



Does self-esteem mediate the association between parenting styles and imposter feelings among female education students?

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ABSTRACT

The study investigates the links between maternal and paternal parenting styles and the imposter syndrome among adult female students, while probing the meditative role played by self-esteem in this context. The sample comprised 182 female students ($M_{age} = 27.85$, $SD = 7.25$) who completed the Parental Bonding Instrument (PBI), the Impostor Phenomenon Scale (CIPS), and the Rosenberg Self-Esteem Scale (RSES). The results of the analyses of the regressions models using SEM revealed that parental care is associated with students' lower imposter feelings via self-esteem, and paternal overprotection is associated with students' higher imposter feelings via self-esteem. Hence, parental care and overprotection may be related to female students' imposter feelings since they increase and decrease (respectively) their self-esteem which, in turn, affects their imposter feelings. The current study is among the first to demonstrate the mediation role played by self-esteem in the association in question separately for mothers and fathers, which contributes to facilitating the understanding of the etiology mechanism of the imposter phenomenon.

1. Introduction

Imposter phenomenon is a term coined by Clance and Imes (1978) to depict a steady tendency of individuals who consistently experience intellectual phoniness and hidden incompetence, contrary to their objective qualifications and actual accomplishments. Imposters cannot properly internalize their success. They feel as if they managed to fool everybody else into believing that they are very intelligent (Clance & Imes, 1978), and they may use measures to preserve this state (e.g., over diligence, intellectual inauthenticity, and charm). The most common imposter symptoms include reluctance to accept credit for accomplishments, feelings of self-doubt, and a tendency to attribute success to external causes (Clance, 1985; Robinson & Goodpaster, 1991). Individuals with imposter syndrome are constantly afraid that others will eventually unmask their fraudulence, to reveal they do not belong in their professional environment (Kolligian Jr & Sternberg, 1991; Wang, Sheveleva & Permyakova, 2019). This perpetual fear of being exposed takes its psychological toll on them, as imposter individuals tend to experience feelings of depression, stress, anxiety, and low self-esteem (Cusack, Hughes & Nuhu, 2013; Li, Hughes & Thu, 2014; Schubert & Bowker, 2017; Wang et al., 2019). Students and employees who cope with imposter feelings tend to experience heightened fear and anxiety over their performance (Cusack et al.,

2013; Halbesleben, 2006). They spend a great deal of energy in unmasking their perceived inadequacy by overworking and using avoidance strategies, resulting in low occupational satisfaction, high emotional exhaustion, and a greater risk of burnout (Crawford, Shanine, Whitman & Kacmar, 2016; Hutchins, Penney & Sublett, 2018).

According to Clance and Imes (1978), the imposter phenomenon is far more prevalent and intensely experienced amongst women, as its origins are predominantly rooted in a gender-based family dynamics. In this regard, the authors identified early family processes such as family comparison (e.g., between siblings) and parental expectations that could underlie subsequent imposter feelings especially among girls. Clance and her colleagues maintained that later in life impostor feelings are further reinforced amongst women, as they face society's gender stereotypes, where assertiveness and accomplishments are more socially acceptable for men than for women (Clance & Imes, 1978; Clance, Dingman, Reviere & Strober, 1995).

While the imposter syndrome was initially viewed as a gender-specific phenomenon of the socially underprivileged sex (Wang et al., 2019), later studies found this phenomenon to be present among men at a similar rate as in women (Langford & Clance, 1993; Rohrmann, Bechtoldt & Leonhardt, 2016; Wang et al., 2019). Despite some inconsistencies with research findings, whereby imposter fears were found to be stronger for females than for males (e.g., Kumar &

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Jagacinski, 2006), the phenomenon is no longer considered as a gender-typical phenomenon (Leonhardt, Bechtoldt & Rohrmann, 2017). To date, there is growing evidence suggesting that moderate to intense imposter feelings are very prevalent phenomena in individuals of both genders (Clark, Vardeman & Barba, 2014; Hutchins, 2015; Sonnak & Towell, 2001; Urwin, 2018), with their ratio among some professional employees and students exceeding 40% on average.

