

Spillover-crossover effects for satisfaction with food-related life in dual-earner parents with adolescent children

Efectos *spillover-crossover* respecto a la satisfacción con la alimentación en parejas asalariadas con hijos adolescentes

Efeitos *spillover-crossover* na satisfação com a vida alimentar em famílias com filhos adolescentes nas quais ambos os pais trabalham fora de casa

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Abstract

This study aimed to examine spillover and crossover associations between parents' family support, work-life balance, and satisfaction with food-related life in dual-earner parents with adolescent children. The mediating role of work-life balance in these relationships was also explored. This is a cross-sectional study with mothers, fathers and adolescent children from Temuco, Chile as participants. The sample comprised 303 families of different-sex dual-earner parents with adolescent children (mean age 13.3, 51.5% female). The Actor-Partner Interdependence Model (APIM) was used to examine spillover (actor effects) and crossover (partner effects) associations between family members. Positive spillover effects were found for both parents ($p < 0.001$). Crossover effects were found from fathers' support and work-life balance, respectively, to mothers' work-life balance and satisfaction with food-related life ($p < 0.001$). No crossover effects were found between parents' work-life balance and their children's satisfaction with food-related life ($p > 0.1$). Work-life balance had a complete mediating role between parents' family support and satisfaction with food-related life in mothers (bias-corrected, 95%CI: -0.191; 0.093), and a partial role in fathers (bias-corrected, 95%CI: 0.007; 0.295). Spillover and crossover effects between parents' family support and work-life balance in dual-earner parents are associated with increased satisfaction with food-related life. Interventions to promote food-related life satisfaction in dual-earner parents should address both the work and other life roles that these parents fulfill.

Adolescent; Family Relations; Feeding Behavior

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Introduction

Dual-earner parents with children face multiple demands from different life domains. To fulfill their job responsibilities, working parents may dedicate less time to their personal and family lives, which can put a strain on members of the couple ¹ and on their children ². The impact of these demands on individuals can be estimated by examining their satisfaction with food-related life ³, that is, the cognitive assessment of one's food-related habits, because the food domain is associated with other life domains, such as health and social relationships ³. Moreover, according to Family System Theory ⁴, individuals involved in reciprocal relationships influence each other's thoughts, emotions, and behaviors. Thus, the literature on food-related life reports that members of the same family show a positive correlation between their eating habits and satisfaction with food-related life ^{5,6}, as well as with other domains of life, such as family and work ².

The Spillover-Crossover Model (SCM) ⁷ help to explain this interdependence between life domains and family members. A spillover effect refers to the intraindividual transmission of experiences in one life domain to another; a crossover effect refers to the transmission of experiences from one domain to another between people sharing the same environment, such as couples or parents and their children ⁷.

SCM has been used to study work-family conflict ⁸, while the spillover-crossover of positive experiences has received less attention ⁹, and even more scarcely in the food domain ⁶. Moreover, most studies on SCM have focused on couples, with fewer studies assessing crossover effects between parents and their children ⁹.

For working individuals, family support exerts a significant effect on other life domains ¹⁰. Consistent with the spillover effect, the Work-Home Resources (W-HR) Model ¹¹ states that contextual resources originated in the home domain may lead to better work performance. For instance, family support decreases work-family conflict ¹² and it serves as a buffer against distress in employees, which in turn enhances their well-being ^{10,13}. Family support is also positively associated with satisfaction with food-related life ^{2,5} and a better balance between work and other life domains in dual-earner parents ^{2,10}. However, these findings come from an intraindividual perspective. To the best of our knowledge, there are no available studies assessing the potential crossover between one parent's family support to the other parent's work-life balance and satisfaction with food-related life.

Inadequate balance between work and other life domains is among the main barriers that workers face to achieve an adequate diet ^{1,14,15,16}, and this difficulty can also affect the workers' family members. For an employee, conflicting demands from the work and other life domains often contribute to fewer meals prepared or eaten at home ¹⁵, less healthy food environments at home ¹⁶, and a greater frequency of fast food consumption ¹. These outcomes can negatively affect the quality of the diet of the couple and their children in dual-earner households ¹.

