	-					
Woman SWFoL	-0.220**	0.358**	0.392**	-				
Man depression	0.352**	-0.105	-0.141*	-0.072	-			
Man SWLS	-0.308**	0.382**	0.353**	0.275**	-0.196**	-		
Man SWFaL	-0.237**	0.380**	0.452**	0.237**	-0.187**	0.730**	-	
Man SWFoL	-0.125*	0.279**	0.283**	0.469**	-0.157**	0.460**	0.452**	-

\*  $p \leq 0.05$ \*\*  $p \leq 0.01$ 

SWLS: Satisfaction with life. SWFaL: Satisfaction with family life. SWFoL: Satisfaction with food-related life.

$p \leq 0.05$ ), but not with her life satisfaction ( $\gamma = -0.094$ ,  $p > 0.01$ ) and food-related life satisfaction ( $\gamma = -0.039$ ,  $p > 0.1$ ). These results support men's depressive symptoms as being negatively associated with his partner's family life satisfaction (H5), but this did not support the expectation that a men's depressive symptoms would be negatively associated with his partner's life satisfaction (H4) and food-related life satisfaction (H6).

Likewise, the path coefficients indicate that women's depression was negatively associated with her own levels of satisfaction with life ( $\gamma = -0.299$ ,  $p \leq 0.01$ ), family life ( $\gamma = -0.241$ ,  $p \leq 0.05$ ), and food-related life ( $\gamma = -0.323$ ,  $p \leq 0.01$ ); thus, the hypotheses was supported that a women's depressive symptoms are negatively associated with her life satisfaction (H7), family life satisfaction (H8), and food-related life satisfaction (H9). Path coefficients also indicate that women's depression was negatively associated with her partner's levels of life satisfaction ( $\gamma = -0.272$ ,  $p \leq 0.01$ ) and family life satisfaction ( $\gamma = -0.197$ ,  $p \leq 0.05$ ), but not with his satisfaction with food-related life ( $\gamma = -0.087$ ,  $p > 0.1$ ). These results support evidence that women's depressive symptoms are negatively associated with her partner's life satisfaction (H10) and family life satisfaction (H11), but they did not support the expectation that a woman's depressive symptoms would be negatively associated with her partner's food-related life satisfaction (H12).

## Discussion

This study focused on exploring the spillover (actor effect) and crossover (partner effect) associations between depression and subjective well-being for dual-earner couples in Chile, a developing country in Latin America. Using the APIM approach, as was expected according to systems theory (Becvar & Becvar, 1998) and the family systems-illness model (Rolland, 1994), our findings show a medium-strength correlation between the two members of the couple's depression levels. This result is consistent with previous studies that have reported an association between the two partners a couple depressive symptoms (Li & Johnson, 2018; Proulx et al., 2009). These correlations

can be explained by direct effects such as the transmission of negative moods and by indirect effects through shared variances of depression-related couple outcomes (Gabriel et al., 2016; Proulx et al., 2009).

As hypothesized on the basis of the "spillover-crossover" model (Bakker & Demerouti, 2013), our findings confirm a negative spillover between depression and life satisfaction for both members of the couple. This means that each member's depression negatively affects their own life satisfaction. This finding is consistent with previous studies in different countries (Gabriel et al., 2016; Heinitz et al., 2018; Lu et al., 2018; Wang & Peng, 2017). However, it should be noted that the association between a man's depression and his life satisfaction was of lower strength than the association between a woman's depression and her life satisfaction. These results may be partially explained by the higher prevalence of mental health problems such as depression in women worldwide (WHO, 2017) and in working women in particular (Gierc, Locke, Jung, & Brawley, 2016; Wang & Peng, 2017). However, at the same time, these findings indicate that the influence of depression on life satisfaction is higher for women than for men in dual-earner couples.

