

Testing Cross-Lagged Associations between Conditional Parental Regard and Impostorism among Students from Elementary to Secondary School

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Abstract

The objective of this longitudinal study was to examine the direction of the relationship between the perception of parental conditional support and the feeling of imposture. 504 students (249 girls) aged 10 - 11 at the start of the study answered questionnaires on their perception of conditional parental support and their feeling of imposture over a period of five consecutive years. Using structural equation modeling, the results of cross-lagged analyzes with overlapping stability paths of each variable showed that the model where the perception of conditional support predicted the presence of the feeling of imposture the following year was the most parsimonious and the one that also best fit the data. There was no evidence for the reverse: impostorism never predicted changes in perception of conditional parental regard. The discussion focuses on the mechanisms likely involved in children internalization of parental expectations as standards that lead them to feel like an impostor. The negative impact of impostorism on the well-being and future of children increases the importance of making parents aware of the avoidance of practices leading their child to perceive that their love and acceptance are based on their accomplishments rather than on their personal qualities.

Keywords

Conditional Parental Regard, Impostorism, Adolescence, Longitudinal Study

1. Introduction

Nowadays, the expression “feeling like an impostor” is part of everyday lan-

guage. Because the worry of seeing one's incompetence being exposed is a characteristic of the feeling of imposture, public claim by a person of such a feeling suggests more of a strategy of self-presentation than actual impostorism (Leary et al., 2000). Impostorism is mainly reported by adults, but it has also been observed in children as young as 10 years old (Bouffard et al., 2011) and in adolescents (Caselman et al. 2006; Cromwell, 1990). Adolescence is the stage of life marked by the formation of identity and high concerns of youths about what others think of them (Erikson, 1950; Somerville et al., 2013). The presence of a sense of imposture can hamper this important developmental task. Accordingly, a better understanding of the factors that fuel this perception of being worth less than others think of oneself is important. Some studies suggested that conditional parental regard might be a predictor of acquiring a feeling of impostorism.

1.1. Impostorism

The problem of impostorism was initially believed to affect mostly high-achieving women occupying positions in predominantly male environments (Clance & Imes, 1978; Harvey & Katz, 1985). Today, impostorism is known to affect people of any gender and there is no consensus as to its relative importance in men and women. It has been observed among professionals in a variety of fields (Barr-Walker et al., 2019; Bravata et al., 2020; Vergauwe et al., 2015), is deemed common among college and university students (Parkman, 2016), as well as adolescents and even children (Al Lawati et al., 2023; Chayer & Bouffard, 2010; Cokley et al., 2018; Grenon et al., 2019). The definition of impostorism is mostly agreed upon among researchers and features personal experience of self-perceived intellectual phoniness, feeling of being overvalued by others, of deceiving them and the fear of being unmasked (Clance & Imes, 1978; Cokley et al., 2018; Harvey & Katz, 1985; Kolligian & Sternberg, 1991; Yaffe, 2020a). As opposed to real impostors whose competence is a fraud, the person with impostorism is no less competent or qualified than others believe (Cozzarelli & Major, 1990; Ferrari, 2005). But instead of internalizing successes and accomplishments as evidence of one's competence, the person attributes them to external factors (Clance, 1985; Clance & Imes, 1978). Impostorism is not known to be pathological (Feenstra et al., 2020), but its prevalence and occurrence typically associated with various mental health difficulties (Cusack et al., 2013; Holden et al., 2021; McGregor et al., 2008).

Empirical studies among adults indicate that those plagued with impostorism present at the same time a set of characteristics that are detrimental to their well-being: anxiety, maladaptive perfectionism, concerns about making mistakes, fear of failure and success, low and unstable self-esteem, low job satisfaction, etc. (Cokley et al., 2018; Cozzarelli & Major, 1990; Hu et al., 2019; Neureiter & Traut-Mattausch, 2016; Pannhausen et al., 2020; Peteet et al., 2015; Thompson et al., 2000; Vergauwe et al., 2015). In the few studies in children, impostorism has been associated with some of the same correlates as in adults, such as low

self-perception of competence, low self-esteem, school anxiety, negative perfectionism, and feeling lack of control over their academic performance (Bouffard et al., 2011; Chayer & Bouffard, 2010; Grenon & Bouffard, 2016).