On the other hand, it seems that more work-life balance is associated to higher levels of well-being and domain-specific satisfaction. The scarce available evidence suggests that employees' work-life balance is positively associated with their own well-being ^{17,18}, with their own and their partner's ¹⁹, and with their children's satisfaction with food-related life ². However, to the best of our knowledge, there is no published research addressing the relationship between parents' work-life balance and their children's satisfaction with food-related life from a SCM perspective, i.e., evaluating spillover and crossover effects among members of the same family in parallel.

Based on this background, this study aims to explore the spillover and crossover associations between parents' family support and work-life balance, and parents' and their children's satisfaction with food-related life in dual-earner families with adolescent children. The mediating role of work-life balance in the relationship between parents' family support and satisfaction with food-related life was also explored. Based on the previous literature ^{2,5,10}, it was expected that: parents' family support would positively associate with satisfaction with food-related life in both parents (H1, spillover); that parents' family support would positively associate with work-life balance in both parents (H2, spillover); and that work-life balance would be positively associated with both parents' (H3, spillover) and their children's satisfaction with food-related life (H4, crossover). Moreover, we addressed the interdependence between the two parents, and it was expected that: one parent's family support would be positively associated with the other parent's work-life balance (H5, crossover);

and that one parent's work-life balance would be associated with the other parent's satisfaction with food-related (H6, crossover). It was also expected that work-life balance would serve as a mediating role between the parents' family support and satisfaction with food-related life in both parents (H7). Lastly, we examined the extent to which the indirect effect of parents' family support on satisfaction with food-related life occurs on the work-life balance of the same parent (H8, spillover) or the other parent (H9, crossover).

Method

Sample and procedure

This study is part of a larger research examining eating habits and subjective well-being in Chilean families. Non-probability sampling was used to recruit a sample of 303 different-sex dual-earner couples (married or cohabiting) with at least one adolescent child aged between 10 to 17 years old in Temuco, Chile (Table 1). Participants were recruited from seven schools presenting socioeconomically diverse populations. After the parents signed written informed consent and the adolescents signed assent forms, the questionnaires were personally administered separately to the three family members by trained interviewers during May and August 2017. Interviews were conducted in participants' households. The anonymity of the respondents was ensured. The study design was approved by the Research Ethics Committee of the La Frontera University (protocol n. 005_16).

Table 1

Sample characteristics. Temuco, Chile, 2017 (n = 303).

Characteristic	Total sample
Mother's age [mean (SD)]	40.9 (7.4)
Father'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)
Interviewed adolescent's age [mean (SD)]	13.3 (2.4)
Interviewed adolescent's gender (%)	
Female	51.5
Male	48.5
Socioeconomic status (%)	
High and upper-middle	11.2
Middle-middle	20.8
Lower-middle	37.0
Low	21.5
Extremely low	9.6
Satisfaction with food-related life [mean (SD)]	
Mother	23.5 (4.6)
Father	24.2 (4.1)
Adolescent	24.4 (4.7)
Perceived family support [mean (SD)]	
Mother	17.6 (2.7)
Father	17.4 (2.6)
Work-life balance [mean (SD)]	
Mother	12.5 (2.2)
Father	12.1 (2.3)

SD: standard deviation.

Measures

The three family members answered the following instrument:

(1) *Satisfaction with Food-related Life* (SWFoL) scale³. This scale consists of five items grouped into a single dimension that evaluates a person's overall assessment of their food and eating habits (i.e., "Food and meals are positive elements", "I am generally pleased with my food", "My life in relation to food and meals is close to ideal", "Regarding food, the conditions of my life are excellent", "Food and meals give me satisfaction in daily life"). The Spanish validated version of the SWFoL was used⁵. 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 (ordinal alpha mothers = 0.908, fathers = 0.901, adolescents = 0.903).

Mothers and fathers only answered the following scales:

(1) *Multidimensional Scale of Perceived Social Support* (MSPSS)²⁰. This scale is composed of 12 items and three subscales: significant other, family and friends. Since the authors of the MSPSS demonstrated that the scale clearly differentiated between these three sources of social support²⁰ – and following previous studies using only the Family subscale^{2,21} – only the four-item Family subscale was used to measure perceived family support in this study (i.e., "My family really tries to help me", "I get the emotional help and support I need from my family", "I can talk about my problems with my family", "My family is willing to help me make decisions"). The Spanish validated version of the *Perceived Family Support* (PFS) subscale was used². Respondents were asked to indicate their degree of agreement with each statement using a 5-point Likert scale (1: completely disagree; 5: completely agree). In this study, the PFS showed good internal reliability (Ordinal alpha mothers = 0.928, fathers = 0.923).