In the last decades, researchers have devoted more attention to the aspects of parent-child bonding and child-rearing styles as part of the role of family dynamics in the etiology of the imposter phenomenon. The imposter phenomenon in adolescents and adults was linked with various marital conditions, including maladaptive parental functioning, parental substance use of alcohol, and certain styles of parenting behaviors in child-rearing (e.g., Caseiman, Seif & Self, 2006; Castro, Jones & Mirsalimi, 2004; Cusack et al., 2013; Robinson & Goodpaster, 1991). Yet, there are still too few studies that deal with aspects of the family environment (specifically, parent-child relationships and parenting rearing styles) in the etiologic context of the imposter phenomenon among youngsters and adults. Parenting rearing styles (below: parenting styles), an intrinsic familial aspect that represents an overall family climate in children's upbringing. The parenting style comprises certain goals and values and is composed of two main dimensions of parental behaviors: demandingness (i.e., control against autonomy granting) and responsiveness (i.e., care and warmth) (Maccoby & Martin, 1983). Responsiveness refers to the extent to which parents are involved in their child's life and activities (Maccoby, 1992), reflecting their emotional closeness and acceptance of the child's emotions and behavior. Manifestations of parental acceptance toward the child such as support, care, affection, and nurturance are closely associated with children's psychological well-being (Khaleque & Rohner, 2002). Conversely, overcontrolling parenting (i.e., excessive regulating of the child's behavior, autocratic decision making, overprotection, and strict direction) were linked to numerous emotional deficiencies amongst children and adolescents, including low self-esteem, elevated anxiety, depression, and lacking autonomy (Cooklin, Giallo, D'Esposito, Crawford & Nicholson, 2013; Pinquart & Gerke, 2019; Yaffe, 2018). Further evidence suggests that these links between parenting and descendants' emotional difficulties may persist into adulthood (Day et al., 2018; Lu, 2019; Yang, Li & Lin, 2019).

The findings of one of the most cited works dealing with parenting styles in relation to the imposter phenomenon (Sonnak & Towell, 2001) have shown that perceived parental overprotection and lack of care are associated with higher scores of imposter feelings among British students. While the effects observed for the parenting styles in this study were relatively moderate, the participants' self-esteem exhibited a considerably stronger prediction (negative correlation) of the imposterism scores. Parental overprotection and self-esteem emerged as the only significant predictors in a model encompassing seven demographic and psychological variables, which accounted for 50% of the variance in the participants' imposterism scores. Interestingly, parental care significantly predicted imposterism scores only after excluding self-esteem from the model, raising the possibility that in the context of parenting styles, self-esteem may have an overlapping or mediating effect on imposter phenomenon.

In a later study, imposter feelings of adults with a wide range of occupations were predicted by their recollections of their parents' parenting styles. Specifically, perceived paternal (but not maternal) overprotection and lack of paternal care were directly associated with increased feelings of imposterism (Want & Kleitman, 2006). However, maternal care was negatively related to self-handicapping and maternal overprotection was negatively related to confidence scores. In turn, self-handicapping and confidence were found to be linked with higher and lower (respectively) levels of the imposter phenomenon.

Contrary to these findings, Li et al. (2014) found maternal parenting

styles to be stronger direct predictors of imposter phenomenon in adult American undergraduate and graduate students. In this study, maternal lack of care and overprotection predicted imposter feelings in both male and female students, while the paternal parenting styles were significant predictors of imposter feelings only among males. This parental differential effect with respect to imposter scores observed in numerous studies suggests that a separate examination of maternal and paternal contributions is necessary (Wang et al., 2019).