Likewise, as hypothesized, our findings show a negative spillover between depression and family satisfaction in both members of the dyad, which agrees with what has been reported by Levin and Kirby (2012), Lu et al. (2018), and Suzuki et al. (2018). Therefore, according to the spillover-crossover model (Bakker & Demerouti, 2013), a negative health experience in both members of the couple—depression in the present study—results in stress experienced in the family domain for the same individual, which, in turn, decreases their own level of family life satisfaction. This may be explained by the importance of family relationships for people's well-being, considering that family is one of the elements that has a stronger effect on overall life satisfaction (Hsieh & Li, 2019; Loewe et al., 2014; Schnettler, Miranda-Zapata et al., 2017; Schnettler et al., 2018ab).

Additionally, according to the spillover-crossover model (Bakker & Demerouti, 2013), our results also show a negative spillover between depression and satisfaction with food-related life in both members of the dyad. This means that depression results in a reduction in the level of satisfaction with food-related life for both members of the couple. This result is in line with studies that report lower levels of satisfaction with food-related life are associated with a higher number of days with mental health problems and depression (Schnettler et al., 2015; Schnettler, Grunert et al., 2017; Seo et al., 2013). Some studies have associated depression with unhealthy eating habits (Levin & Kirby, 2012; Pickett & McCoy, 2018) as well as with being overweight and obesity (Breymer, Lampe, McGregor, & Neuhaus, 2016; Pickett & McCoy, 2018). Therefore, it is possible to suggest that the negative spillover between depression and satisfaction with food-related life is associated with inadequate eating behaviours and weight gain although further research is needed to corroborate these relationships. Nevertheless, according to Cohen (1988), the spillover association in women was of medium strength, while the spillover association in men was of low strength, which indicates that the influence of depression on satisfaction with food-related life is also higher in women than in men for dual-earner couples.

According to the family systems theory (Kerr & Bowen, 1998) and the spillover-crossover model (Bakker & Demerouti, 2013), our results show a bidirectional crossover between the two members of dual-earner couples (Westman & Bakker, 2008). Our findings show a significant association between one partner's depression and the other partner's satisfaction in the family domain. This means that a negative experience in the health domain experienced by one member of the couple is transferred to the other member of the couple, which negatively affects their level of satisfaction with family life, and vice versa. These findings partially confirm that a person's depression may negatively affect their partner's well-being (Fowler & Gasiolek, 2017; Marguerite et al., 2017) although our results indicate that this bidirectional association mainly affects well-being in the family domain. This is especially relevant in dual-earner parents, such as those in our study, because they must coordinate their lives in the work and family domains, including the multiple demands associated with raising children (Steiner & Krings, 2016). One possible explanation underlying this negative crossover is related to negative marital interactions associated with depression in both members of the couple, which is consistent with the indirect form of crossover through social interaction between partners (Westman & Vinokur, 1998). In fact, a distressed marital relationship often has a higher level of hostility, and both partners generally offer and receive less social support, all of which may lead to depression (Wang et al., 2014). At the same time, Baucom, Whisman, and Paprocki (2012) indicate that a couple's relationship may deteriorate if depressed individuals perceive themselves as unpleasant for the partner or feel their partner is unsupportive. Some studies have demonstrated that negative marital interactions are a key driver of negative crossover effects (Bakker, Petrou, & Tsaousis, 2012; Shimazu, Bakker, & Demerouti, 2009; Steiner & Krings, 2016), which, in turn, decreases well-being for both members of the couple (Steiner & Krings, 2016). Nevertheless, it should be noted that the associations

between each member of the dyad depression and their own level of satisfaction with family life were stronger than the crossover associations between the dyad, suggesting that spillover is more relevant than crossover in the association between depression and satisfaction with family life. This means that the level of satisfaction with family life of one member of the couple is more influenced by their own depression rather than by his/her partner's depression.