(2) *Work-life Balance* (WLB)¹⁸. This is a three-item scale that assesses an individual's perception of the balance between work and the rest of their life (i.e., "I manage to balance the demands of my work and personal/family life well", "I am satisfied with my work-life balance, enjoying both roles", "Nowadays, I seem to enjoy every part of my life equally well"). The Spanish validated version of the WLB was used². Respondents were asked to indicate their degree of agreement with the three statements using a 5-point Likert scale (1: completely disagree; 5: completely agree). In this study, the WLB scale showed good internal reliability (ordinal alpha mothers = 0.876, fathers = 0.919).

The three family members were asked about their age and gender. Women were asked about the number of family members and the number of children. Education level and occupation of the head of household were used to determine socioeconomic status. The combination of these two variables in a matrix determines the socio-economic level, classified as high and upper-middle, middle-middle, lower-middle, low and extremely low²². The high and upper-middle socioeconomic status include householders with complete secondary or incomplete technical education, complete technical education or incomplete higher education, complete higher education and postgraduate studies (master, doctorate or equivalent) and occupations like low- and mid-level administrative employee, salesperson, secretary, mid-level executive, general manager, traditional professional and senior executive or general manager. The middle-middle socioeconomic status includes householders with incomplete elementary education or less, complete elementary, incomplete secondary, complete secondary or incomplete technical education, complete technical education or incomplete higher education, complete higher education and postgraduate studies (master, doctorate or equivalent) and occupations like skilled worker, junior, foreman, microentrepreneur, low- and mid-level administrative employee, salesperson, secretary, mid-level executive, general manager, traditional professional and senior executive or general manager. The lower-middle socioeconomic status includes householders with incomplete elementary education or less, complete elementary, incomplete secondary, complete secondary or incomplete technical education, complete technical education or incomplete higher education, complete higher education and postgraduate studies (master, doctorate or equivalent) and occupations like occasional and informal minor work, unskilled worker, odd jobs worker, day laborer, skilled worker, junior, foreman, microentrepreneur, low and mid-level administrative employee, salesperson, secretary, mid-level executive, general manager, traditional professional. The low socioeconomic status includes householders with incomplete elementary education or less, complete elementary, incomplete secondary, complete secondary or incomplete technical education and occupations like occasional and informal minor work, unskilled worker, odd jobs worker, day

laborer, skilled worker, junior, foreman, microentrepreneur. The extremely low socioeconomic status includes householders with incomplete elementary education or less, complete elementary and occupations in occasional and informal minor work, unskilled worker, minor tradesperson, day laborer ²².

Data analysis

Descriptive analyses were conducted using SPSS v.23 (<https://www.stata.com>). To evaluate the spillover-crossover effects between both parents' PFS and WLB and their own and their children's SWFoL, the Actor-Partner Interdependence Model (APIM) with distinguishable dyads was assessed using Structural Equation Modeling (SEM) ²³. The APIM uses the dyadic interaction as the unit of analysis. In the APIM framework, each dyad member is considered an actor and a partner in the analysis ²³. "Actor effects" (spillovers) are the associations between the PFS of one parent with their own SWFoL and WLB, and the associations between the WLB of one parent with their own SWFoL. "Partner effects" (crossovers) are: the associations between the PFS of one parent with the WLB of the other parent; and the associations between one parent's WLB and the other parent's SWFoL as well as with their children's SWFoL.

The APIM controls for the extent to which one parent's PFS is affected by the other parent's PFS and vice versa through a correlation between independent variables of each member of the dyad (the mother's and father's PFS). The APIM also includes correlations between the residual errors of the dependent variables of each family member (SWFoL), which controls for other sources of interdependence between partners ²³.

To control the effects of number of children and family socioeconomic status in modeling the fit of the data, these variables with a direct effect on the dependent variable of the three family members (SWFoL) were included. Family socioeconomic status grouped statuses of high and upper-middle and middle-middle in the high level (32%) and the socioeconomic status statuses of lower middle, low and extremely low in the low level (68%).

SEM was conducted using Mplus 7.11 (<https://www.statmodel.com/>). 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 ²⁴. The mediating role of WLB was evaluated via SEM using bias-corrected (BC) bootstrap confidence interval (CI), using 1,000 samples ²⁵. The mediating role was established when BC CI for the mediation effect did not include zero, indicating a significant indirect effect.