1.2. Conditional Parental Regard

It has long been established that the parental regard and support are assets in child and adolescent development (Auerbach et al., 2011; Desjardins & Leadbeater, 2011). However, the quality of that regard matters. As early as 1959, Rogers suggested that some children feel accepted and loved for who they are as a person and not for what they do, while others feel loved and accepted for their ability to meet others' expectations of them. Harter (1999, 2012) has taken Rogers' concept of conditionality and defined it in turn as a child's perception of being loved and supported by parents only when their behaviors, attitudes, or views are aligned with those expected by their parents. When children feel that only some of their characteristics are worthy of their parents' approval, they interpret them as conditions of their worth. They come to see themselves in the same way their parents do and internalize the standards expected of them (Assor et al., 2004; Langford & Clance, 1993; Rogers, 1959). In order to correspond to parental criteria, they avoid certain experiences and seek out others. Feeling the necessity to earn parental love and regard operates as a mean of psychological control over the child (Assor & Tal, 2012), where feelings of guilt and withdrawal of affection may increase the behaviors valued by the parents, but not the adoption of parental values and may lead to resentment towards them (Assor et al., 2004; Roth et al., 2009).

Conditional parental regard is detrimental to children in several ways. Receiving conditional parental regard predicts poorer psychosocial adjustment, including lower and more unstable self-esteem and the presence of depressive symptoms (Harter & Marold, 1994; Kollat, 2007; Otterpohl et al., 2020; Wouters et al., 2013). The perception of conditional parental regard has also been associated with a negative self-evaluation bias, a focus on outcomes rather than learning, disengagement from school, test anxiety, and negative perfectionism (Côté & Bouffard, 2011; Curran et al., 2017, 2020; Gittins & Hunt, 2019; Otterpohl et al., 2019; 2020; Roth et al., 2009; Smith et al., 2017). In a two-year longitudinal study, parental self-reported of conditional regard was directly related to the children's poorer academic functioning and indirectly related via their negative self-evaluation bias of competence (Côté, et al., 2014).

In short, studies have shown that children's perception of conditional parental regard is harmful for children's psychosocial and academic adjustment. Their worry of losing their parents' love and regard leads them to internalize their parents' expectations, even if it means rejecting the parts of themselves that they think their parents don't like or adopting inauthentic behaviours and attitudes ("false-self behavior") that are more to their liking (Harter et al., 1996). That experience of inauthenticity is a central facet of the definition of impostorism.

1.3. Link between Impostorism and Conditional Parental Regard

Langford and Clance (1993) have made the perception of conditional parental regard central to their theoretical comprehension of the development of impostorism. Families of people feeling like impostors would show a lack of emotional warmth and of validation of the self, leading the child to work excessively hard and develop a false self that is more likely to satisfy others. This suggests a link between conditional parental regard and impostorism. Although this hypothesis has not yet been directly examined (Sakulku & Alexander, 2011), some studies provided indirect support for this relation. Impostorism has positively been related to parental control, of which conditional parental regard is a form, (Sonnak & Towell, 2001) and to family emphasis on the importance of success and achievement (King & Cooley, 1995). Studies have retrospectively examined how adult impostors remember their childhood relationship with their parents. They show that adult impostors tended to remember being misunderstood by distant and cold parents, lacking parental care and warmth, or having to meet their expectations to be loved (Clance, 1985; Grays, 1992; Harvey & Katz, 1985; Li et al., 2014; Sonnak & Towell, 2001; Want & Kleitman, 2006; Yaffe, 2020b, 2021). Only a few studies have explored the role of parents in the feeling of imposture among young people still in their childhood or adolescence. Chayer et al. (2015) reported that perceiving conditional parental regard at age 13 was significantly associated with a higher risk of having a sense of impostorism that persists over the five following years. In a follow-up study, Grenon et al. (2019) found the perception of conditional parental regard to be part of a set of personal and parental characteristics associated with the presence of impostorism in youth aged 12 to 14 years. Finally, in a cross-sectional design with adolescents aged 12 to 17, Yaffe (2023) showed that the link between adolescents' reports of impostorism and their parents' authoritarian style was mediated by their perception of parental psychological control.

Thus, although few studies have examined the role of conditional parental regard on the impostor phenomenon, there is some evidence that it could be a predictor of acquiring a feeling of impostorism. However, most studies either included a single measurement time (Yaffe, 2023) or retrospectively associated adults' current impostorism with memories of their relationship with their parents (Li et al., 2014; Sonnak & Towell, 2001; Want & Kleitman, 2006; Yaffe, 2020b, 2021). The dearth of longitudinal studies makes it impossible to rule out that the relation between conditional parental regard and impostorism goes in the opposite direction, i.e. impostorism affects youths' perception of their conditional parental regard. This is particularly true for the developmental periods of late childhood and adolescence, that are characterized by changes in the family dynamics that might influence the way the two phenomena interact. In addition to the theoretical interest in clarifying the relationship between the two concepts, it is also important to do so on a practical level. Knowing which of the two concepts acts on the other or if their influence is reciprocal implies different targets

of intervention.

