

**PAPER****PSYCHIATRY & BEHAVIORAL SCIENCE**

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## Confidence in Attachment Relationships and Marital Status as Protective Factors for Self-Perceived Parental Role and In-Person Visitation with Children Among Incarcerated Fathers\*

**ABSTRACT:** The study aimed at investigating the role of confidence in attachment relationships and marital status as protective factors for incarcerated fathers' self-perceived parental role and in-person contacts with their children. Participants included 150 inmate fathers and 145 nonincarcerated control fathers who provided background sociodemographic information and completed two self-reports, the Attachment Style Questionnaire and the Self-Perception of Parental Role. A two-phased cluster analytic plan allowed us to highlight two profiles of self-perceived parental roles, with incarceration and low confidence in attachment relationships increasing the risk of the less optimal of the two profiles. Higher confidence in attachment relationships and having a stable romantic relationship increased the likelihood of incarcerated fathers engaging in frequent contacts with their children, while the profile of self-perceived parental role had no effect. Implications for practice are discussed, and suggestions for further research are provided.

**KEYWORDS:** forensic science, incarcerated fathers, father-child relationship, parental role, marital status, attachment, contacts with children

The parental role of incarcerated fathers has received growing attention in psychological research in recent years (1–7). Findings show that the relationship between imprisoned men and their children has a meaningful impact on the lives of both fathers and children (8) in terms of adjustment during incarceration (9), less recidivism (10), reintegration of fathers after release (11), and children's well-being (12).

These beneficial effects highlight the advantage of supporting the parental role of incarcerated fathers, in terms of both their self-perceived parental role as well as their contacts with their children during incarceration. Nevertheless, it is thus far unclear which factors should be targeted to achieve this aim. This study addressed this critical gap by focusing in particular on the protective role of confidence in attachment relationships and marital

status in supporting both incarcerated fathers' parental self-perception and behavior.

### *The Effects of Parental Incarceration on Children and Fathers and the Importance of In-Person Visitation*

Parental incarceration has a profound influence on families and children as it leads to significant disturbances in family life: Children usually have to face critical changes in living arrangements and caregiving (13–15). Caregivers commonly experience financial and psychological difficulties and parenting distress that may cause further harm to children (16). Several studies show that children affected by the sudden absence of an incarcerated parent experience ambivalent reactions toward the incarcerated parent including anger and resentment, emotional difficulties, behavioral problems, and deterioration of interpersonal relationships (3,12,17–20), frequently resulting in antisocial behavior, delinquency, and future incarceration (21,22). Specifically, with respect to fathers' incarceration, recent findings highlight that the effects of paternal incarceration are more severe than those relating to other forms of father absence, for children both who lived with their fathers before incarceration and also for those who had nonresident fathers, thus suggesting that incarceration itself is a risk factor (12). Incarceration has also a strong negative impact on fathers: Detention has been found to be associated with high levels of

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parenting stress, anxiety, and depression, which might lead to in-prison violent and aggressive behavior and institutional infractions (9,23,24).

One critical dimension in fathers' parenting experience is the set of attitudes and beliefs concerning their parental role and experience. This self-perception is a key component of parenting behavior, because fathers who have a positive perception of their image and role have been found to be highly involved in their children's lives (25,26). Although the findings reviewed above highlight the detrimental effect of detention on children's and fathers' psychological well-being and the challenge for these parents in maintaining contacts with their children and in exerting their parental role (27), it is debatable whether these difficulties lead incarcerated fathers to perceive themselves differently from control fathers. Some studies specifically show that inmate fathers feel close to their children notwithstanding their condition of incarceration (5,28,29), while some others highlight their feeling of disconnectedness and dissatisfaction (7,9,28). Furthermore, it is unknown which factors may support them in maintaining a positive and effective self-perception as fathers and an active involvement in the relationship with their children, despite the forced separation from them.

In-person visitation is the most proximal form of contact between offenders and children and an essential mean to maintain vital connections (30,31), as visits represent important opportunities through which offenders and their family members can strengthen their relationships (32,33): Indeed, most offenders are determined to reunify with their families after release (34) and their reintegration seems strongly connected with family relationships (11,35). Although in-person visitation has the advantage of helping to maintain family relationships, it can also present several problems for both parents and children since traumatic separations are relived. Moreover, visitor environments do not facilitate interactions because of noise, lack of privacy, and limitation of physical contact; offenders can experience painful emotions and memories, frustration, shame, and guilt; and children may find the experience upsetting (1).

