

## Relationships between diet quality, food satisfaction and life satisfaction in mother-adolescent dyads

Relaciones entre calidad de la dieta, satisfacción con la alimentación y con la vida en díadas madre-adolescente

Relações entre qualidade da dieta, satisfação com a alimentação e satisfação com a vida em pares mãe-adolescente

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doi: 10.1590/0102-311XEN209121

### Abstract

*This study examined the relationships between diet quality, satisfaction with food-related life and life satisfaction in mother-adolescent dyads. The sample consisted of 470 mother-adolescent dyads in Temuco, Chile. Mothers and adolescents responded to the Adapted Healthy Eating Index, Satisfaction with Life Scale, and the Satisfaction with Food-related Life scale. Data was analyzed using the Actor-Partner Interdependence Model (APIM) and Structural Equation Modelling (SEM). Diet quality was associated with satisfaction with food-related life, which related to life satisfaction in mothers and adolescents. We did not find direct relationships between diet quality and life satisfaction for either dyad member. Adolescents' diet quality negatively affected their mothers' satisfaction with food-related life; adolescents' food-related life was positively associated with their mothers' life satisfaction. The mothers' satisfaction with food-related life played a mediating role between their own diet quality and life satisfaction. Mothers and their adolescent children affect one another in their dietary patterns and life satisfaction. Child-to-mother influences on food-related experiences show that adolescents' satisfaction with food-related life improves their own and their mothers' life satisfaction. Interventions to promote healthy eating habits must be addressed to both mothers and their adolescent children.*

Adolescent; Family Relations; Personal Satisfaction

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## Introduction

Family members influence each other by reciprocal relationships, according to family systems theory<sup>1</sup>. In the food domain, family members tend to show similar eating behaviors<sup>2</sup>. Studies on parent-child relationships report diverging degrees of influence of parents' diets and food-related behaviors on their children<sup>3</sup>. However, fewer studies address the mutual influence of parents and children on one another's eating habits, and how this interdependence affects each other's well-being. This question is essential for families with adolescents, whose increasing autonomy in their food choices<sup>4</sup> coexists with family influences on their food consumption patterns<sup>5</sup>, especially their mothers'<sup>6</sup>.

Life satisfaction is the cognitive component of subjective well-being, which is defined as the individuals' assessment of their life as a whole and in different domains<sup>7</sup>. The bottom-up theoretical approach of life satisfaction states that a person's life satisfaction depends on their satisfaction in other life domains<sup>8</sup>. One of these domains, which gained more attention in the literature, is food. Higher life satisfaction is directly associated with individual healthy eating habits in adults and adolescents<sup>9,10,11</sup>. In parent-child dyads, studies show that children's eating behaviors resemble those of their parents in many degrees, regardless of the child's age<sup>3</sup>. Therefore, mother-adolescent influences can be expected in the food domain. This also questions if adolescents' food behaviors can affect their mothers' life satisfaction.

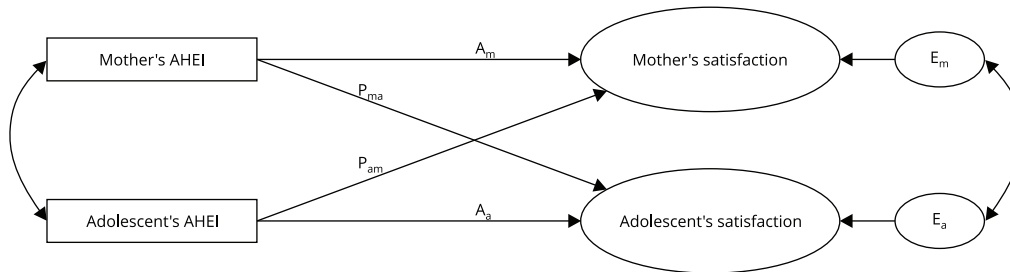
We examined the food domain using two constructs. First, diet quality, which represents the overall dietary patterns<sup>3</sup>. The second construct is satisfaction with food-related life, an individual's assessment of their eating habits and overall food-related practices<sup>12</sup>. Higher diet quality has been associated with higher levels of satisfaction with food-related life<sup>11,13</sup>. Researchers have also reported that adults and adolescents more satisfied with their food-related life are more satisfied with their overall life<sup>13,14,15,16</sup>. Moreover, satisfaction with food-related life is the mediator between food-related parenting practices and life satisfaction in mothers and their adolescent children<sup>14</sup>; and between dietary concerns and life satisfaction in adolescents<sup>15</sup>. Thus, these relationships, satisfaction with food-related life might mediate diet quality and life satisfaction.