Similar to the earlier research findings, the direct connections observed in Li's et al. (2014) study between parenting styles and imposterism were for the most part of a small to moderate size. However, those studies using additional psychological variables that were in part correlated with parenting styles strengthened the predictivity of the imposter phenomenon. Thus, in the previous studies mentioned above, self-esteem and self-handicapping were strong antecedents of imposterism scores, and their predictions significantly improved the model explaining imposterism by the parenting styles. This evidence strongly suggests that some psychological variables may play a mediative role in the relationship between parenting styles and imposter phenomenon. This is particularly the case with self-esteem and anxiety, where the link with parenting styles is well established (see: Pinquart & Gerke, 2019; Yaffe, 2018). Self-esteem in particular was also found in numerous studies to be strongly inversely-related with imposter syndrome, notably amongst women (Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995; Cusack et al., 2013; Lin, 2008; Schubert & Bowker, 2017; Sonnak & Towell, 2001), whereas its role in mediating and moderating the effects of parental variables in this context received little empirical focus.

While there is a strong theoretical rationale linking between parenting styles and imposter phenomenon in developmental terms (Wang et al., 2019), the current body of research lacks more empirical evidence to support this link. The intervening role possibly played by specific psychological variables with respect to the relationship between parental variables and the imposter phenomenon is also obscure. This is particularly true regarding those psychologic variables to which the association with parenting and imposterism is well established, such as self-esteem. Accordingly, the current study aims to seek further evidence for the relationships between parenting styles and the imposter phenomenon among adult female students, while accounting for the function of their self-esteem in this regard. Moreover, several works have demonstrated the differential parental effects of mothers and fathers on descendants' imposter feelings. Yet, the inconsistencies across studies with regard to this gender effect calls for more research to help illuminate this issue. By using separate reports on parenting styles for mothers and father (i.e., parental protection and care), the current study will be able to provide more empirical information regarding the significance of parental gender in the context of imposter phenomenon. The current study focuses on female college students in education programs, where the vast majority of the trainees are women. While previous research on imposterism encompassed students of both genders from various disciplinary fields, less is known about the antecedents of the phenomenon in female students who are about to become teachers. As the imposter syndrome is a phenomenon particularly relevant and common in populations of students and professional employees, the current study's findings drawn from this specific reference group may facilitate more understanding of the phenomenon's etiology. Our hypothesis was that parental care would be associated directly and indirectly (i.e., through self-esteem) with lower imposter scores, and that parental over-protection would be associated directly and indirectly (i.e., through self-esteem) with higher imposter scores. The participants' self-esteem was expected to be reversely correlated with their recollections of their parents' level of care and protection, and to be negatively correlated with their imposter feelings.

2. Method

2.1. Participants and procedure

The sample comprised 182 female students ($M_{age} = 27.85$, $SD = 7.25$) who studied at several academic institutions in northern Israel. Of the participants, 139 students (76.4%) were Jews who speak Hebrew as their native language, and the rest were Muslim, Druze, and Christian Israeli minorities, bi-lingual students who speak Arabic as their first native language. Fifty-three (29.1%) of the sample's participants reported to have some diagnosed learning disability. Yet, they did not differ from the sample's students without learning disabilities in their reported mean grades (participants' grades were measured using self-reports of their recent GPA in their college studies). The participants reported the family size of their origin families (in terms of numbers of siblings), which ranged from 2 to 10, with mean size of 3.98 ± 1.69 . The majority of the sample's participants (about 52.4%) evaluated their social-economic status (SES) as middle level, while 34% evaluated their SES as middle to high level, and the rest (10.2%) as below middle level (about 3% did not refer to this question).

The core segment of the sample's participants (about 71%) was recruited as part of a research exercise conducted in several academic courses in which the participants took part as students in their college studies. The rest were recruited via the students who had taken part in the study and who were asked to shared it with other students they were familiar with (that is, based on a snowball data collection method). The students who agreed to take part in the study were given an internet link to an online research form, where they were asked to read the research objectives and instructions and confirm their informed consent to take part in the study prior to filling out the questionnaires. They were asked to report their personal demographic information (according to the data detailed above) and to anonymously fill in a series of four research questionnaires (as follows). The research procedure was approved in advance by the institutional review board as part of data collection conducted in a more extensive study.