Regarding overall life satisfaction within the dyad, our findings only show a unidirectional crossover from the woman's depression to her partner's life satisfaction, whereas the woman's life satisfaction was not associated with her partner's level of depression. According to the spillover-crossover model (Bakker & Demerouti, 2013), these results mean that negative experience in the health domain experienced by the woman is transferred to her partner, negatively affecting the man's satisfaction with life, but not vice versa. These results are consistent with studies that have reported asymmetric crossover patterns among couples in which the two members of a couple may differ in terms of the significance or strength of the crossover relationships (Liu & Cheung, 2015). However, it is noteworthy that the spillover association between the man's depression and his own life satisfaction was of lower strength than the crossover association between his partner's depression and the man's life satisfaction, suggesting that, in this case, crossover is more relevant than spillover. This means that the man's life satisfaction is more influenced by his partner's depression rather than his own depression. Some authors have reported that women, in particular working women, are more prone to depression than men within the marital context (Gierc et al., 2016; Wang & Peng, 2017). However, our results suggest that in dual-earner couples men may be in a more vulnerable situation than their partners, considering that their overall life satisfaction may not only be affected by their own depression, but also by their partner's. Therefore, consistent with the suggestion made by Li and Johnson (2018), interventions to reduce depression in dual-earner couples should include both partners.

Although there is evidence indicating that eating habits (Rhodes et al., 2016; Schnettler, Lobos et al., 2017) and satisfaction with food-related life (Schnettler, Lobos et al., 2017) are related between husbands and wives, our results show that the crossover associations between depression and satisfaction with food-related life were not significant for both members of the couple. This means that a negative experience in the health domain experienced by one member of the couple does not crossover to the other member of the couple's satisfaction with food-related life, contrary to what had been postulated by the spillover-crossover model (Bakker & Demerouti, 2013). Our findings did not show interdependence effects among couples, contrary to what was expected on the basis of the family systems theory (Kerr & Bowen, 1998). This is an unexpected result, considering that it has been reported that depressed women are more likely to skip some meals, have a lower frequency of family meals, and serve unhealthy meals to their families (Levin & Kirby, 2012; McCurdy et al., 2014): all of which have been related with lower levels of food-related life satisfaction (Schnettler et al., 2015, Schnettler, Lobos et al., 2017; Schnettler et al., 2018ac). Nevertheless, although some authors have not found crossover effects between different variables when studying dyads (Steiner & Krings, 2016), further research is



required to better understand the lack of a partner's effect on the association between depression and the satisfaction with food-related life in dual earner-couples.

One of the limitations of this study is its cross-sectional design, which did not allow us to test causality. Thus, in order to test causality, new research is required that includes longitudinal designs. Regarding the model, despite finding goodness-of-fit indices that fulfil the cut-off points determined for estimations with maximum likelihood, it is important to consider that the present study used a robust estimation with the Satorra-Bentler correction. Therefore, the model could consider some parameters that are not statistically different from zero in the population. Another limitation is related to the non-probabilistic nature of the sample and its relatively small size, and the fact that it only examined families with adolescent children, which limits the generalization of our results to families at certain life cycle stages. Furthermore, all data were self-reported. Thus, responses may have been affected by social desirability. We also did not assess work-family conflict; thus, although the sample is composed of dual-earner couples, it was not possible to determine if depression is completely associated with the level of work-family conflict for each member of the couple or other variables that are related to their depression levels. Finally, we did not assess the quality of both members of the couple's diet and their frequency of family meals, which is related to depression level (Levin & Kirby, 2012; McCurdy et al., 2014; Pickett & McCoy, 2018). These variables should be taken into account in future studies, which should also assess marital satisfaction.

Despite these limitations, this is the first study to explore the spillover and crossover associations between depression and satisfaction with life, food-related life, and family life in dual-earner couples using the APIM approach. This technique made it possible to analyse data at the dyadic level and conduct a simultaneous analysis taking depression, overall life satisfaction, and satisfaction in two life domains of both members of the couple into consideration. On this basis, our results show that, through spillover, a greater depression level translates into lower levels of satisfaction with life, family life, and food-related life in both members of dual-earner couples. Regarding crossovers, a bidirectional crossover between the two members of

dual-earner couples was found, between one partner's depression and the other partner's satisfaction with family life. Only a unidirectional crossover from the woman's depression to her partner's life satisfaction was obtained, which indicates an asymmetric crossover pattern. Conversely, no crossover effects were found between depression and satisfaction with food-related life within the dyads. Therefore, our results provide new insights into the growing corpus of literature focused on the crossover of negative experiences, such as exhaustion, burnout, or work-family conflict (Steiner & Krings, 2016).