Diet quality may improve an individual's satisfaction with food-related life, as well as other family members<sup>1</sup>. Studies show that both satisfaction with food-related life<sup>17,18</sup> and eating habits<sup>17,19</sup> are directly correlated among family members. Another study shows that a father's satisfaction with food-related life influenced his own and the mother's life satisfaction, but neither parent's satisfaction with food-related life influenced their child's life satisfaction. The child's satisfaction with food-related life did not influence the parents' life satisfaction either<sup>18</sup>. Our study expands on this knowledge by accounting for diet quality in the relationships between adolescents' satisfaction with food-related life and their mothers' life satisfaction and vice versa.

The aims of our study were: (a) to explore actor and partner effects between diet quality, satisfaction with food-related life and life satisfaction in mother-adolescent dyads, and (b) to find if satisfaction with food-related life can mediate diet quality and life satisfaction. We used the Actor-Partner Interdependence Model (APIM<sup>20</sup>) to study this interdependence. In the APIM, one variable outcome is predicted by the individuals' own characteristics or behaviors (actor effect) and by their partners (partner effect<sup>20</sup>). The APIM is used to investigate complex dynamics in family members and other close relationships, such as cohabiting couples and parent-child dyads<sup>20</sup>. Figure 1 shows the basic model for actor-partner effect used in our study. The hypothesis was that mothers and adolescents' diet quality, satisfaction with food-related life and life satisfaction are positively associated (actor effects, H1); the mother's diet quality, satisfaction with food-related life and life satisfaction are positively associated with those of the adolescents and vice versa (partner effects, H2); and that satisfaction with food-related life mediates the mothers and adolescents' diet quality and life satisfaction (actor and partner effects, H3).

**Figure 1**

Basic actor-partner interdependence model of diet quality (measured using the *Adapted Healthy Eating Index* – AHEI) and satisfaction.



$A_m$ : actor effect of mother's AHEI on her own satisfaction;  $A_a$ : actor effect of adolescent's AHEI on their own satisfaction;  $P_{ma}$ : partner effect of mother's AHEI on adolescent's satisfaction;  $P_{am}$ : partner effect of adolescent's AHEI on mother's satisfaction;  $E_m$  and  $E_a$ : residual errors on satisfaction for the mother and adolescent, respectively.

## Method

### Sample and procedure

This is a non-probabilistic sample composed of 300 dual-headed families and 170 single-headed families with at least one adolescent child between 10 and 17 years of age, from Temuco, Araucanía Region, Chile. Samples were taken using a quota system proportionally based on the distribution of families in Temuco according to data on family structure obtained from the 2013 CASEN survey <sup>21</sup>. Table 1 shows the sociodemographic characteristics of the final sample composed of 470 mother-adolescent dyads. This study is part of a larger research on eating habits and subjective well-being in Chilean families. The study protocol was approved by the Ethics Committee of the Universidad de La Frontera (protocol n. 005\_16).

Mothers were invited to participate in this study via their adolescent children's schools. The principals from each school (seven, in total) signed authorization letters to conduct the research with their students, which resulted in 5,145 families eligible for this study. From this number, 954 mothers (randomly selected) were invited to participate in this study, providing the following information: aims of the study, sample criteria, the questionnaire structure and data collection procedure, and the anonymous and confidential treatment of the data. Then, the interviewers detailed the information about the questionnaires and asked if mothers wanted to participate with one of their adolescent children. A total of 473 mothers agreed to participate in the study, which results in a 49.6% response rate. The participating mothers who had more than one child between 10 and 17 years of age, the child who received the letter of invitation to participate in this study was chosen to be interviewed. The participating mothers provided their telephone numbers. Trained interviewers called those mothers to schedule dates and time to apply the surveys, and then they were visited in their household by the trained interviewers. Mothers and adolescents signed informed consent forms, which guaranteed the anonymity and confidentiality of their responses. The interviewers read the questions aloud to mothers and their adolescent children and recorded the participant responses on paper questionnaires. The interviewers administered the questionnaires separately to the mothers and the adolescents. Data was collected between June and December 2016.