1.4. Pathways of the Predictive Relation between Perception of Conditional Parental Regard and Impostorism

The interaction between perception of conditional parental regard and impostorism can reflect three different predictive pathways. In the first predictive model, the perception of conditional parental regard fuel the development of impostorism. Children who perceive conditional regard from their parents believe that the consequence of failing to meet parental expectations is losing their love and respect. To prevent this from happening, these children adopt inauthentic attitudes and behaviours when they feel they are not up to parental standards (Harter et al., 1996). Even when they succeed in meeting parental demands, they attribute their success to external factors or exerting excessive efforts rather than to their skills. Positive parental reactions and expressions of satisfaction following success reinforce children's perception that their parents over-evaluate their competence and that what matter to them is performance rather than their personal characteristics (Assor et al., 2004).

In the second predictive path, the relationship between the two variables goes in the opposite direction: impostorism alters children's perception of their parents' regard and leads them to consider that their love is not free and must be deserved. Grays (1992) reported that adults plagued with impostorism retrospectively recalled having been very sensitive to criticisms when they were young and, despite significant involvement in their work, often felt that they were failing to meet established standards. This suggests that children's feelings of inadequacy and fear of making mistakes may well bias their perception of their parents' expectations of them and reactions in the event of failure, leading them to conclude to their conditional parental regard.

Finally, in the third pathway, the mechanisms at play in each unidirectional relationships just described could act simultaneously: the interplay between impostorism and conditional parental regard would then be reciprocal. Successfully avoiding being unmasked and seeing parents' positive reactions to inauthentic behavior fuel the perception of conditional parental regard which, in return, makes the young person intensify their efforts to preserve parental love. The worry of being able to do so would encourage them to present themselves in an even less authentic way conducive to increased impostorism.

2. The Present Study

The purpose of this exploratory study was to model the directional associations between perception of conditional parental regard and impostorism over a five-year period. We assessed each variable annually among students initially in their penultimate year of primary school, until their third year of secondary school, thus covering the transition period from primary to secondary school.

Autoregressive cross-lagged panel models using data from multiple time points served to test the associations between the perception of conditional parental

regard and impostorism. As each construct has been found to be relatively stable over a five-year period (Grenon & Bouffard, 2016), we tested a baseline stability model including autoregressive and concurrent paths. Then, we tested three alternative hypotheses, corresponding to the pathways outlined above.

H-1 The development of the perception of conditional parental regard predicts the development of impostorism.

H-2 The development of impostorism predicts the development of the perception of conditional parental regard.

H-3 The development of the perception of conditional parental regard and the development of impostorism influence each other reciprocally.

This study is the first to examine the possible transactional associations between children's perception of conditional parental regard and impostorism. In previous studies on these constructs, little attention has been paid to gender differences and no consensus has been reached on this issue (Caselman et al., 2006; Li et al., 2014; Macek & Jezek, 2007; Rueger et al., 2008). Also, studies have shown a positive association between parents' education, on the one hand, and their expectations for the child's performance and education, and their availability to support them, on the other hand (Davis-Kean, 2005; De Civita et al., 2004; Englund et al., 2004; Kaplan et al., 2001; Mortimer & Lee, 2021). Therefore, we considered student's gender and the levels of parental education as potential covariates in the analyses.

3. Method

3.1. Participants and Procedure

Participants are 504 grade five students (255 boys and 249 girls, mean age = 11.63 years, standard deviation = 0.65) enrolled in a larger longitudinal project on the development of motivational variables. They were recruited from public primary schools located in urban and semi-urban areas. At the secondary level, students attended 25 different schools: 18 were public schools and seven were private colleges. More than 95% of parents consented to their child's participation.

Parents reported their ethnicity, highest level of education attained by each parent, annual family income, age of the responding parent and the number of children in the family. Most of the parents are of French-Canadian origin (98%), and the responding parent was generally the mother (87%). The percentage of parents with post-secondary education is 45.2% for fathers and 59.6% for mothers. A small number of parents (13.3%) did not answer the question on their annual family income. Among those who answered, 4.8% had an annual income of \$30,000 or less, 4.8% had an income between \$30,000 and \$40,000, 9.1% between \$40,000 and \$50,000, 11.9% between \$50,000 and \$60,000, 10.5% between \$60,000 and \$70,000, and 45.3% had an income greater than \$70,000. The average age of the responding parent was 38.9 years (s.d. = 4.75). Finally, 11.3% of families had one child, 52.4% had two, 27.8% had three, and 8.5% had four or more children.