Results

Sample description

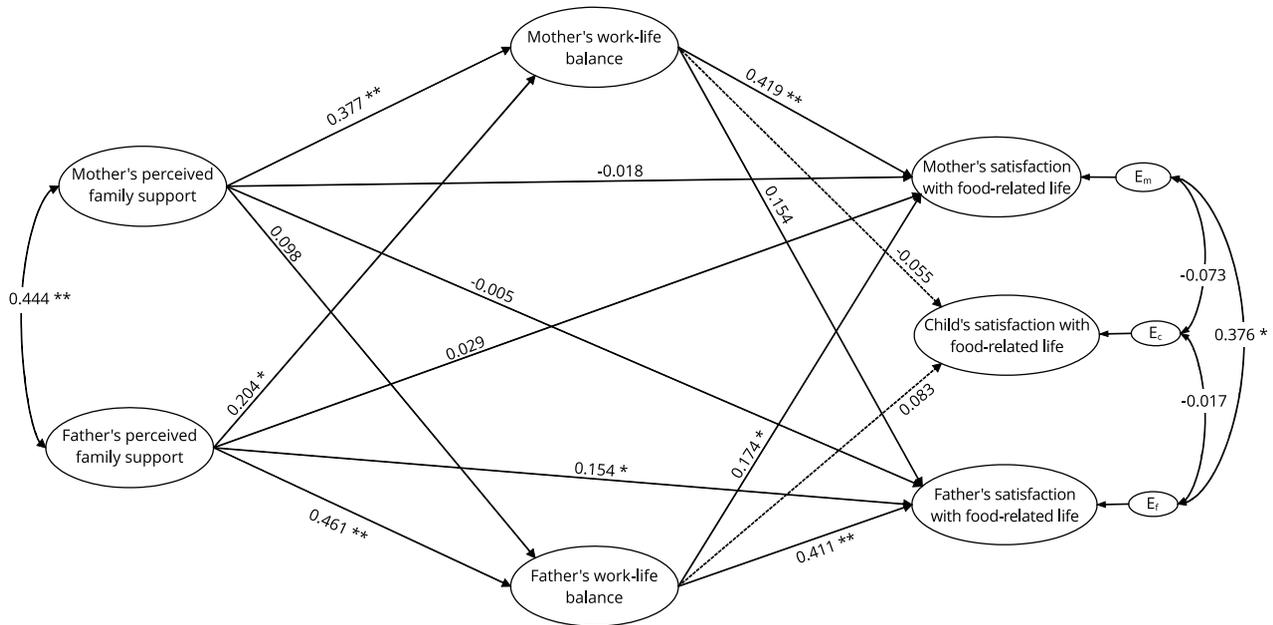
Table 1 shows sociodemographic characteristics of the sample encompassing 303 families of mothers, fathers and adolescents. On average, mothers were aged 40.9 years, fathers aged 43.2 years, and adolescents aged 13.3 years. In the latter group, 51.5% were female. Families were composed of an average of 4.3 family members and 2.4 children. Most families belonged to the lower-middle, low and middle-middle socioeconomic status. Table 1 also shows each family member's SWFoL and PFS average scores as well as both parents' WLB average scores.

Actor-Partner Interdependence Model results

Inspection of all item loadings indicated no issues with the measurement model. Figure 1 shows the results from the estimation of the structural model. Having controlled the effects of number of children and family socioeconomic status, the model that assessed the APIM association between both parents' perceived family support and work-life balance and their own and their adolescent children's

Figure 1

Actor-Partner Interdependence Model of the effect of *Perceived Family Support* (PFS) on *Work-Life Balance* (WLB) and *Satisfaction with Food-Related Life* (SWFoL) in dual-earner parents with adolescent children.



E_m , E_c and E_f : residual errors on SWFoL for the mother, adolescent child and fathers, respectively.

Note: the control for the effects of number of children and family socioeconomic status on the dependent variable of the three family members (satisfaction with food-related life) are not shown in the path diagram.

Dotted line arrows show crossover effects from both parent's work-life balance to their adolescent children's satisfaction with food-related life.