**Table 1**

Sociodemographic characteristics and mean scores on the *Satisfaction with Food-related Life* (SWFoL) scale, *Satisfaction with Life Scale* (SWLS) and *Adapted Healthy Eating Index* (AHEI) of the sample of mother-adolescent dyads. Temuco, Araucanía Region, Chile, 2017.

Characteristic	Total (n = 470)
Mother's age [Mean (SD)]	41.4 (7.2)
Adolescents' age [Mean (SD)]	13.3 (2.3)
Number of family members [Mean (SD)]	4.1 (1.3)
Number of children [Mean (SD)]	2.3 (1.0)
Adolescent gender [%]	
Female	52.3
Male	47.7
Socioeconomic status [%]	
High and upper-middle	16.7
Middle-middle	20.3
Lower-middle	33.1
Low	23.6
Very low	6.3
Mothers [Mean (SD)]	
AHEI	64.5 (14.3)
SWFoL	22.7 (4.9)
SWLS	23.4 (4.9)
Adolescents [Mean (SD)]	
AHEI	61.1 (14.6)
SWFoL	22.6 (6.3)
SWLS	23.9 (5.6)

## Measures

(1) *Adapted Healthy Eating Index* (AHEI): this instrument used to measure diet quality is an adaptation of the US-HEI<sup>22</sup> developed by Norte & Ortiz<sup>23</sup> for Spanish speakers. This version was previously used by the Chilean Ministry of Health to measure the overall quality of food in the Chilean population<sup>24</sup>. Respondents indicated their consumption frequency of nine food groups, such as cereals and derivatives, fruit, and meats. Consumption frequency for each food group was converted to a 0-10 score according to the degree of compliance with dietary guidelines<sup>23</sup>. The AHEI score was the total of all the scores earned in each of the food groups, to a maximum of 100 points. Scores above 80 represent a “healthy” diet; scores between 51 and 80 are a diet that “requires changes”; scores below 50 are “unhealthy” diets<sup>22</sup>.

(2) *Satisfaction with Food-related Life* (SWFoL) scale: SWFoL<sup>12</sup> is a five-item scale that evaluates 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 scale<sup>25</sup> showed good internal consistency in studies conducted in Chilean adult and adolescent samples<sup>11,14,17</sup>. Respondents were asked their agreement level with each statement using a 6-point Likert scale (1: completely disagree; 6: completely agree). In this study, the SWFoL scale showed a good level of internal consistency (Cronbach's  $\alpha$  mothers = 0.864, adolescents = 0.906).

(3) *Satisfaction with Life Scale* (SWLS): SWLS<sup>7</sup> is a five-item scale that assesses a person's overall cognitive judgments about their life (e.g., “In most ways my life is close to my ideal”). The Spanish version<sup>23</sup> was used, showing good internal consistency in studies with adults and adolescents in Chile<sup>11,14,17</sup>. Respondents indicated their agreement level with each statement on a 6-point Likert scale (1: completely disagree; 6: completely agree). In this study, the SWLS showed a good level of internal consistency (Cronbach's  $\alpha$  mothers = 0.903, adolescents = 0.910).

Studies in adult and adolescent samples in Chile have verified the discriminant validity of the SWLS and SWFoL scale <sup>14,26</sup>.