2.2. Measures

Parental Bonding Instrument (PBI; Parker, Tuplin & Brown, 1979). The questionnaire was developed in order to measure the parent's attitudes and behaviors towards child's rearing, focusing on two main parental dimensions: overprotection (e.g., "Tried to control everything I did") and care (e.g., "Spoke to me in a warm and friendly voice"). Designed for offspring's report, it consists of 25 items (13 items pertain to the first parental category and 12 items pertain to the second parental category), which are measured on a four-point Likert scale. Thus, a higher score on both scales represents a higher level of the

parental dimension. The current study's participants completed this questionnaire separately for their mother and their father. In the current sample, we obtained medium to high reliability indexes (alpha coefficients) for the paternal and maternal overprotection scales ($\alpha = 0.78$ and 0.74 respectively) and for the paternal and maternal care scales ($\alpha = 0.93$ and 0.90 respectively). The scales' descriptive statistics appear in [Table 1](#).

Impostor Phenomenon Scale (CIPS; Clance, 1985). We used Clance's scale to measure the participants' imposter feelings. The scale contains 20 items designated for self-report, in which the respondents give their answer on a five-point Likert scale. Accordingly, the scale's total score ranges from 20 to 100, with a threshold of 61 indicating frequent to intense imposter feelings (Hoang, 2013). The Imposter Test was developed to help individuals determine whether or not they have IP characteristics, such as fear of evaluation (e.g., "I avoid evaluations if possible and have a dread of others evaluating me"), self-doubt regarding one's abilities (e.g., "I rarely do a project or task as well as I'd like to do it"), feelings of phoniness (e.g., "I can give the impression that I'm more competent than I really am"), fear of being exposed by others as a fraudster (e.g., "Sometimes I'm afraid others will discover how much knowledge or ability I really lack"), and the inclination to underestimate self-achievements and to attribute them to external factors (e.g., "At times, I feel my success has been due to some kind of luck"). The CIPS was translated into Hebrew using a three-step backtranslation process. In the current study, the scale's Cronbach alpha coefficient was 0.90. The scale's descriptive statistics are displayed in [Table 1](#).

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The questionnaire includes 10 items (e.g., "I feel I am a person of value, at least on an equal level with others") that measure the individual's global, positive and negative feelings towards herself. Responses to an item are given on a 4-rank Likert scale, resulting in total score that ranges from 0 to 30. This is a reliable and valid questionnaire widely used in Israel and around the world. For example, the questionnaire in its Hebrew version was previously used in Nadler's et al. study (Nadler, Mayseless, Peri & Chemerinski, 1985) and presented acceptable reliability data. In the present sample, a relatively high reliability index was recorded for the scale ($\alpha = 0.88$). The scale's descriptive statistics are displayed in [Table 1](#).

2.3. Statistical analysis

The IBM SPSS statistics package was used to produce all the preliminary analyses for the demographics and the study's variables, including the descriptive statistics, the reliability indexes, and the zero-order correlations. Missing values on all variables were handled using casewise deletion method (three cases with significant data deprivations were excluded from the sample). The Amos statistics software was

Table 1
Means, standard deviations, and zero-order correlations between study variables.

	1	2	3	4	5	6	7
<i>Student's variables</i>							
1. Student's self-esteem	–						
2. Student's imposter score	–0.67***	–					
3. Student's grades (GPA)	.09	–0.07	–				
<i>Parental dimensions</i>							
4. Father's care	.45***	–0.18*	.02	–			
5. Father's overprotection	–0.44***	.28***	–0.18*	–0.42***	–		
6. Mother's care	.43***	–0.23***	.13	.71***	–0.45***	–	
7. Mother's overprotection	–0.26***	.22**	–0.14	–0.30***	.53***	–0.38***	–
Mean	3.27	57.0	86.6	3.23	1.92	3.50	2.00
SD	.64	15.22	8.68	.77	.51	.57	.46

Note: $N = 182$.

* $p \leq 0.05$.