In addition, the associations between depression and well-being in dual-earner couples detected in this study may be useful for both couples and organizations. As our results show that depression results in a decrease in satisfaction with life, family life, and food-related life for both members of the couple, organizational efforts should be made to maintain adequate levels of mental health among employees regardless of gender. This, in turn, may enhance workers' satisfaction with life, family life and food-related life. Regarding family life satisfaction, families in which one or both members of the couple suffer depression should place special emphasis on generating supportive environments at home. This is relevant, given our results show that problems associated with depression of both members of the couple cross over to the other member, decreasing both members' satisfaction with family life. This result is significant due to the importance of the family domain for an individual's well-being, particularly in Latin American culture. Although our results show that only a woman's depression crosses over to her partner's life satisfaction (and not vice versa), both members of the couple must receive support to achieve adequate mental health, given that women's depression not only influences her life satisfaction but also her partner's. This is important due the relatively high prevalence of depression in Chile (WHO, 2017), linked mainly to the demands at work and at home (SIS, SUSESO, FONASA, 2017), where women's participation in the workforce is growing fast (CNP, 2017) as it is in many other countries throughout the world.

Future studies should also assess the spillover-crossover associations between depression and satisfaction in other domains of life as well as between mother-children and

Table 3 The actor-partner interdependence model of the effect of depression on Satisfaction with Life (SWLS), Satisfaction with Family Life (SWFaL) and Satisfaction with Food-related Life (SWFoL) in dual-earner parents.

	SWLS		SWFaL		SWFoL	
	Estimate	p-value	Estimate	p-value	Estimate	p-value
Man (actor)						
Depression actor's effect (spillover)	-0.179	0.025	-0.252	0.001**	-0.214	0.009*
Depression partner's effect (woman crossover)	-0.272	0.000**	-0.197	0.007*	0.087	0.322
Woman (actor)						
Depression actor's effect (spillover)	-0.299	0.000**	-0.241	0.002*	-0.323	0.000**
Depression partner's effect (man crossover)	-0.094	0.245	-0.183	0.020*	0.039	0.616

\*  $p \leq 0.05$

\*\*  $p \leq 0.01$

father-children dyads. In addition, future research should also explore possible mediators and moderators of these associations. In this regard, as our results show that the influence of depression on life satisfaction and satisfaction with food-related life is higher for women than it is for men, future studies should assess the moderating role of sex.

## Acknowledgements

The results presented correspond to the Fondecyt Project 1160005 and Fondecyt Project 1190017.