Mothers and adolescents also reported their age. Mothers reported the number of family members and number of children, as well as education level and occupation of the person with the highest income in the household, used to determine socioeconomic status. The high and upper-middle socioeconomic status include householders with complete high school or incomplete technical education, complete technical education or incomplete higher education, complete higher education and graduate studies (master's, doctorate or equivalent), and occupations such as 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 middle school education or less, complete middle school, incomplete high school, complete high school or incomplete technical education, complete technical education or incomplete higher education, complete higher education and graduate studies (master's, 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 middle school or less, complete middle, incomplete high school, complete high school or incomplete technical education, complete technical education or incomplete higher education, complete higher education and graduate studies (master's, 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 middle school or less, complete middle school, incomplete high school, complete higher school 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 very low socioeconomic status includes householders with incomplete middle school or less, complete middle school and occupations in occasional and informal minor work, unskilled worker, minor tradesperson, day laborer <sup>27</sup>.

### **Data analysis**

Descriptive analyses were conducted using SPSS, version 23 (<https://www.ibm.com/>). To test the actor and partner effects between diet quality (AHEI), SWFoL scale and life satisfaction, the APIM with different dyads was assessed using Structural Equation Modelling (SEM) <sup>20</sup>. The dyadic interaction is the unit of analysis in the APIM framework, and each dyad member is an actor and a partner in the analysis <sup>20</sup>.

In this study, the associations between the individual's AHEI, SWFoL scale and life satisfaction scores are called actor effects. The associations between the AHEI and SWFoL scores of one dyad member with the satisfaction with food related life and life satisfaction of the other member are called partner effects. The APIM controls the dyad member's AHEI affected by the other member's AHEI and vice versa by a correlation between independent variables of each member. The APIM also includes correlations between the residual errors of the dependent variables of each dyad member (life satisfaction), which controls other sources of interdependence between partners <sup>20</sup>.

SEM was conducted using Mplus 7.11 (<https://www.statmodel.com/>). The structural model parameters were estimated using the robust unweighted least squares (ULSMV). Based on the ordinal scale of the items, the SEM analysis was conducted by the polychoric correlation matrix. The Tucker-Lewis index (TLI), the comparative fit index (CFI) and the root mean square error of approximation (RMSEA) determined the model fit of the data. The TLI and CFI showed a good fit with a value above 0.95. A good fit is defined as a value of the RMSEA below 0.06 <sup>28</sup>. To control the effects of family structure, family socioeconomic status, adolescent's age and gender in modelling the fit of the data, these variables that directly affect the dependent variable of both members of the dyad (life satisfaction) were incorporated.

The mediating roles of SWFoL scale were tested via a SEM by a bias-corrected bootstrap confidence interval using 1,000 samples <sup>29</sup>. The mediating role was established when the bias-corrected confidence interval for the mediation effect did not include zero.