As in any longitudinal study, the problem of attrition must be considered. All 504 students responded to the measures of impostorism and perception of conditional parental regard in at least two of the five measurement times, 466 (92.5%) responded in at least three measurement times, 442 (87.7%) responded in at least four measurement times, and 421 (83.5%) responded in all five measurement times. More than 90% of the missing data was due to students having moved outside the school district or being absent from school on the day the questionnaire was administered. We performed a Little's test to verify whether the pattern of missing values for both perception of conditional parental regard and impostorism was completely at random (MCAR). The results indicate that there was no systematic pattern of missing data ($\chi^2(244) = 256.25, p = 0.28$).

The students were met in the spring of each year for five consecutive years to complete the questionnaires in group sessions during regular school hours. While one of the two research assistants explained the instructions and read each statement aloud, the other circulated around the classroom paying attention to possible signals of incomprehension and answering questions students might have. To preserve confidentiality, the teacher left the classroom and the experimenters put the completed questionnaires in an envelope and sealed it in full view of the students.

3.2. Measures

Students' gender (males = 1, females = 2) was recorded at the outset of the longitudinal project.

For both impostorism and perception of conditional parental regard, students rated the extent to which they considered themselves similar to the fictional student described in each statement on a Likert-type scale ranging from 1 (not at all) to 4 (completely). For each variable, a higher mean score indicates a higher degree of its presence.

Impostorism was assessed using the Questionnaire of Impostorism for Children and Adolescents by Bouffard et al. (2011). This instrument consists of eight statements concerning how the students feel about what others think about their intelligence. An example of a statement is: "This student is afraid their parents will find out they are less intelligent than they think". Internal consistency was satisfactory at each five times of measurement (α ranged from 0.80 to 0.86).

Perception of conditional parental regard was assessed using seven statements taken from the Parental Support Subscale of the Approval Support Scale for Children of Harter and Robinson (1988). An example statement is: "This student thinks that their parents will love them less when they make mistakes". Internal consistency was satisfactory in each year of the study (α between 0.83 and 0.86).

4. Data Analysis Strategy

4.1. Preliminary Analyses

Pearson correlations. We calculated Pearson correlation coefficients between

perception of conditional parental regard, impostorism and potential covariates at all five time points.

Measurement of longitudinal invariance. Prior research using the measure of conditional parental regard demonstrated evidence for its age-invariance at the partial scalar level (Bouffard et al., 2023) with participants of the same ages as those in this study. We performed a longitudinal measurement invariance of impostorism across the five time points. To control for systematic measurement errors, the residuals of the scale items across the time points were allowed to correlate with each other (Marsh & Hau, 1996). We evaluated the adequacy of the theoretical model to the data using the following indicators of model fit: chi-square (χ^2); comparative fit index (CFI) and Tucker-Lewis Index (TLI), with values >0.90 deemed adequate, and >0.95 excellent; standardized root-mean-square residual (SRMR), with values <0.08 considered adequate; and root mean square error of approximation (RMSEA) less than <0.08 (or less than 0.05 for an excellent fit), with the lower-bound confidence interval closest to zero (0) and the higher-bound confidence interval less than 0.10 (Wang & Wang, 2019). We used delta values of change between a more restrictive and a less restrictive model to compare the adequacy of a more restrictive model. According to Chen (2007), a change in CFI and TLI equal to or less than 0.010 complemented by a change of less than 0.015 in RMSEA and SRMR would indicate invariance within the adequate threshold. The parameters of the models were estimated using the Maximum Likelihood estimator. Missing data were accounted for using Full Information Maximum Likelihood using the Mplus software version 8.6 (Muthén & Muthén, 2017).

4.2. Main Analyses

We used cross-lagged structural equation modelling to investigate the direction of longitudinal associations between perception of conditional parental regard and impostorism. Full information maximum likelihood (FIML) was used, as well as the maximum likelihood ratio (MLR) indicator. This method is included in version 8 of the Muthens and Muthens Mplus Software (2017) which we used to test the hypotheses. This technique allows to adjust the estimated parameters while considering data patterns. It yields the least biased and most reliable estimates and allows the full use of available data without causing any loss of information due to attrition of participants, thus maximizing the power of the analyses (Allison, 2002; Nagin, 1999; Nagin & Tremblay, 2001; Peugh & Enders, 2004).

An autoregressive model with no cross-lagged effects, called a baseline or stability model, assumed that the only predictor of the variable at a subsequent time is the same variable at previous times and shows the temporal stability of the variables over time. This model also includes concurrent association of both variables with one another. As both the perception of conditional parental regard and impostorism have been found to be stable over the years (Grenon & Bouf-

fard, 2016), both first- and second-higher order stability of each variable have been added to all models. This provides a parsimonious model to compare the models of predictive relationships stemming from the hypothesis and accounts for the possibility that each variable evolves independently over time. Then, three models that also took stability into account were tested. Model 1 corresponding to the first hypothesis extended the baseline model by adding first-order cross-lagged paths from current perception of conditional parental regard to later impostorism. In Model 2 that tested the second hypothesis, the first-order cross-lagged paths describe the prediction from current impostorism to subsequent perception of conditional parental regard. According to the third hypothesis, model 3 is a reciprocal causation model: it includes first- and higher-order stability paths and first-order cross-lagged paths.