** $p \leq 0.005$.

*** $p \leq 0.001$.

used for building and probing the study's mediational regression models (i.e., path analysis with SEM), by determining the significance of the direct and indirect effects of the models' paths and by bootstrapping the models' estimates.

3. Results

3.1. Preliminary analyses

Table 1 displays the zero order correlations and the descriptive statistics for the study's variable, as obtained in the current sample of 182 female students who reported about themselves and about their parents in retrospect. As expected, the participants' self-esteem was inversely and strongly correlated with their imposter syndrome scores. However, neither the students' self-esteem nor their imposter feelings were associated with their grades in college. Since the students' GPA was neither significantly associated with the parental dimension (apart from one negligible correlation with the father's overprotection), it was not included in the further statistical examinations. Furthermore, the correlations observed between the students' variables and the parental dimension initially confirmed our hypotheses, as perceived parental overprotection was found to be associated with students' lower self-esteem and higher imposter feelings for both parents. In contrast, mother's and father's perceived care were associated with the students' higher self-esteem and lower imposter feelings, with all the observed correlations found to be significant at 0.5% and below. Finally, as expected, the parental dimensions of overprotection and care were negatively correlated for both parents (that is, parental overprotection was related to lower care), and these parental behaviors were perceived by the participants as considerably consistent between mother and father.

As for the associations between the study's variables and demographic variables (i.e., participants' age, SES, and number of siblings in their origin family), we solely observed negative correlations between the participants' age and the paternal and maternal care ($r = 0.32, p < .001$ and $r = 0.30, p < .001$, respectively), but no significant effect was found for the demographic variables on the study's dependent variables. Therefore, these demographics were not taken into account in the following statistical analyses for the parental direct and indirect links with imposter feelings. We did, however, identify significant effects of learning disabilities on the students' self-esteem ($t(180) = 3.91, p < .001$) and their imposter feelings ($t(180) = 3.09, p < .005$), whereby students reporting having a diagnosed learning disability scored lower on self-esteem and higher on imposter feelings. Since running separate analyses for both groups (i.e., with and without learning disabilities)

was not possible due to the relatively small size of the LD group, we tested the regression models also when controlling for the LD effects on the dependent variables (as elaborated below).

3.2. The relationship between parental dimensions and imposter syndrome with self-esteem as mediator

We used a structural equation modeling (SEM) to test the simple regression model linking parental overprotection and care with the imposter phenomenon directly and indirectly via self-esteem (see Fig. 1). The model was tested separately for fathers (Table 2) and for mothers (Table 3), and used in the current sample to assess each parental effect on the female students' imposter feelings with and without their self-esteem as a mediator. In order to determine the significance of the indirect effects of the parental dimension on the students' imposter feelings (i.e. the mediational path), we used a bootstrapping method with a 95% confidence interval. Bootstrapping was also used to determine the standard errors (SEs) and the confidence intervals of all the model estimates (Joyce, & Zimmer-Gembeck, 2009). Bootstrapping is a resampling method used for making statistical inferences about a population from which a sample is drawn, which involves repeated random selections of cases from the study sample (Good, 1999).

The results of the model analysis reveal that both paternal and maternal care are positively associated with the students' self-esteem (standardized path coefficient ranges between 0.31 and 0.39, $p < .001$), which mediates the parental effects on the students' imposter feelings (i.e., an indirect effect whereby parental care is associated with students' higher self-esteem which, in turn, is associated with lower imposter feelings). The upper negative CI value of the indirect path is smaller than zero for both parents, indicating that the indirect effect of parental care on imposter feelings via self-esteem is significant. Paternal care was the only parental dimension to be directly associated with the students' self-esteem and imposter feelings. Interestingly, the direct correlation with the imposter variable was positive (rather than negative as it the case in the indirect association between these two variables), which means that fathers' care is uniquely significantly associated with students' higher imposter feelings (standardized path coefficient = 0.16, $p < .05$).