## References

- Adimark. (2004). *Mapa Socioeconómico de Chile*. Retrieved from: <http://www.adimark.cl>. Accessed on December 30, 2015.
- Antúñez, Z., & Vinet, E. V. (2012). Escalas de depresión, ansiedad y estrés (DASS-21): Validación de la versión abreviada en estudiantes universitarios chilenos. *Terapia Psicológica*, 30(3), 49-55. <http://dx.doi.org/10.4067/S0718-48082012000300005>
- Bakker, A. B., & Demerouti, E. (2013). The spillover-crossover model. In J. G. Grzywacz & E. Demerouti (Eds.), *Current issues in work and organizational psychology. New frontiers in work and family research*, (55-70). New York, NY, US: Psychology Press.
- Bakker, A. B., Petrou, P., & Tsaousis, I. (2012). Inequity in work and intimate relationships: A spillover-crossover model. *Anxiety, Stress & Coping*, 25(5), 491-506. <http://dx.doi.org/10.1080/10615806.2011.619259>
- Baucom, D. H., Whisman, M. A., & Paprocki, C. (2012). Couple-based interventions for psychotherapy. *Journal of Family Therapy*, 34, 250-270. <http://dx.doi.org/10.1111/j.1467-6427.2012.00600.x>
- Botha, F., & Booyesen, F. (2014). Family functioning and life satisfaction and happiness in South African households. *Social Indicators Research*, 119(1), 163-182. <http://dx.doi.org/10.1007/s11205-013-0485-6>
- Becvar, D. S., & Becvar, R. J. (1998). *Systems theory and family therapy*. New York: University Press of America.
- Bremeyer, K. L., Lampe, J. W., McGregor, B. A., & Neuhaus, M. L. (2016). Subjective mood and energy levels of healthy weight and overweight/obese healthy adults on high-and low-glycemic load experimental diets. *Appetite*, 107, 253-259.
- Cohen, J. (1988). *Statistical Power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Diener, E., Emmons, R., Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75. [http://dx.doi.org/10.1207/s15327752jpa4901\\_13](http://dx.doi.org/10.1207/s15327752jpa4901_13)
- Dekel, R., Vilchinsky, N., Liberman, G., Leibowitz, M., Khaskia, A., & Mosseri, M. (2014). Marital satisfaction and depression among couples following men's acute coronary syndrome: Testing dyadic dynamics in a longitudinal design. *British Journal of Health Psychology*, 19(2), 347-362. <http://dx.doi.org/10.1111/bjhp.12042>
- Fowler, C., & Gasiorek, J. (2017). Depressive symptoms, excessive reassurance seeking, and relationship maintenance. *Journal of Social and Personal Relationships*, 34(1), 91-113. <http://dx.doi.org/10.1177/0265407515624265>
- Gabriel, B., Untas, A., Lavner, J. A., Koleck, M., & Luminet, O. (2016). Gender typical patterns and the link between alexithymia, dyadic coping and psychological symptoms. *Personality and Individual Differences*, 96, 266-271. <http://dx.doi.org/10.1016/j.paid.2016.02.029>
- Gierc, M., Locke, S., Jung, M., & Brawley, L. (2016). Attempting to be active: Self-efficacy and barrier limitation differentiate activity levels of working mothers. *Journal of Health Psychology*, 21(7), 1351-1360. <http://dx.doi.org/10.1177/1359105314553047>
- Grimaldo, M., & Reyes Bossio, M. A. (2015). Calidad de vida profesional y sueño en profesionales de Lima. *Revista Latinoamericana de Psicología*, 47(1). [http://dx.doi.org/10.1016/S0120-0534\(15\)30006-6](http://dx.doi.org/10.1016/S0120-0534(15)30006-6)
- Grunert, K. G., Dean, M., Raats, M. M., Nielsen, N. A., & Lumbers, M. (2007). A measure of satisfaction with food-related life. *Appetite*, 49(2), 486-493. <http://dx.doi.org/10.1016/j.appet.2007.03.010>
- Heinitz, K., Lorenz, T., Schulze, D., & Schorlemmer, J. (2018). Positive organizational behavior: Longitudinal effects on subjective well-being. *Plos One*, 13(6), e0198588. <http://dx.doi.org/10.1371/journal.pone.0198588>