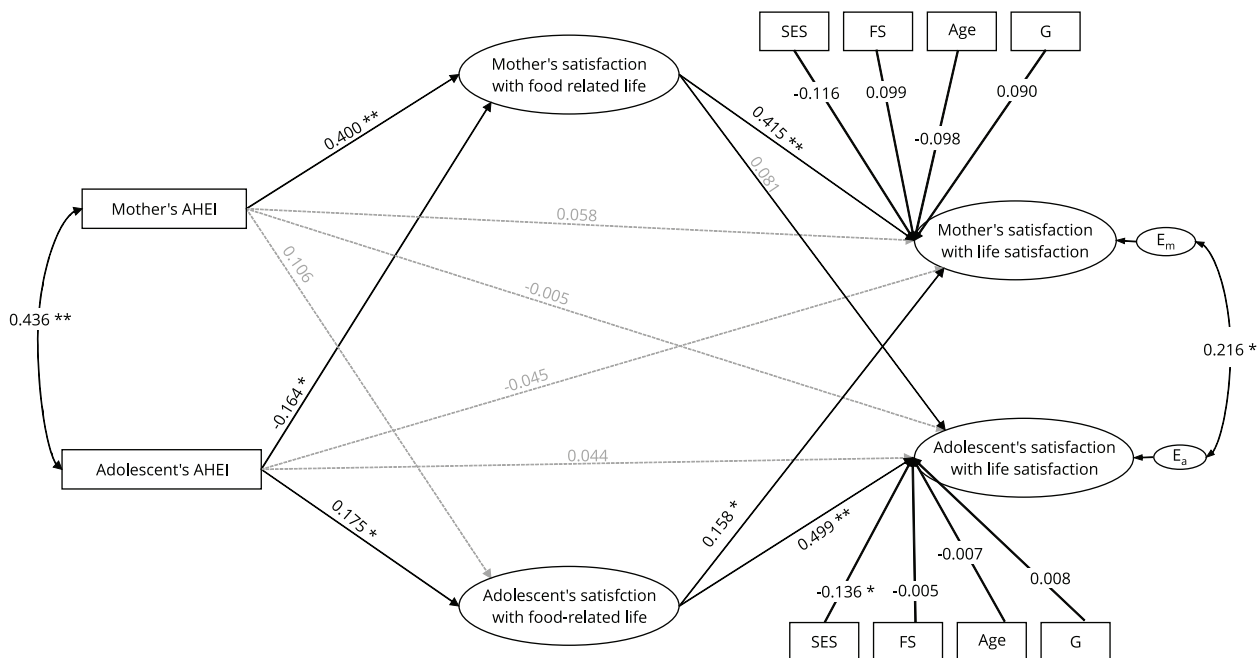
## Results

### APIM results

In our study, the standardized factor loadings of the SWFoL scale ranged from 0.737 to 0.844 for mothers and from 0.713 to 0.900 for adolescents, all statistically significant ( $p < 0.001$ ). The average extracted variance (AVE) values for the SWFoL scale were higher than 0.50 (AVE mothers = 0.65, adolescents = 0.70). The standardized factor loadings of the SWLS ranged from 0.803 to 0.975 for mothers and from 0.654 to 0.943 for adolescents, all statistically significant ( $p < 0.001$ ). The AVE values for the SWLS were also higher than 0.50 (AVE mothers = 0.79, adolescents = 0.75). The measurement model had CFI and TLI values greater than 0.95 and RMSEA was below 0.06. Figure 2 shows the estimates of the structural model. The model had a good fit with the data (CFI = 0.960; TLI = 0.952; RMSEA = 0.038). We found a significant correlation (covariance) between the AHEI score of both members of the dyad ( $r = 0.436$ ,  $p = 0.000$ ) and between the residual errors of mothers' and adolescents' life satisfaction ( $r = 0.216$ ,  $p = 0.011$ ).

**Figure 2**

Actor-partner interdependence model of the effect of diet quality (measured using the *Adapted Healthy Eating Index – AHEI*) on *Satisfaction with Life Satisfaction Scale (SWLS)* and *Satisfaction with Food-related Life (SWFoL)* scale in mother-adolescent dyads.



Age: Adolescent's age; E<sub>m</sub> and E<sub>a</sub>: residual errors on SWLS for the mother and adolescent, respectively; FS: family structure; G: adolescent's gender; SES: socioeconomic status.

\*  $p < 0.05$ ;

\*\*  $p < 0.01$ .

The first hypothesis tested actor effects. The path coefficients (standardized) indicated no AHEI→SWLS actor effects for mothers ( $\gamma = 0.058$ ,  $p = 0.425$ ) nor adolescents ( $\gamma = 0.044$ ,  $p = 0.518$ ). AHEI and SWFoL scale were directly associated, for mothers ( $\gamma = 0.400$ ,  $p < 0.001$ ) and adolescents ( $\gamma = 0.175$ ,  $p = 0.018$ ). For satisfaction with food related life→life satisfaction actor effects, the path coefficients indicate that satisfaction with food related life was directly associated with SWLS, for both mothers ( $\gamma = 0.415$ ,  $p < 0.001$ ) and adolescents ( $\gamma = 0.499$ ,  $p < 0.001$ ). Therefore, H1 was partially supported for mothers and adolescents.

Regarding partner effects (H2), the mother's AHEI was not statistically associated with the adolescent's SWLS ( $\gamma = -0.005$ ,  $p = 0.946$ ), and the adolescent's AHEI was not statistically associated with their mother's SWLS ( $\gamma = -0.045$ ,  $p = 0.553$ ) either. The mother's AHEI was not associated with the adolescent's satisfaction with food related life ( $\gamma = 0.106$ ,  $p = 0.176$ ); the adolescent's AHEI was inversely associated with their mother's satisfaction with food related life ( $\gamma = -0.164$ ,  $p = 0.017$ ). For satisfaction with food related life→life satisfaction partner effects, results showed that the mother's satisfaction with food related life was not significantly associated with her adolescent child's SWLS ( $\gamma = 0.081$ ,  $p = 0.254$ ), whereas the adolescent child's satisfaction with food related life was directly associated with their mother's SWLS ( $\gamma = 0.158$ ,  $p = 0.018$ ). These results partially support H2 for adolescents.