* p-value < 0.05;

** p-value < 0.01.

SWFoL had fit indices that showed a good fit with the data (CFI = 0.986; TLI = 0.983; RMSEA = 0.024). A significant correlation (covariance) was found between the perceived family support of both parents ($r = 0.444$; $p < 0.001$). A significant correlation was found between the residual errors of mother's and father's satisfaction with food-related life ($r = 0.376$; $p < 0.001$), which is not statistically significant between mother's and children's satisfaction with food-related life ($r = -0.073$; $p = 0.151$) as neither between father's nor children's satisfaction with food-related life ($r = -0.017$; $p = 0.810$).

As shown in Figure 1, the path coefficients indicate that the mother's perceived family support was not significantly associated with her own satisfaction with food-related life ($\gamma = -0.018$; $p = 0.795$), whereas fathers' perceived family support was positively associated with his own satisfaction with food-related life ($\gamma = 0.154$; $p = 0.042$). Thus, H1 was supported for fathers but not for mothers, i.e., perceived family support was positively associated with satisfaction with food-related life only for fathers. Perceived family support was positively associated with work-life balance in mothers ($\gamma = 0.377$; $p < .001$) and fathers ($\gamma = 0.461$; $p < 0.001$), thus supporting H2, confirming the positive relationship between perceived family and work-life balance for both parents. Work-life balance was positively associated with satisfaction with food-related life in mothers ($\gamma = 0.419$; $p < 0.001$) and fathers ($\gamma = 0.411$; $p < 0.001$), thus supporting H3, i.e., work-life balance was positively associated with satisfaction with food-related life for both parents. Mother's ($\gamma = 0.005$; $p = 0.617$) and father's ($\gamma = 0.083$; $p = 0.404$) work-life balance was not significantly associated with their children's satisfac-

tion with food-related life. These results did not support the expectation that both parents' work-life balance is positively associated with their adolescent children's satisfaction with food-related life, leading to the rejection of H4.

The mother's perceived family support was not significantly associated with the father's work-life balance ($\gamma = 0.098$; $p = 0.198$), whereas the father's perceived family support was positively associated with the mother's work-life balance ($\gamma = 0.204$; $p = 0.010$), confirming that father's perceived family support is positively related to mother's work-life balance, but not vice versa. Thus, H5 was supported only for mothers. Likewise, the mother's work-life balance was not significantly associated with the father's satisfaction with food-related life ($\gamma = 0.154$; $p = 0.053$), whereas the father's work-life balance was positively associated with the mother's satisfaction with food-related life ($\gamma = 0.174$; $p = 0.029$). These findings show that father's work-life balance crossed over to the mother's satisfaction with food-related life, but not vice versa. Thus, H6 was supported for mothers but not for fathers.

Regarding the control variables, the number of children did not significantly affect the three family members satisfaction with food-related life (mother: $\gamma = -0.052$; $p = 0.336$, father: $\gamma = -0.072$; $p = 0.205$, adolescent: $\gamma = -0.018$; $p = 0.778$). Likewise, the family socioeconomic status did not significantly affect the three family members satisfaction with food-related life (mother: $\gamma = -0.047$; $p = 0.394$, father: $\gamma = 0.061$; $p = 0.336$, adolescent: $\gamma = 0.059$; $p = 0.420$).

Evaluating the mediating role of work-life balance

The role of mother's work-life balance as mediator in the relationship between her own perceived family support and satisfaction with food-related life was supported by a significant indirect effect obtained with the bootstrapping confidence interval procedure (standardized indirect effect = 0.118; 95%CI: 0.030; 0.250), as the confidence intervals did not include zero. Likewise, the role of father's work-life balance as mediator in the relationship between his own perceived family support and satisfaction with food-related life was supported by a significant indirect effect (standardized indirect effect = 0.154; 95%CI: 0.068; 0.226), as the confidence intervals did not include zero. For both parents, these results mean that the influence of perceived family support on their own satisfaction with food-related life occurs indirectly via their own work-life balance. Thus, these findings confirm the expectations that work-life balance serve as a mediating role between perceived family support and satisfaction with food-related life for mothers and fathers (H7) and that the indirect effect of perceived family support on satisfaction with food-related life occurs through the work-life balance of the same parent (H8). The path coefficients of direct effects of perceived family support on satisfaction with food-related life were -0.039 (BC 95%CI: -0.191; 0.093) for mothers and 0.151 (BC 95%CI: 0.007; 0.295) for fathers. Due to the direct effect of perceived family support on satisfaction with food-related life included zero, which was statistically significant, work-life balance was a full mediator in mothers. On the other hand, the direct effect of perceived family support on satisfaction with food-related life did exclude zero, which was statistically significant, work-life balance was a partial mediator in fathers. No other mediating roles of work-life balance were identified (results not shown), thus not supporting H9 for mothers and fathers, i.e., the indirect effect of one parent perceived family support on their own satisfaction with food-related life do not occur on the work-life balance of the other parent.