The quality of model fit was assessed using six indicators: The Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC) for which a lower value indicates a more parsimonious model, the Chi square whose value is ideally non-significant, the comparative fit index (CFI) and the Tucker-Lewis index (TLI), for which values ≥ 0.95 are desirable, the root mean square error of approximation (RMSEA < 0.05), and the root mean square of error (SRMR < 0.05). Finally, as models 1 and 2 are not nested and similarly complex, they can be directly compared based on their fit indices. To compare nested models where a simpler statistical model is included in a more complex model, we used the Satorra-Bentler Chi square. The Satorra-Bentler test is a chi-square difference test adjusted to the MLR (Maximum Likelihood Ratio) used by default by Mplus. When comparing nested models with each other, a non-significant Satorra-Bentler index indicates that the more complex model adds no information and thus the most parsimonious model is preferable.

5. Results

5.1. Preliminary Analyses

Table 1 presents the descriptive statistics the means and standard deviations of students' conditional parental regard and impostorism at five-point times. According to Cohen's (1988) criteria, correlations of $r = 0.10$ to 0.29 are considered small, from 0.30 to 0.50 are considered medium, and over 0.50 are considered large. Students' gender is unrelated to perception of conditional parental regard but at T1 ($r = -0.11$, $p < 0.01$): being a boy is related to higher perception of conditional parental regard. Father's education, but not mother's education, significantly links to perception of conditional having a father with fewer years of schooling relates to higher perception of conditional parental regard. Impostorism was unrelated to students' gender, and both mothers' and fathers' education. Therefore, students' gender and father education are included in the models to test the hypotheses. Stability over time between the adjacent time-points of the conditional regard measures varied between $r = 0.41$ and $r = 0.65$ and that of impostorism varied between $r = 0.37$ and $r = 0.59$. Finally, the relations between

perception of conditional parental regard and impostorism varied from $r = 0.46$ and $r = 0.52$ across the concurrent five-point measurement times.

5.2. Measurement of Longitudinal Invariance of Impostorism

We tested the longitudinal measurement invariance hypothesis of the impostorism scale by examining the stability of its factor structure over time (T1 through to T5). Model fit information and their delta difference tests are reported in **Table 2**.

We applied increasing equality constraints to test the longitudinal invariance. First (Model 1 in **Table 2**), the eight-item structure of the scale was applied to all the time points. Thresholds for model adequacy of the configural solution were

Table 1. Correlation matrix of variables and descriptive statistics (means and standard deviations).

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1) Gender	0.52	0.50												
2) Fedu	2.2	1.18	-0.04											
3) Medu	2.5	1.14	0.00	0.46										
4) CPR1	1.42	0.39	-0.11	-0.09	0.02									
5) CPR2	1.51	0.30	0.03	-0.06	0.00	0.41								
6) CPR3	1.48	0.25	0.00	-0.01	-0.05	0.31	0.37							
7) CPR4	1.51	0.37	-0.03	-0.02	-0.04	0.20	0.33	0.59						
8) CPR5	1.55	0.34	-0.01	-0.07	-0.02	0.23	0.28	0.56	0.65					
9) IMP1	1.56	0.34	-0.03	0.02	0.04	0.51	0.28	0.18	0.14	0.19				
10) IMP2	1.44	0.24	0.00	0.06	-0.03	0.27	0.46	0.20	0.18	0.16	0.37			
11) IMP3	1.45	0.34	-0.02	0.00	-0.07	0.28	0.31	0.51	0.29	0.31	0.34	0.48		
12) IMP4	1.48	0.39	-0.02	0.02	0.03	0.23	0.29	0.35	0.47	0.37	0.23	0.35	0.48	
13) IMP5	1.41	0.23	-0.03	0.04	-0.02	0.23	0.21	0.37	0.38	0.52	0.25	0.26	0.49	0.59

Notes: Gender: Boys = 0; Girls = 1; Fedu = Father education; Medu = Mother education; CPR1 to CPR5 = Conditional regard T1 to T5; IMP1 to IMP5 = Impostorism T1 to T5; $R = 0.08$ to 0.10 , $p < 0.05$; $r = 0.11$ to 0.16 , $p < 0.01$; $r = 0.17$ to higher, $p < 0.001$.