- Horodyski, M. A., Brophy-Herb, H. E., Martocchio, T. L., Contreras, D., Peterson, K., Shattuck, M., Senehi, N., Favreau, Z., Miller, A. L., Sturza, J., Kaciroti, N., & Lumeng, J. (2018). Familial psychosocial risk classes and preschooler body mass index: The moderating effect of caregiver feeding style. *Appetite*, 123, 216-224. <http://dx.doi.org/10.1016/j.appet.2017.12.025>
- Hsieh, C. M., & Li, Q. (2019). What importance? Importance weighting and subjective well-being. *Journal of Well-Being Assessment*, 1-16. <http://dx.doi.org/10.1007/s41543-019-00020-1>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55. <http://dx.doi.org/10.1080/1070519909540118>
- Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *Dyadic data analysis*. New York, NY: Guilford Press.
- Kerr, M. E., & Bowen, M. (1988). *Family evaluation*. New York: W.W. Norton.
- Levin, K. A., & Kirby, J. (2012). Irregular breakfast consumption in adolescence and the family environment: underlying causes by family structure. *Appetite*, 59(1), 63-70. <http://dx.doi.org/10.1016/j.appet.2012.03.016>
- Li, P. F., & Johnson, L. N. (2018). Couples' depression and relationship satisfaction: examining the moderating effects of demand/withdraw communication patterns. *Journal of Family Therapy*, 40, S63-S85. <http://dx.doi.org/10.1111/1467-6427.12124>
- Liu, H., & Cheung, F. M. (2015). Testing crossover effects in an actor-partner interdependence model among Chinese dual-earner couples. *International Journal of Psychology*, 50(2), 106-114. <http://dx.doi.org/10.1002/ijop.12070>
- Liu, R., & Grunert, K. G. (2019). Satisfaction with food-related life and beliefs about food health, safety, freshness and taste among the elderly in China: A segmentation analysis. *Food Quality and Preference*, 79, 103775. <http://dx.doi.org/10.1016/j.foodqual.2019.103775>
- Loewe, N., Bagherzadeh, M., Araya-Castillo, L., Thieme, C., & Bastista-Foguet, J. M. (2014). Life domain satisfactions as predictors of overall life satisfaction among workers: Evidence from Chile. *Social Indicators Research*, 118(1), 71-86. <http://dx.doi.org/10.1007/s11205-013-0408-6>
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335-343. [http://dx.doi.org/10.1016/0005-7967\(94\)00075-U](http://dx.doi.org/10.1016/0005-7967(94)00075-U)
- Lu, S., Reavley, N., Zhou, J., Su, J., Pan, X., Xiang, Q., Zhang, Y., Oldenburg, B., & Wu, M. (2018). Depression among the general adult population in Jiangsu Province of China: prevalence, associated factors and impacts. *Social Psychiatry and Psychiatric Epidemiology*, 53(10), 1051-1061. <http://dx.doi.org/10.1007/s00127-018-1568-0>
- Marguerite, S., Laurent, B., Marine, A., Tanguy, L., Karine, B., Pascal, A., & Xavier, Z. (2017). Actor-partner interdependence analysis in depressed patient-caregiver dyads: Influence of emotional intelligence and coping strategies on anxiety and depression. *Psychiatry Research*, 258, 396-401. <http://dx.doi.org/10.1016/j.psychres.2017.08.082>
- Maroufizadeh, S., Hosseini, M., Foroushani, A. R., Omani-Samani, R., & Amini, P. (2018). The relationship between marital satisfaction and depression in infertile couples: an actor-partner interdependence model approach. *BMC Psychiatry*, 18(1), 310. <http://dx.doi.org/10.1186/s12888-018-1893-6>
- Marsh, H. W., Hau, K. T., & Grayson, D. (2005). Goodness of fit evaluation in structural equation modeling. In A. Maydeu-Olivares, and J. McArdle (Eds.), *Contemporary psychometrics* (275-340).