Family structure, adolescent's age and gender did not affect the model significantly (Figure 2). Family socioeconomic status did not affect the mother's SWLS. However, family socioeconomic status affected negatively and significantly the adolescents' SWLS.

### **Mediating roles of satisfaction with food-related life**

Finally, the AHEI→satisfaction with food related life→life satisfaction mediating role was tested. This mediation regards mothers and is supported by a significant indirect effect obtained with the bootstrapping confidence interval procedure (standardized indirect effect = 0.166, 95%CI = 0.041, 0.291). We did not find further indirect effects of the satisfaction with food related life, since the confidence intervals did include zero. These findings partially supported H3 for mothers.

The standardized total effect from mothers' AHEI and satisfaction with food related life and from the adolescents' AHEI and satisfaction with food related life on the mothers' SWLS was 0.155. The standardized total effect from mothers' AHEI and satisfaction with food related life and from the adolescents' AHEI and satisfaction with food related life on the adolescents' SWLS was 0.198.

## **Discussion**

Our study explored the interdependence of diet quality, satisfaction with food-related life and life satisfaction in mother-adolescent dyads. We found actor effects for diet quality→satisfaction with food related life, and satisfaction with food related life→life satisfaction in mothers and adolescents by using the APIM approach. On the other hand, we found two partner effects: from adolescents' diet quality on their mothers' satisfaction with food related life, and from adolescents' satisfaction with food-related life on their mothers' life satisfaction. Besides, the mothers' satisfaction with food related life mediated their own diet quality and life satisfaction.

Contrary to expectations, we found no diet quality→life satisfaction actor effects in mothers and adolescents. These results contradict previous findings<sup>9,10,11</sup>, which suggest that healthy eating habits and life satisfaction are not directly associated both in mothers and in adolescents, and this relationship may be more complex than previously reported. The method used in previous studies may explain this finding, since direct relationships between diet quality and life satisfaction were found<sup>9,10,11</sup>. These studies evaluated this relationship individually instead of the dyad as a unit of study as in our study. Another explanation may be that previous studies showing direct relationships between diet quality and life satisfaction<sup>9,10,11</sup> did not evaluate the mediating role satisfaction with food related life in this relationship. Therefore, it is plausible that when diet quality, satisfaction with food related life and life satisfaction are evaluated in parallel, diet quality first improves the satisfaction with food related life, which improves life satisfaction; or the relationship between diet quality



and life satisfaction may be mediated by the satisfaction with food related life, as it was the case of mothers in our study. Further studies are needed to corroborate if the results found are associated to the dyadic nature of the sample of our study or if it is due to the presence of satisfaction with food related life as a variable under study. Besides, we found no partner effects from diet quality to life satisfaction. Therefore, it has been suggested that if actor effects are not significant, it is likely that partner effects do not exist <sup>30</sup>.

On the other hand, results showed directly diet quality→satisfaction with food related life actor effects in mothers and adolescents. These findings support that healthier eating habits are positively related to the individual's satisfaction with food related life <sup>11,31</sup>. Nevertheless, the strength of this relationship <sup>32</sup> differed for each dyad member. The diet quality→satisfaction with food related life association was of medium strength in mothers, and of low strength in adolescents. This difference may occur due to adolescents' tendency to choose healthier foods and to have more hedonistic eating habits than adults <sup>33</sup>. Researchers report that adolescents associate satisfaction with food related life with healthy and unhealthy (tasty) foods, whereas mothers associate satisfaction with food related life mainly with healthy food for them and their family <sup>34</sup>. Hence, while diet quality may correlate parents and children <sup>3</sup>, their definition of diet quality can differ, particularly for older children who are more autonomous to choose their own food.