Discussion

This study examined the spillover and crossover associations between parents' family support and work-life balance, and parents' and their child's satisfaction with food-related life in dual-earner families with adolescent children. Our results showed that spillover and crossover effects occur between perceived family support and work-life balance in dual-earner parents, which in turn are effectively associated with an increased satisfaction with food-related life.

Regarding specific effects, spillover relationships between perceived family support and satisfaction with food-related life differed between parents. A positive spillover relationship was found only

for fathers, which agree with previous studies ^{2,5}. For fathers, mealtimes may be a time for positive family interactions and to strengthen interpersonal relationships ²⁶, which may enhance their satisfaction with food-related life ^{2,5}.

For mothers, there was no direct association between perceived family support and satisfaction with food-related life, conflicting with previous studies showing that family support is positively associated with satisfaction with food-related life ^{2,5}. This may be due to women still being the primary responsible for the household food-related tasks, even if they have a paid work. Preparing family meals might be a source of tension for working mothers, as they tend to oversee the family's food-related habits ², or try to prepare meals likely to be enjoyed by all family members to encourage harmonious family relationships ²⁶. This extra workload in the household may negatively influence working mothers' satisfaction with food-related life, if mothers do not receive tangible support from their partners and children in the food-related tasks.

On the other hand, positive spillover effects were found for both mothers and fathers, where perceived family support was positively related to their own levels of work-life balance, and in turn, their work-life balance was positively related to their own levels of satisfaction with food-related life. The first relationship shows that a contextual resource derived from the family domain (i.e., perceived family support) is associated with a better work-life balance, in line with previous studies ^{10,19}, and with the SCM ⁷ and the W-HR ¹¹ models. The second relationship, the work-life balance/satisfaction with food-related life spillover effect for both parents, supports studies showing that employees with higher balance between their work and home-related activities (frequent family meals, meal planning, preparing home-made foods for their families) are more likely to have a healthy diet ^{1,14,15,16}, which positively influences satisfaction with food-related life ^{5,19}.

No crossover effects were found from mother's and father's work-life balance to their adolescent child's satisfaction with food-related life. This null result can be explained by previous evidence that children are more likely to choose unhealthful foods and have more hedonistic eating habits than their parents ²⁷. Parents' higher levels of work-life balance – which may entail more investment in their family food-related life – may have no effect on their adolescent children's satisfaction with food-related life, as adolescents experience an increased autonomy in their food choices ².

Between parents, crossover effects were unidirectional: from the father's perceived family support to the mother's work-life balance; and from the father's work-life balance to the mother's satisfaction with food-related life. To rephrase it, the fathers' positive experiences in the family domain and those derived from a better work-life balance are transferred to their partners, positively affecting the mother's work-life balance and satisfaction with food-related life, respectively; but the mother does not exert the same influence on her spouse. This finding may be due to women being socialized to be more sensitive to relationships than their male counterparts ²⁸. Other studies have also reported unidirectional crossover effects from father to mother regarding satisfaction with food-related life, showing that the man's satisfaction with food-related life is associated with his partner's overall life satisfaction, while the woman's satisfaction with food-related life is not associated with her partner's life satisfaction ⁶. Moreover, it has been found that the two members of the couple tend to differ in the significance of this effect ²⁹. Crossover is also typically smaller when dyadic analysis is ³⁰, which may in part explain the lack of crossovers from the mother's perceived family support and work-life balance to the father's work-life balance and satisfaction with food-related life, respectively; and from both parent's work-life balance to their adolescent children's satisfaction with food-related life.