- Matias, M., Ferreira, T., Vieira, J., Cadima, J., Leal, T., & Matos, P. (2017). Workplace family support, parental satisfaction, and work-family conflict: Individual and crossover effects among dual-earner couples. *Applied Psychology, 66*(4), 628-652. <http://dx.doi.org/10.1111/apps.12103>
- McCurdy, K., Gorman, K. S., Kisler, T., & Metallinos-Katsaras, E. (2014). Associations between family food behaviors, maternal depression, and child weight among low-income children. *Appetite, 79*, 97-105. <http://dx.doi.org/10.1016/j.appet.2014.04.015>
- OECD. (2017). *Obesity Update 2017*. Retrieved from: <http://www.oecd.org/health/health-systems/Obesity-Update-2017.pdf>
- Pickett, S., & McCoy, T. P. (2018). Effect of psychosocial factors on eating behaviors and BMI among African American Women. *Clinical Nursing Research, 27*(8), 917-935. <http://dx.doi.org/10.1177/1054773817713420>
- Proulx, C. M., Buehler, C., & Heather, H. (2009). Moderators of link between marital hostility and change in spouses' depressive symptoms. *Journal of Family Psychology, 23*(4), 540-550. <http://dx.doi.org/10.1037/a0015448>
- Realí, F., Soriano, T., & Rodríguez, D. (2016). How we think about depression: The role of linguistic framing. *Revista Latinoamericana de Psicología, 48*(2). <http://dx.doi.org/10.1016/j.rlp.2015.09.004>
- Rhodes, K., Chan, F., Prichard, I., Coveney, J., Ward, P., & Wilson, C. (2016). Intergenerational transmission of dietary behaviours: a qualitative study of Anglo-Australian, Chinese-Australian and Italian-Australian three-generation families. *Appetite, 103*, 309-317. <http://dx.doi.org/10.1016/j.appet.2016.04.036>
- Rolland, J. S. (1994). In sickness and in health: the impact of illness on couples' relationship. *Journal of Marital & Family Therapy, 20*, 327-347. <http://dx.doi.org/10.1111/j.1752-0606.1994.tb00125.x>
- Schnettler, B., Miranda, H., Sepúlveda, J., & Denegri, M. (2011). Satisfacción con la Alimentación y la Vida, un Estudio Exploratorio en Estudiantes de la Universidad de La Frontera, Temuco- Chile. *Psicología & Sociedad, 23*(2), 426-435. <http://dx.doi.org/10.1590/S0102-71822011000200024>
- Schnettler, B., Miranda, H., Lobos, G., Orellana, L., Sepúlveda, J., Denegri, M., Etchebarne, S., Mora, M., & Grunert, K. G. (2015). Eating habits and subjective well-being. A typology of students in Chilean state universities. *Appetite, 89*, 203-214. <http://dx.doi.org/10.1016/j.appet.2015.02.008>
- Schnettler, B., Grunert, K. G., Orellana, L., Sepúlveda, J., Miranda, H., Lobos, G., ... & Hueche, C. (2017). Dietary restraint, life satisfaction and self-discrepancy by gender in university students. *Suma Psicológica, 24*(1), 25-33. <http://dx.doi.org/10.1016/j.sumpsi.2016.12.001>
- Schnettler, B., Lobos, G., Miranda-Zapata, E., Denegri, M., Ares, G., Hueche, C. (2017). Diet quality, satisfaction with life, family life and food-related life across families: A cross-sectional pilot study with mother-father-adolescent triads. *International Journal of Environmental Research and Public Health, 14*(11), 1313. <http://dx.doi.org/10.3390/ijerph14111313>
- Schnettler, B., Miranda-Zapata, E., Grunert, K. G., Lobos, G., Denegri, M., Hueche, C., & Poblete, H. (2017). Life satisfaction of university students in relation to family and food in a developing country. *Frontiers in Psychology, 8*, 1522. <http://dx.doi.org/10.3389/fpsyg.2017.01522>
- Schnettler, B., Grunert, K. G., Lobos, G., Miranda-Zapata, E., Denegri, M., & Hueche, C. (2018a). Exploring relationships between family food behaviour and well-being in single-headed and dual-headed households with adolescent children. *Current Psychology, 1-16*. <http://dx.doi.org/10.1007/s12144-018-9974-8>
- Schnettler, B., Grunert, K. G., Miranda-Zapata, E., Orellana, L., Sepúlveda, J., Hueche, C., ... & Adasme-Berrios, C. (2018b). Life, Family and Food Satisfaction in University Students. *Suma Psicológica, 25*(1), 30-40. <http://dx.doi.org/10.14349/sumapsi.2018.v25.n1.4>