Table 2. Results of the longitudinal measurement invariance analysis of the impostorism questions measured at five consecutive years.

Models	χ^2	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$	Δ CFI	Δ TLI	Δ RMSEA	Δ SRMR
1) Configural	1379 (1015)	0.957	0.952	0.022	0.046	-	-	-	-	-
2) Metric	1435 (1050)	0.954	0.951	0.022	0.048	56	0.003	0.001	0.000	0.002
3) Scalar	1644 (1087)	0.922	0.919	0.028	0.055	209	0.032	0.032	0.006	0.007
4) Partial scalar	1515 (1066)	0.949	0.946	0.028	0.050	80	0.005	0.005	0.006	0.002

met, with an excellent fit of the model to the data. This means that the factorial structure remained equal over time. Test of metric invariance (Model 2) showed no significant changes in CFI, TLI, RMSEA and SRMR when all factor loadings were constrained to equality. Thus, full metric invariance was supported. However, as shown in Model 3 (Table 2), scalar invariance stemming from constraining the item intercept to equality with the results of the partial metric model was not supported: values of both Δ CFI and Δ TFI exceeded 0.01. Thus, we tested the partial scalar invariance (Model 4) freeing two item intercepts at T1 and one item intercept at T3 and T4. The results show invariance, with all changes in CFI, TLI, RMSEA and SRMR being within the appropriate threshold. Thus, the impostorism scale used in this study is partially time-invariant at the scalar level. This supports its use in our cross-lagged analyses. Model fit information and their delta difference tests are reported in Table 2.

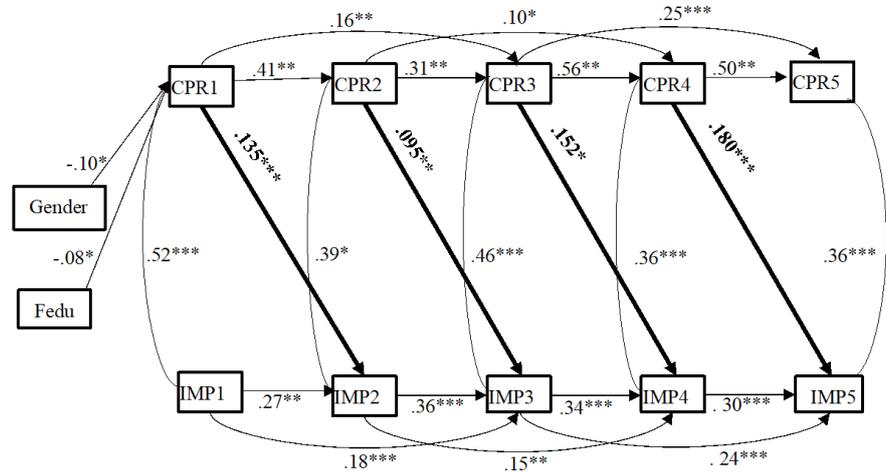
We tested the structural associations described in each hypothesis using cross-lagged structural equation modeling. We included the covariates of gender and father's education on T1 perception of conditional regard. The fit indices of all models are presented in Table 3 and show that all models, but the baseline model generally fit the data well. Model 1 and Model 2 are similarly complex and can be directly compared. As can be seen in Table 3, all indices of Model 1 are better than those of Model 2 (Δ AIC = 22.55; Δ CFI = 0.014; Δ TLI = 0.028; Δ RMSEA = 0.02; Δ SRMR = 0.026). Thus, Model 1 is preferred to Model 2.

Model 1 is nested in the more complex Model 3 and thus the Satorra-Bentler test was performed to compare them. The result is non-significant ($\chi^2(4) = 4.48$, $p = 0.34$) allowing to conclude that Model 1 is more parsimonious than Model 3. Figure 1 illustrates the final cross-lagged model of perception of conditional parental regard and impostorism.

All autoregressive paths are positive and significant, pointing to an overall moderate to high level of temporal stability of the constructs. In addition, perception of conditional parental regard and impostorism are concurrently and positively related at every time of measurement; this indicates that both phenomena operate or occur at the same time. The model shows a unidirectional relationship where the perception of conditional parental regard predicts the presence of impostorism from year to year, despite the moderate to strong correlations between the two variables being considered every year of the study as well as their moderate to strong annual concurrent link.

Table 3. Summary of fit statistics for the hypothetical models tested.