The positive crossover between father's perceived family support and the mother's work-life balance suggests that spousal support is fundamental to decrease tension and stress by its effect on experiential stressors ¹³. For married or cohabiting working women, spousal support can help reduce demands that arise in the household domain (e.g., family and food-related tasks) ¹⁰, thus allowing a higher work-life balance especially in mothers. This unidirectional crossover between father's perceived family support and mother's work-life balance is congruent with studies reporting that social support can be a more salient issue for women than for men ¹⁰, but our results nonetheless stress the relevance of the husband's support for his wife. Furthermore, as it was expected according to the Family Systems Theory ⁴, our findings showed a positive medium strength correlation between mothers' and fathers' perceived family support.

Likewise, regarding the positive crossover from the father's work-life balance to the mother's satisfaction with food-related life, it has been suggested that higher balance between work and home/family demands increase positive marital interactions and cooperation in the household, which in turn increase family well-being^{9,13}. It may be that men who experience higher work-life balance levels may dedicate time to food-related tasks that traditionally are conducted by their female partner (e.g. grocery shopping, cooking), positively influencing his partner's food-related life satisfaction.

Work-life balance showed a complete mediating role between mother's perceived family support and her own satisfaction with food-related life, whereas this mediating role was partial in fathers. This finding suggests that in both parents a high perceived family support contributes to enhancing their own work-life balance, which in turn improves their own satisfaction with food-related life. The complete mediating role of work-life balance in mothers may be because women tend to give greater importance to family support than men¹⁰, and because of the multiple difficulties that women face in balancing work and other life demands¹³.

When interdependence between parents was considered, contrary to what was expected, work-life balance did not serve a mediating role between perceived family support and satisfaction with food-related life. Similar results have been reported in the literature exploring crossover effects of negative experiences³¹. Although in this sample significant paths were obtained between father's perceived family support and mother's work-life balance, as well as between father's work-life balance and mother's satisfaction with food-related life, the bootstrapping procedure did not support a mediating role for any parent's work-life balance.

Our study has some limitations. The first one is the cross-sectional design of the study, which does not allow inferring causal relationships. A second limitation is the non-probabilistic nature of the sample and its relatively small size for a dyadic analysis. Another limitation was that parents were not asked about type of employment nor number of working hours, which may account for their level of work-life balance; frequency of family meals and the diet quality of the three family members were also not assessed to allow for comparison between conditions of their food-related life and their level of satisfaction with it.

Despite these limitations, these results contribute to literature on the spillover and crossover of positive experiences in terms of well-being in the food domain, which has received little attention compared to the work-family crossover of negative experiences⁹. The strengths of our study lie on its survey that gathered mothers-father-adolescent groups from socioeconomically diverse families. Besides, the APIM approach makes it possible to analyze three family members simultaneously, taking both parents' perceived family support and work-life balance and the three family members' satisfaction with food-related life. Moreover, this study is the first to evaluate the possibility that one parent's perceived family support may cross over to the other parent's work-life balance, and that one parent's work-life balance may cross over to the other parents and their children's satisfaction with food-related life.

Implications for research and practice

The results of this study posit several implications for research. First, it is encouraged to continue using the APIM approach to model and analyze interdependencies in members of a dyad. Centering on food-related well-being and satisfaction with food-related life research, most of these studies have traditionally focused on individual household members, which may be a limited scope: Food consumption takes place in a social setting, and it may be influenced by family and work demands that both parents face. A second implication for research is a number of questions derived from these findings which future research should address. Further studies should examine the lack of bidirectional crossovers: from mother's perceived family support to father's work-life balance, and between mother's work-life balance and father's satisfaction with food-related life. Future studies should also consider families at different life stages (other than with adolescent children) and of different structures; variables that may have a moderating role in the perceived family support – work-life balance – satisfaction with food-related life relationship, such as the type of employment (employees vs. self-employees) and organizational support; and family members' participation in food-related tasks

and meals preparation. Lastly, researchers focusing on a dyadic or triadic approach to life domain satisfaction should consider longitudinal designs to evaluate causality between associated variables.

Our findings also have practical implications. Organizations and health policymakers can design guidelines and interventions that address workers' work-life balance in direct relation to their well-being in the food domain. Moreover, the gender differences found regarding mothers' and fathers' perceived family support and work-life balance suggest that interventions should include a focus on working fathers, since their influence on their partner's work-life balance and satisfaction with food-related life. Ultimately, the results of this study encourage researchers and policymakers to pay attention to the influence that working individuals exert on others with whom they share a meaningful relationship⁴.