- Schnettler, B., Grunert, K. G., Lobos, G., Miranda-Zapata, E., Denegri, M., & Hueche, C. (2018c). Maternal food-related practices, quality of diet, and well-being: Profiles of Chilean mother-adolescent dyads. *Journal of Nutrition Education and Behavior, 50*(8), 776-787. <http://dx.doi.org/10.1016/j.jneb.2018.03.003>
- Seo, S., Cho, M., Kim, Y., & Ahn, J. (2013). The relationships among satisfaction with food-related life, depression, isolation, social support, and overall satisfaction of life in elderly South Koreans. *Journal of the Korean Dietetic Association, 19*(2), 159-172. <http://dx.doi.org/10.14373/JKDA.2013.19.2.159>
- Shimazu, A., Bakker, A. B., & Demerouti, E. (2009). How job demands affect an intimate partner: A test of the spillover-crossover model in Japan. *Journal of Occupational Health, 51*(3), 239-248. <http://dx.doi.org/10.1539/joh.L8160>
- Steiner, R. S., & Krings, F. (2016). How was your day, darling? A literature review of positive and negative crossover at the work-family interface in couples. *European Psychologist, 21*(4), 296. <http://dx.doi.org/10.1027/1016-9040/a000275>
- Superintendencia de Salud (SIS), Superintendencia de seguridad social (SUSESO), Fondo Nacional de Salud (FONASA). (2017). Estadísticas de licencias médicas y subsidio por incapacidad laboral 2016. Retrieved from file:///C:/Users/Berta%20Schnettler/Downloads/InformeEstadisticasLM\_SIL\_FONASA\_SIS\_SUS-ESO%20(1).pdf.
- Suzuki, M., Furihata, R., Konno, C., Kaneita, Y., Ohida, T., & Uchiyama, M. (2018). Stressful events and coping strategies associated with symptoms of depression: a Japanese general population survey. *Journal of Affective Disorders, 238*, 482-488. <http://dx.doi.org/10.1016/j.jad.2018.06.024>
- Terrazas-Carrillo, E., McWhirter, P. T., & Muetzelfeld, H. K. (2016). Happy parents in Latin America? Exploring the impact of gender, work-family satisfaction, and parenthood on general life happiness. *International Journal of Happiness and Development, 3*(2), 140-161. <http://dx.doi.org/10.1504/IJHD.2016.079596>
- Wang, Y., & Peng, J. (2017). Work-family conflict and depression in Chinese professional women: the mediating roles of job satisfaction and life satisfaction. *International Journal of Mental Health and Addiction, 15*(2), 394-406. <http://dx.doi.org/10.1007/s11469-017-9736-0>
- Wang, Q., Wang, D., Li, C., & Miller, R. B. (2014). Marital satisfaction and depressive symptoms among Chinese older couples. *Aging & Mental Health, 18*(1), 11-18. <http://dx.doi.org/10.1080/13607863.2013.805730>
- Weinberg, M., Besser, A., Zeigler-Hill, V., & Neria, Y. (2018). Marital satisfaction and trauma-related symptoms among injured survivors of terror attacks and their spouses. *Journal of Social and Personal Relationships, 35*(3), 395-407. <http://dx.doi.org/10.1177/0265407517691367>
- Westman, M., & Bakker, A.B. (2008). Crossover of burnout among health care professionals. In J. Halbesleben (Ed.), *Handbook of stress and burnout in health care* (111-125). Hauppauge NY: Nova Science Publishers.
- Westman, M., & Vinokur, A. D. (1998). Unraveling the relationship of distress levels within couples: Common stressors, empathic reactions, or crossover via social interaction? *Human Relations, 51*(2), 137-156.
- World Health Organization (WHO). (2017). Depression and other common mental disorders. Global Health Estimates. Retrieved from file: [https://www.who.int/mental\\_health/management/depression/prevalence\\_global\\_health\\_estimates/en/](https://www.who.int/mental_health/management/depression/prevalence_global_health_estimates/en/)
- Zabriskie, R., & McCormick, B. (2003). Parent and child perspectives of family leisure involvement and satisfaction with family life. *Journal of Leisure Research, 35*, 163-189. <http://dx.doi.org/10.1080/01494929.2013.768321>