The direct relationship diet quality→satisfaction with food related life partner effects was inversely significant as it was hypothesized (H2). The adolescents' diet quality and their mother's satisfaction with food related life were inversely related. This finding contradicts the study by Schnettler et al. <sup>18</sup> regarding no partner effects from parents' satisfaction with food related life to their child's life satisfaction and vice versa. One possible explanation for this inverse pattern is that mothers, as traditionally responsible for child feeding <sup>35</sup>, may be reacting against their children's autonomy in food choices. The literature shows that caregivers tend to offer children healthier food options than what adolescents would select on their own <sup>4</sup>, while adolescents gain access to the foods they want, which may result in less healthy diets <sup>34</sup>. The mothers' concern for healthy diets may clash with the adolescents' dislike for these diets, or with their inclination towards unhealthy (but tastier) meals. This mother-child conflict may also explain the weaker relationship between adolescents' diet quality and their satisfaction with food related life, as they remain dependent on their family to provide food for them. Overall, this finding shows an instance of child-to-mother influence on food-related experiences.

Moreover, mothers' actor effects were of medium strength, while their child's partner effect was of low strength. Mother's satisfaction with food related life was mainly influenced by their own diet quality rather than by their child's diet quality. As in the study by Grunert et al. <sup>12</sup>, this unidirectional effect from adolescents to their mothers suggests that satisfaction with food related life does not strictly measure an individual's overall assessment of their food and eating habits. At least for mothers, this construct includes their adolescent children's food and eating habits.

We found direct satisfaction with food related life→life satisfaction actor effects for mothers and adolescents. This finding means that positive experiences in the food domain in both dyad members increase their own life satisfaction, which agrees with previous research at an individual level <sup>14,19,31</sup> and at a dyad level in couples <sup>18</sup>. Moreover, since the actor effects from satisfaction with food related life to life satisfaction in mothers and adolescents were of medium strength, satisfaction with food related life can be considered essential for the individual's life satisfaction at different stages of life in a dyadic context.

For satisfaction with food related life→life satisfaction partner effects, we found a unidirectional effect from the adolescents' satisfaction with food related life to their mother's life satisfaction. These results suggest that adolescents' positive experiences in the food domain are transferred to their mothers, which increases the mother's life satisfaction <sup>36</sup>, but not vice versa. Thus, the mother's life satisfaction may be sensitive to their children's satisfaction with food related life, but not the other way around.

The adolescents' satisfaction with food related life did not mediate their own diet quality and life satisfaction. For mothers, satisfaction with food related life mediated these two variables, which suggest that healthier eating habits can improve satisfaction with food related life in mothers, which improves their life satisfaction.



The limitations of our study must be considered to improve future research. First, the cross-sectional nature of the study allows for no causal relationships. Future studies must include longitudinal designs to test causality. A second limitation is the non-probabilistic nature of the sample and its relatively small size; the focus on mother-adolescent dyads limits the generalization of our results to families at other life cycle stages (e.g., dyads composed of mothers and young children) and to other possible dyads within the family (e.g., father-child). Moreover, the sample was self-selected, and mother-adolescent dyads who accepted to participate were possibly the most motivated by the subject of our study, therefore, they may be biased in their relationship with food and diet. A third limitation is all data were self-reported, so responses may have been affected by social desirability. Furthermore, in our study, the family structure was controlled in the data analysis; however, comparative studies according to the family structure may provide valuable information regarding possible differences between dual-headed and single-headed families.

## Conclusion

We explored the actor and partner effects between diet quality, satisfaction with food related life and life satisfaction in mother-adolescent dyads using the APIM approach. The findings contribute to the literature on the transmission of positive effects in mother-adolescent dyads, testing reciprocal influences (compared to unidirectional parental influences on children) that, to our knowledge, is a subject scarcely addressed in the dyadic analysis of well-being.

Our findings affect families with adolescent children and health practitioners and policymakers. Campaigns and interventions to promote healthy eating habits must be addressed to both mothers and their adolescent children to improve their satisfaction with food related life. Interventions should aim to improve adolescents' satisfaction with food related life, since our study suggests that the adolescent's positive experiences in this life domain can influence both their own and their mothers' life satisfaction.