Further, paternal overprotection was found to be significantly associated with the students' imposter feelings via self-esteem, with the CI values of the indirect path higher than zero, indicating a significant mediating effect. According to this finding, paternal overprotection is associated with the students' lower self-esteem which, in turn, is associated with higher imposter feelings. The reported results with respect to the all direct and indirect effects for both parents essentially persist,

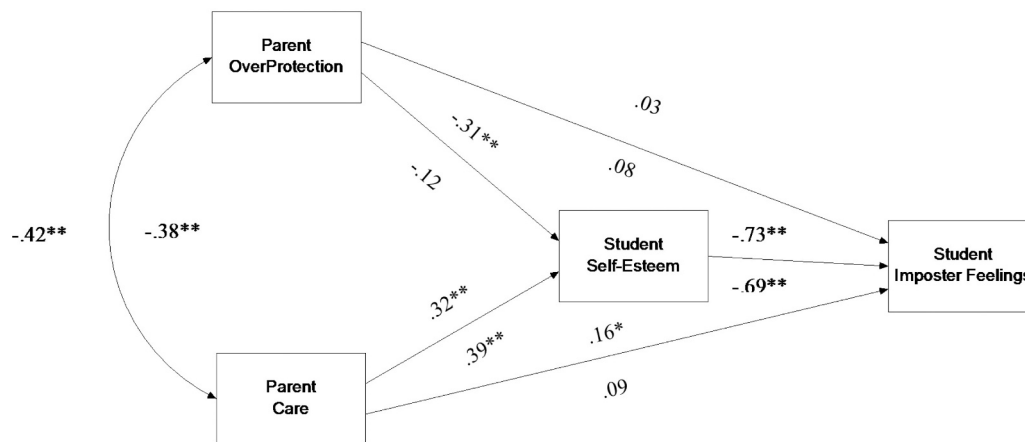


Fig. 1. Standardized SEM maximum likelihood estimates from testing the direct and indirect associations between the parental dimension and students' imposter feelings.

Note: Relative to each arrow, the upper figures represent the father's estimates and lower figures represent mother's estimates. * $p \leq 0.05$, ** $p \leq 0.001$.

Table 2

Bootstrapped path estimates, SEs and 95% CIs for the regression model predicting students' imposter syndrome scores from their father's overprotection and care with (students') self-esteem as a mediator ($N = 182$).

Model paths	Unstandardized (B)			Standardized (β)		
	Estimate (SE)	Lower 95% CI	Upper 95% CI	Estimate (SE)	Lower 95% CI	Upper 95% CI
Father: Self-esteem as mediator (see Fig. 1). Covariance/correlation. Overprotection, Care***	-0.16 (0.32)	-0.24	-0.10	-0.42 (0.07)	-0.54	-0.25
<i>Direct effect</i>						
Overprotection-self-esteem***	-0.39 (0.09)	-0.57	-0.22	-0.31 (0.08)	-0.46	-0.18
Care-self-esteem**	.27 (0.06)	.12	.38	.32 (0.08)	.14	.44
Self-esteem-imposter***	-0.87 (0.08)	-1.0	-0.72	-73 (0.05)	-0.83	-0.62
Overprotection-imposter	.04 (0.09)	-0.16	.23	.03 (0.07)	-0.12	.15
Care-imposter*	.16 (0.06)	0.1	.28	.16 (0.07)	.01	.28
<i>Indirect effect via self-esteem</i>						
Overprotection-imposter**	.34 (0.09)	.19	.55	.22 (0.06)	.12	.37
Care-imposter**	-0.23 (0.06)	-0.35	-0.11	-0.23 (0.06)	-0.35	-0.11

Note: CI = confidence interval;

* $p \leq 0.05$,

** $p \leq 0.005$,

*** $p \leq 0.001$.

and stay significant, also after controlling for the effect of LD on the dependent variables while co-varyating it with the parental dimensions.

As emerges from the data, the students' self-esteem plays a considerable mediating role in the relationship between perceived parental care, perceived paternal overprotection, and the students' imposter feelings. The paternal dimensions explained a significant proportion of variance in the students' self-esteem ($R^2 = 0.281, p < .01$), which together explained about 46.5% ($p < .05$) of the variance in the students' imposter scores.