Nevertheless, in-person visitation remains the only way in which parents and children can maintain and strengthen their relationship and it is the key means by which offenders feel that they matter in their children's lives. Although incarcerated fathers commonly have less contact with their children than imprisoned mothers (10,36), their contacts with children have been found to be associated with better offenders' adjustment during and after imprisonment (9,36). Children also seem to benefit from maintaining these contacts, as those who continue to have close relationships with their imprisoned fathers are less likely to engage in delinquent behavior and show better adjustment (18,37). In sum, in-person visitation is the main channel incarcerated fathers have to exert their parental role and findings available highlight how positively such visits impact on both fathers and children. Nevertheless, little research has been carried out on the factors that promote positive parenting of imprisoned men and facilitate them in keeping contacts with their children. In the following section, we review findings suggesting that confidence in attachment relationships and marital status could both act as protective factors for self-perceived parental role and in-person visitation among incarcerated fathers.

#### *Confidence in Attachment Relationships and Parenting*

A strong connection between attachment style and parenting has been shown by a consolidated tradition of research (38).

Attachment styles, which have been conceptualized as parallels of Ainsworth's infant attachment categories, refer to an individual's attitudes, feelings, and experiences in adult close relationships. They are assessed through self-reported measures and have been shown to predict the quality of caregiving in romantic and close relationships.

Particularly relevant to the topic of this study are the findings showing that parents' self-reported attachment styles are related to several self-reported and observed parenting behaviors. Whereas self-perceived security and confidence in attachment relationships, compared to insecurity, have been linked to a more sensitive, warm, and involved parenting, self-perceived insecure attachment styles have been associated with the risk for hostility, conflict behavior, child maltreatment, corporal punishment, negative overall parental functioning, and with miscellaneous parenting behaviors, such as a low level of involvement (38–40).

Parents' self-reported attachment styles have also been found to be linked to emotions related to parenting. More specifically, parental self-perceived insecurity, compared to self-perceived security and confidence in attachment relationships, has been associated with less desire to have children; lower feelings of closeness to children; lower parental satisfaction and ability to cope with pregnancy and adulthood; higher parental stress; higher maternal separation anxiety; and other negative emotions such as jealousy or resentment, more feelings of incompetence, and social isolation (38,41,42). Parents' self-reported attachment styles have been shown to relate also to cognitions in parenting. Compared to a secure parental attachment style, insecure styles have been linked with a more negative perception of parenthood and of oneself as a parent and with a more negative perception of current and future children; moreover, insecure attachment styles have been associated with more negative perceptions of parent-child relationship and family functioning and with more negative cognitive responses to infant distress (38,41,42).

Overall, these findings suggest that self-perceived confidence in attachment relationships predicts positive behaviors, emotions, and thoughts related to parenting, and therefore, we might expect such dimension to play a key role in supporting a father's self-perceived parental role as well as frequency of in-person visits of incarcerated fathers with their children.

#### *Marital Status and Parenting*

A condition shown to promote positive parenting is the possibility to rely on the partners' presence and support: Findings show that the support partners bring to each other in rearing a child ensures cohesiveness of the family and influences child outcomes (43). In families affected by parental separation such as divorce, a collaborative co-parenting alliance has been shown to increase contacts with nonresidential parents and to have beneficial effects for children's well-being (1,44,45). As regards families affected by parental incarceration, a positive relationship with the children's caregiver allows offenders to continue being involved in their children's lives (46). Positive co-parenting results in children having fewer behavior problems (47) and facilitates contacts with children during incarceration and successful parenting after release (48). Current caregivers regulate frequency and type of contact with children, thus playing a key role in the possibility of incarcerated parents maintaining a parental role and meeting their children (49). Even in the case of incarcerated fathers who are married or engaged in a romantic relationship with a woman who is not the mother of their children, the presence of a partner could still be supportive for the

father's parenting as marital status and support have been shown to enhance one's psychological well-being (50–52), which, in turn, could impact positively the challenges of parenting that incarcerated fathers must face. In sum, based on the findings reviewed above, we expect marital status to affect both incarcerated fathers' self-perceived parental role and behavior in keeping in contact with their children through in-person visitation.

### Current Study

Existing findings show the detrimental effect of parental incarceration both on parents and children and stress the importance of supporting incarcerated fathers' parenting role and behavior, through in-person visitation with their children. However, little is known thus far on the factors that might support incarcerated fathers' parenting, in terms of both their self-perceived parental role and behavior, through in-person visitation with their children. Such issues appear even more relevant in relation to the Italian context: Most of the findings reviewed above, in fact, refer to other cultural context, while research regarding modalities and processes to facilitate the parental role and behavior of incarcerated fathers in Italy are scant (but 2,4,8).

This study attempts to tackle these issues: More specifically, the first aim was to investigate the patterns of self-perceptions related to the parental role among incarcerated and control fathers in order to highlight the peculiarities of the self-perceived parental role related to detention. Given the forced separation which prevents incarcerated fathers from exerting their parental role in daily life and the distress related to incarceration, we expect them to report a less positive and functional self-perceived parental role, compared to control fathers.