Contributors

B. Schnettler conceived of and wrote the first manuscript draft, approved the statistical analysis and the final version of the manuscript. E. Miranda-Zapata guided the statistical analysis. L. Orellana and C. Hueche supervised data collection and made a critical analysis of the final version of the manuscript. G. Lobo, M. C. Lapomade and C. Adasme-Berrios made a critical analysis of the final version of the manuscript. All authors read, revised and approved the final manuscript.

Additional informations

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Resumen

El objetivo de este estudio fue examinar las asociaciones spillover y crossover entre el apoyo familiar, equilibrio entre trabajo-vida, y satisfacción vital relacionada con la comida en parejas de asalariados con hijos adolescentes. También se investigó el papel mediador del equilibrio entre trabajo-vida en estas relaciones. El diseño del estudio fue transversal, y los participantes fueron madres, padres y niños adolescentes de Temuco, Chile. La muestra estuvo compuesta por 303 familias con padres asalariados de diferente sexo e hijos adolescentes (media de edad 13,3, 51,5% mujeres). Se usó el Modelo de Interdependencia Actor-Pareja (APIM por sus siglas en inglés) para examinar asociaciones secundarias (efectos de actor) y transversales (efectos de pareja) entre los miembros de la familia. Se encontraron efectos positivos secundarios en ambos padres ($p < 0,001$). Se hallaron efectos spillover desde el apoyo familiar y equilibrio entre trabajo-vida de los padres, respectivamente, hasta el equilibrio entre trabajo-vida y satisfacción con la alimentación de las madres ($p < 0,001$). No se encontraron efectos crossover entre el equilibrio entre trabajo-vida de los padres y la satisfacción con la alimentación de su hijos ($p > 0,1$). El equilibrio entre trabajo-vida tuvo un rol mediador completo entre el apoyo familiar y satisfacción con la alimentación en madres (corregido por sesgo, IC95%: -0,191; 0,093), y un papel parcial en padres (corregido por sesgo, IC95%: 0,007; 0,295). Los efectos spillover y crossover entre apoyo familiar y equilibrio entre trabajo-vida en padres asalariados están asociados con la satisfacción con la alimentación. Las intervenciones para promover la satisfacción con la alimentación en parejas asalariadas deberían dirigirse tanto al trabajo, como hacia otros roles de la vida con los que deben cumplir los progenitores.

Adolescentes; Relaciones Familiares; Conducta Alimentaria

Resumo

O estudo buscou examinar as associações de spillover e crossover entre apoio familiar, equilíbrio trabalho-vida e satisfação com a vida alimentar em famílias com filhos adolescentes nas quais ambos os pais trabalham fora de casa. Foi explorado também o papel mediador do equilíbrio trabalho-vida nessas relações. O estudo adotou um desenho transversal, e os participantes eram mães, pais e filhos adolescentes na cidade de Temuco, Chile. A amostra consistia em 303 famílias de pais heterossexuais com duas rendas de trabalho e com filhos adolescentes (média de idade 13,3 anos; 51,5% do sexo feminino). Foi usado o Modelo de Interdependência Ator-Parceiro (APIM) para examinar as associações de spillover (efeitos de ator) e crossover (efeitos de parceiros) entre os membros da família. Foram encontrados efeitos positivos de spillover para ambos os pais ($p < 0,001$). Foram encontrados efeitos de crossover do apoio familiar e equilíbrio trabalho-vida dos pais, respectivamente, e em relação ao equilíbrio trabalho-vida e satisfação com a vida alimentar das mães ($p < 0,001$). Não foram encontrados efeitos de crossover entre o equilíbrio trabalho-vida parental e a satisfação com a vida alimentar dos filhos ($p > 0,1$). O equilíbrio trabalho-vida teve papel mediador completo entre o apoio familiar e a satisfação com a vida alimentar nas mães (IC95%, viés-corrigido: -0,191; 0,093) e papel parcial nos pais (IC95%, viés-corrigido: 0,007; 0,295). Os efeitos de spillover e crossover entre apoio familiar e equilíbrio trabalho-vida em famílias cujos ambos os pais trabalhavam fora de casa mostraram associação com aumento de satisfação com a vida relacionada à alimentação. As intervenções para promover a satisfação com a vida relacionada à alimentação devem levar em conta as atividades laborais e outros papéis vitais desempenhados por esses pais e mães.

Adolescente; Relações Familiares; Comportamento Alimentar

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