With care as the only significant predictor, the maternal dimensions explained about 20% of the variance of the students' self-esteem ($R^2 = 0.200, p < .01$). While in the absence of a significant direct maternal effect on the imposter scores, self-esteem plays an even stronger mediating role, as it explains a proportion of 45.6% ($p < .05$) of the variance in the students' imposter scores.

It is worth noting that when including both parents in the same regression model, we observe essentially identical results. First, the students' self-esteem variance explained by the parents' dimensions slightly improved to 30% ($R^2 = 0.300, p < .01$), and the total explained variance of the students' imposter scores remained the same. Also, while the estimates of parents' indirect effect on the students' imposter scores somewhat decreased, its significance did not change. Hence, after including both parents at the same model, paternal care is significantly associated with the students' imposter scores both directly (standardized SE = 0.16, $p \leq 0.05$) and indirectly (standardized SE = -0.17, $p < .05$), while maternal care is only associated indirectly

with the students' imposter scores (standardized SE = -0.13, $p < .05$). Similarly, after accounting for both parents in the model, the indirect association between paternal overprotection and the students' imposter scores also remained significant, with its standardized SE equal to 0.20 ($p < .005$).

4. Discussion

The study deals with the links between maternal and paternal parenting styles and the imposter phenomenon among adult female students. It particularly aims to probe the meditative role that self-esteem plays in this context. As the relationship between parenting styles and imposterism seems to vary across genders, the current study focuses solely on women, testing the differential effects of mothers' and fathers' care and overprotection within this gender context.

The study's main hypothesis was that female students' recollections of their parents' parental care and parental overprotection would be associated directly and indirectly (i.e., through self-esteem) with their imposter feelings. We tested this hypothesis separately for the participants' mothers and fathers using separate regression models with SEM, and found partial support for the indirect links between the parental dimensions and the students' imposter feelings. Generally consistent with previous research, where the meditative effects of these links were considered (Li's et al., 2014; Sonnak & Towell, 2001; Want & Kleitman, 2006), in the current sample we found parenting styles to be associated with the participants' imposter feelings mainly through the

Table 3

Bootstrapped path estimates, SEs and 95% CIs for the regression model predicting students' imposter syndrome scores from their father's overprotection and care with (students') self-esteem as a mediator ($N = 182$).

Model paths	Unstandardized (B)			Standardized (β)		
	Estimate (SE)	Lower 95% CI	Upper 95% CI	Estimate (SE)	Lower 95% CI	Upper 95% CI
Mother: Self-esteem as mediator (see Fig. 1). Covariance/correlation. Overprotection, Care**	-0.10 (0.02)	-0.15	-0.05	-0.38 (0.07)	-0.51	-0.22
<i>Direct effect</i>						
Overprotection-self-esteem	-0.16 (0.10)	-0.43	.03	-0.12 (0.08)	-0.28	.02
Care-self-esteem**	.44 (0.08)	.26	.61	.39 (0.07)	.24	.53
Self-esteem-imposter**	-0.82 (0.07)	-0.94	-0.69	-69 (0.05)	-0.78	-0.59
Overprotection-imposter	.13 (0.10)	-0.16	.31	.08 (0.06)	-0.05	.19
Care-imposter	.13 (0.09)	-0.06	.36	.10 (0.08)	-0.04	.27
<i>Indirect effect via self-esteem</i>						
Overprotection-imposter	.14 (0.10)	-0.02	.35	.08 (0.05)	-0.01	.19
Care-imposter*	-0.36 (0.08)	-0.53	-0.21	-0.27 (0.06)	-0.39	-0.16

Note: CI = confidence interval;

* $p \leq 0.005$,

** $p \leq 0.001$.

mediator. The mediator in this case, self-esteem, seems to play a crucial role in establishing the links between parenting and imposter feelings, which in the current study were not observed in the direct paths between them. This strongly suggests that parental care and overprotection are related to the offspring's imposter feelings, since they increase and decrease (respectively) their self-esteem which, in turn, affects their imposter feelings.