Models	AIC	BIC	χ^2 (p)	Df	RMSEA (90%)	CFI	TLI	SRMR
Baseline	5831.82	6033.52	56.21 (0.03)	44	0.055 (0.038 - 0.064)	0.954	0.950	0.063
Model 1	5799.35	5992.47	31.08 (0.84)	40	0.000 (0.000 - 0.015)	1.000	1.013	0.027
Model 2	5821.90	6015.02	49.83 (0.14)	40	0.021 (0.009 - 0.038)	0.988	0.985	0.055
Model 3	5811.63	6011.92	37.09 (0.64)	36	0.009 (0.000 - 0.029)	0.990	0.988	0.042



Notes: Gender: Boys = 0; Girls = 1; Fedu = Father education; CPR1 to CPR5 = Conditional regard T1 to T5; IMP1 to IMP5 = Impostorism T1 to T5.

Figure 1. Final path model.

6. Discussion

The present study examined the transactional association of perception of conditional parental regard and impostorism from elementary to secondary school. Specifically, a longitudinal cross-lagged design with five data points extending from grades 5 to 9 was used to disentangle, and specifically test for the directions of these associations. To our knowledge, no research has yet utilized a longitudinal framework to assess the interplay between these phenomena. Controlling for students' gender and parents' education, we tested three competing hypotheses using nested statistical models.

Comparing these models, we found that the perception of conditional parental regard predicts impostorism while there was no evidence for the reverse: impostorism did not predict changes in perception of conditional parental regard. Recall that the higher the self-relationships between measurement times of a variable and the higher their concurrent link, the lower the probability of observing that one variable predicts another (Adachi & Willoughby, 2015; Selig & Little, 2012; Spinath & Steinmayr, 2008). Thus, as the stability of each variable was added to the models for the following year ($T + 1$) and the year after ($T + 2$), we can assume that the links, year after year, between perceived conditional parental regard and impostorism are robust. In addition to the co-occurring associations between the two variables, for each year throughout the study, the perception of conditional parental regard at a given time systematically predicted impostorism the following year. These findings lend credence to authors proposing that the type of regard children perceived from their parents might be involved in the development and maintenance of youths' impostorism (Clance, 1985; Clance et al., 1995; Grays, 1992; Grenon et al., 2019; Harvey & Katz, 1985; Kolligian & Sternberg, 1991; Langford & Clance, 1993; Sakulku & Alexander, 2011).

Two aspects of conditional parental regard are likely involved in its contribu-

tion to the development of impostorism. The first relates to the fact that this type of parental regard leads to an introjected regulation of the child's behavior (Assor et al., 2004). That is, it would cause the child to rigidly apply the required behavioral rules without adopting the values that underlie them. To gain or avoid losing parental affection, children feel compelled to act as they believe their parents expect and come to disavow or deny parts of themselves that are different from those, they think their parents appreciate. To please them, they adopt attitudes that they know are inauthentic (Harter et al., 1996). This posture of inauthenticity created by the perception of conditional parental regard is at the heart of impostorism where the person has the feeling of deceiving others. The second aspect of conditional regard that may contribute to the development of impostorism concerns the generally high parental expectations of the child. High parental expectations are not inherently a sign of conditional regard; children may well perceive that their parents have high expectations of them without feeling that their love and support are dependent on their ability to meet these expectations. However, conditional parental regard is accompanied by the presence of such expectations that children feel they must meet in order to maintain their relationship with their parents (Assor et al., 2004; Entwisle et al., 2005). In this context, any mistake becomes for the child not only a risk of losing their parents' love and support, but also an indication of a lower competence than that reflected by their parents' high expectations. The parents' expectations would thus feed the child's fear that their parents will discover that the child is worth less than they thought, another central dimension of impostorism.

Some authors argue that impostorism prevents people from reaching their full potential (Bravata et al., 2020). Studies among young people have shown that feelings of imposture are associated with correlates that are detrimental to psychological and social adaptation (Bouffard et al., 2011; Chayer & Bouffard, 2010). The onset of adolescence coincides with entry into secondary school, where competition among students is more valued. One of the consequences of impostorism is the avoidance or withdrawal from situations whose outcome could threaten one's sense of self (Clance, 1985; Clance & Imes, 1978; Harvey & Katz, 1985). Individuals who feel they are impostors may avoid taking risks thereby reducing their chance of reaching their full potential. By not recognizing their competence and being unable to take credit for their successes, they may lower their expectations and limit their educational or career goals and ambitions. In Fruhan's (2002) study of career women, some reported that because of the self-doubt associated with their impostorism, they avoided asserting themselves, expressing their ideas and asking questions, hence missing opportunities to learn and demonstrate their skills. For students who feel like impostors, demanding assessment activities and the large number of opportunities to appear incompetent can make school a threatening place where they feel uncomfortable and alienated. Satisfying themselves with low grades and dropping out of school can be a way to keep up appearances and ease their anxiety about being deemed in-

competent (Leary et al., 2000; Want & Kleitman, 2006).