## Contributors

B. Schnettler designed the research study and conceptualized this paper, performed the research, and wrote the paper. E. Miranda-Zapata analyzed the data, and provided a critical analysis of the study throughout its stages. L. Orellana performed the research, and wrote the paper. G. Lobos, M C. Lapo, C. Adasme-Berrios and K. G. Grunert provided a critical analysis of the study throughout its stages. All authors reviewed and approved the final version for publication.

## Acknowledgements

This study was funded by Fondecyt Project n. 1160005 and Fondecyt Project n. 1190017.

## Additional informations

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## Resumen

*Este estudio examinó las interrelaciones entre calidad de la dieta, satisfacción con la alimentación -relacionada con la vida, y satisfacción con la vida en díadas madre-adolescente. Se reclutó una muestra de 470 díadas madre-adolescente en Temuco, Chile. Las madres y adolescentes respondieron al Índice de Alimentación Saludable Adaptado, Escala de Satisfacción con la Vida, y la Escala de Satisfacción con la Alimentación. Se analizaron los datos usando el Modelo de Interdependencia Actor-Pareja (APIM) y el modelado de ecuaciones estructurales. La calidad de la dieta está asociada con la satisfacción con la alimentación, y la última está asociada con la satisfacción con la vida, en madres y adolescentes. No se encontraron relaciones directas entre la calidad de la dieta y la satisfacción con la vida para ningún miembro de la díada. La calidad de la dieta de los adolescentes tuvo un efecto negativo en la satisfacción con la alimentación de las madres; la satisfacción con la alimentación de los adolescentes estuvo positivamente asociada con la satisfacción con la vida de sus madres. La satisfacción con la alimentación de las madres tuvo un papel mediador entre la calidad de su propia dieta y su satisfacción con la vida. Las madres y sus hijos adolescentes se influyen mutuamente en sus hábitos alimentarios y satisfacción con la vida. Se encontró que las influencias hijo/a-madre tienen un impacto en las experiencias relacionadas con la comida, mostrando que la satisfacción con la alimentación de los adolescentes potencia su propia satisfacción con la vida y la de sus madres. Las intervenciones para promover hábitos saludables en la alimentación deben dirigirse tanto a las madres como a sus hijos adolescentes.*

*Adolescente; Relaciones Familiares; Satisfacción Personal*

## Resumo

*O estudo examinou as interrelações entre qualidade da dieta, satisfação com a alimentação e satisfação com a vida em pares de mães e adolescentes. Foi recrutada uma amostra de 470 pares mãe-adolescente em Temuco, Chile. As mães e adolescentes responderam o questionário do Índice Adaptado de Alimentação Saudável, a Escala de Satisfação com a Vida e a Escala de Satisfação com a Alimentação. Os dados foram analisados com o modelo de interdependência ator-parceiro (APIM) e modelagem de equações estruturais. A qualidade da dieta está associada com a satisfação com a alimentação, e esta está associada com a satisfação com a vida, entre mães e adolescentes. Tanto nas mães quanto nos filhos adolescentes, não foram observadas relações diretas entre qualidade da dieta e satisfação com a vida. A qualidade da dieta dos adolescentes teve um efeito negativo sobre a satisfação das mães com a alimentação; a satisfação dos adolescentes com a alimentação esteve associada positivamente à satisfação das mães com a vida. A satisfação das mães com a alimentação teve um papel mediador entre a qualidade de sua própria dieta e a satisfação com a vida. As mães e seus filhos adolescentes afetam uns aos outros nos padrões de dieta e satisfação com a vida. Foram identificadas influências de filho para mãe nas experiências relacionadas à alimentação, o que demonstra que a satisfação dos adolescentes com a alimentação potencializa a satisfação com a vida, tanto deles e quanto de suas mães. Devem ser realizadas intervenções no sentido de promover hábitos alimentares saudáveis entre as mães e seus filhos adolescentes.*

*Adolescente; Relações Familiares; Satisfação Pessoal*

Submitted on 28/Aug/2021

Final version resubmitted on 13/Jan/2022

Approved on 25/Feb/2022