While self-esteem was often found in previous research to be associated with impostorism and with parenting styles amongst students (both adolescents and adults) (e.g., Cusack et al., 2013; Lin, 2008; Pinquart & Gerke, 2019; Schubert & Bowker, 2017), the current study is among the first to demonstrate its simultaneous association with both of these variables (Sonnack & Towell, 2001), particularly as a mediator. Perhaps further decoding of the mediation mechanisms between parenting and the impost feelings could be the key to shedding a considerable light on the etiology of the impostor phenomenon.

In accordance with previous studies showing deferential associations between parenting styles and imposter feelings for both parents (Li's et al., 2014; Want & Kleitman, 2006), our findings revealed somewhat stronger effects of fathers than of mothers on the sample's females' students. Whereas the connection trends between the parenting dimensions and the students' variables were similar in general, more paternal paths approached significance. Thus, both parents' care was associated with the students' lower imposter feelings via higher self-esteem, but only paternal overprotection was significantly associated with the students' higher imposter feelings via lower self-esteem. Seemingly, the possible long-term detrimental consequences of parental overprotection in the context of daughters' self-esteem and imposter feelings may be worse from the fathers' side than from the mothers' side. The reverse explanation, in which female students who experience imposter feelings and low-self-esteem tend to perceive their parent's past parenting as overprotective, also applies only to fathers in the current sample but not to mothers. This conclusion may contradict the fundamental psychological premise regarding the mother's superior role in the child's emotional development. Yet, it is in line with some research findings where the associations between parenting styles and various psychological properties in offspring, including desirable and undesirable outcomes, were found to be more dominant (or at least similar) for fathers than for mothers (Enten & Golan, 2009; Pinquart & Gerke, 2019; Want & Kleitman, 2006; Yaffe, 2018).

Interestingly, alongside these findings, we also identified a direct, unique link between paternal care and the students' imposter feelings, which its direction is contrary to the link found between care and imposter feelings via self-esteem. This finding, although minor, is contradictory to previous relevant findings, where paternal care was associated directly with lower, rather than higher, imposter feelings in adults. In the current sample, however, parental care is directly associated with the participants' higher imposter feelings, implying that the sample's women might identify part of the paternal care with overprotection. This may stem from the parent-child cross-gender relationships, which might be the case when fathers' care and monitoring behaviors toward girls are interpreted as protecting and overcontrolling.

The gender aspect of parenting styles is an important strength point of the current study, since differential parenting between the two parents had been given less attention in the empirical literature (McKinney & Renk, 2008). Although its findings cannot be used to determine which parent plays a pivotal role in the offspring's psychological development of self-esteem and impostorism, they do strengthen the presumption regarding the potential differential parental influence on the child (e.g., Jewell, Krohn, Scott, Carlton & Meinz, 2008), which also persists in the long-term throughout adulthood (Yang et al., 2019).

The study's findings are limited in two major respects. First, since the sample contains only women, its findings and explanations may not apply to men and might generally be lacking in depicting the impostor phenomenon. Neither impostorism itself, nor its relation to parenting,

are gender-typical phenomena. Hence, the attempts to understand the origins and possible factors of this problem among youngsters and adults must not be confined to gender-related explanations as is the case in the current study. Additional limitation concerns the study's data collection method, which was based on merely a sole informant for all the study's variables and may result in inflating the correlational findings (Campbell & Fiske, 1959). Also, although using the child's point of view in assessing parent-child relationships is, in some respects, considered favorable (Barber, 1996), using a retrospective perspective might affect the perception of the past parent-child relationship. This may result in distorting the description of the relationship between the parental dimensions and the study's dependent variables. A further study involving a more sophisticated research design may use numerous sets of data to assess the parenting styles, either by using several informants or by employing a few assessment time points.

The study was conducted in accordance with the ethical standards of the American Psychological Association (APA).

Declaration of Competing Interest

No.

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