7. Strengths and Limitations

This study is the first to examine the transactional dynamic of perception of conditional parental regard and impostorism to determine the direction of their relationship over the period of late childhood to mid adolescence. It is also one of the few to have examined impostorism in such young children, at the time when the phenomenon is supposed to be developing (Fruhan, 2002). This study has other strengths, including its large sample size, five consecutive measurement points and a balanced distribution of boys and girls. Nevertheless, there are some limitations. The first is the exclusive reliance on self-reported questionnaires although, as the variables are perception and internal feelings, it is difficult to see what other method could have given access to them. With respect to conditional regard, it is unclear whether the youths' perception corresponds to the actual behaviors of parents. The points of view of young people and their parents do not necessarily agree (Segrin et al., 2012), and authors have shown that the parents' report and young people's perception of the same phenomenon tend to be weakly related (Côté & Bouffard, 2011; Laird & De Los Reyes, 2013; Pasch et al., 2010). However, children perception of a phenomenon has a greater impact on their development and behavior than its objective presence or that reported by parents (Bandura, 1997; Gecas & Schwalbe, 1986; Kerr & Stattin, 2000; Laird et al., 2010; Varvil-Weld et al. 2013). In addition, we wanted to examine the effects of the perception that young people have of this regard, independently of its real quality: when it comes to examining the perception that people have of the quality of their relationship with others, the use of a self-reported measure is appropriate (Howes, 2000). Nevertheless, our findings generalize only to how students perceive their parental regard. But, because self-reports represent the children view of their parents' conditional acceptance, they may also reflect low self-esteem or negative perfectionism. Future studies should use a multi-informant approach when assessing parenting behaviors. Another limitation is the correlational nature of the study. The longitudinal design compensates, at least in part, for this limitation. Although it was not possible to determine the causal nature of the relationship between the two variables, the analyses did make it possible to determine the direction of the relationship. Even though the students were quite young at the first measurement time, the perception of conditional parental regard and impostorism was already present. Thus, we still do not fully know when the phenomena emerge nor whether the emergence of one precedes that of the other. Longitudinal studies beginning in the first years of schooling could help clarify these issues. Findings suggest that mothers and fathers contribute differently to children's development (Dyer et al., 2014; Parke et al., 2006). The fact that in this study, students did not provide separate ratings of conditional maternal and paternal regard, is another limitation. Capturing students' perspectives on their mothers' and fathers' support may be a fruitful ave-

nue for future studies, allowing to examine the possibility of same-gender associations with the children. Finally, the participants came from a middle-class white background, the sample was normative and included only students in regular classes. Thus, the scope of our conclusions cannot be extended to students of other ethnic origins, nor to students from different economic backgrounds or to those with neuroatypical development or with special characteristics such as physical, psychological or mental disabilities.

The presence of feelings of imposture in adolescence is a concern and deserves further study. One of them could address the processes through which the perception of conditional parental regard acts on the development and maintenance of impostorism. In addition to self-critical perfectionism and contingent self-esteem, already mentioned, the negative bias of self-evaluation where students underestimate their competence is also deserving of attention. [Côté and Bouffard \(2011\)](#) showed that the presence of such a bias was associated with conditional regard as reported by the child and self-reported by parents. [Hascoët et al. \(2018\)](#) also showed that the perception of conditional regard from teachers was associated with a low perception of competence. For their part, [Grenon and Bouffard \(2016\)](#) showed that the recurrent presence from one year to the next of a negative self-evaluation bias contributed to the development of a sense of imposture. All of these studies suggest that the negative self-evaluation bias could be a mediator of the link between the perception of conditional parental regard and impostorism. Another interesting avenue would be to explore the joint developmental trajectories of young people's perception of conditional parental regard and impostorism for the same period. Such a study would make it possible to verify the associations between the different developmental patterns of these two phenomena and the psychological adaptation of young people in order to develop targeted preventive interventions.

8. Conclusion

Findings of this study show that perceiving conditional parental regard from parents predicts impostorism in students from year to year, beginning in childhood. According to [Assor et al. \(2004\)](#), there could be some intergenerational transmission of the use of conditional parental regard as a socialization practice. Parents are not necessarily aware of their use of such practices and of their negative effects on their child's psychological well-being and in particular on the development of impostorism. Providing this information to parents would be useful to help guiding their attitudes towards their child and enable them to review their practices to ensure that their child does not subordinate their self-worth to their ability to meet their parents' expectations.

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Authors' Contributions

This article is based on the second author non-published doctoral essay. The data were taken from the first author longitudinal project on the development of self-perceptions. All authors contributed to the study conception, design and statistical analyses. The first draft of the manuscript was written by Thérèse Bouffard and Noémie Gratton and all authors approved the final manuscript.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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