As to the second aim, the study investigated self-perceived confidence in attachment relationships and marital status as possible factors promoting both a more functional self-perceived parental role and contacts with children through in-person visitation. We expect that incarcerated fathers who report higher confidence in attachment relationships and are currently engaged in a romantic relationship to have a more positive self-perceived parental role. Secondly, we expect incarcerated fathers with a more positive self-perception of their parental role who reported to be in a romantic relationship and to be more confident in attachment relationships to be engaged in more frequent in-person visits with their children.

## Method

### Participants

Participants included 150 fathers incarcerated in the prisons of six Italian cities, four of which are located in Southern Italy (Lecce, Taranto, Trani, and Turi), and two in Northern Italy (Modena and Reggio Emilia), and 145 nonincarcerated control fathers. Incarcerated fathers had a mean length of detention of 73.20 months ( $SD = 71.46$ , range = 4–114). This information was missing for 36 inmates, all but two belonging to one prison (i.e., Turi) due to the unavailability of the institution to provide this information.

Descriptive statistics for each subsample are reported in Table 1. Prior to data collection, the research project and the request to have access to the prisons in order to recruit the incarcerated sample were evaluated and approved by the Department for Penitentiary Administration Office for Convicts and Treatment, Section 2, Observation and Treatment (Authorization No.

20080 of 4 July 2013). The project was then also evaluated and authorized by the Executive Boards of the prisons in which the data were collected. Staff educators provided all imprisoned fathers with detailed information about the purposes of the study and the type of information that was to be collected. Only volunteer fathers participated in the research.

The inmate fathers were in ordinary condition of incarceration. Consequently, according Italian Penitentiary Law (article n. 18 Law 26 July 1975 n. 354 and article n. 37 Decree of the President of the Republic 30 June 2000 n. 230), they had the right to meet their children up to six times per month. Each meeting could last up to one hour. None of the participants was in special condition of detention (e.g., for mafia, terrorism) for which, according to the same law, restrictions in family contacts are applied. During recruitment, the following conditions were assured: (i) All families were available and willing to facilitate the contacts between inmates and their children; (ii) all children were in the condition to have access to the visits, as these were organized after school time, thanks to the facilitation provided by the Direction of the Prisons; (iii) all children were motivated to meet their parents (based on fathers' and prisons' professionals reports).

Control fathers were recruited randomly in Bari through advertisement and were matched to the inmate fathers based on age and years of education. They were informed about the scope of the research and the information to be collected.

### Instruments and Measures

For both incarcerated and control fathers, the data collection was completed in one session; instruments were administered in random order to counterbalance possible order effects. All fathers were asked to provide written consent prior to the data collection. A detailed description of the instruments administered and the measures collected are reported in the following section.

*Demographic and Child-Related Background Information*—Each participant was asked the following personal information: age, years of education, marital status (married, engaged in a stable romantic relationship or single), sex and age of children, and, only for incarcerated fathers, length of detention and frequency of visits by children. This latter variable was dichotomized as “at least twice per month” and “less than twice per month.”

*Attachment Style Questionnaire (ASQ; 53)*—It is a self-report questionnaire to assess individual differences in adult attachment style. It comprises 40 items asking the degree of agreement with their descriptions on a 1–6 Likert scale, grouped in five subscales: confidence, discomfort with closeness, viewing relationships as secondary (to achievement), need for approval, and

TABLE 1—Descriptive statistics of the sociodemographic variables by father's status (incarcerated vs. control).

Dependent variable	Father's status	
	Incarcerated ( $N = 150$ )	Control ( $N = 145$ )
Single fathers ( $f$ )	54 (36%) <sup>a</sup>	13 (9%) <sup>b</sup>
Fathers' age ( $M$ )	41.11 (10.78) <sup>a</sup>	43.53 (12.05) <sup>a</sup>
Father's years of education ( $M$ )	7.49 (2.82) <sup>a</sup>	8.13 (2.39) <sup>b</sup>
Firstborn's age ( $M$ )	12.91 (10.02) <sup>a</sup>	15.90 (12.36) <sup>b</sup>
Average number of children ( $M$ )	1.90 (1.01) <sup>a</sup>	1.81 (0.80) <sup>a</sup>

Different subscripts indicate significantly different means ( $p < 0.05$ ).

preoccupations with relationships. The questionnaire is well validated and has been shown to have good psychometric properties (54–58). In the present study only the measures on the confidence scale were used, as this scale is considered as the best representative of self-perceived security in attachment relationships (59 for a review).

*Self-Perception of Parental Role (SPPR; 60)*—This is a self-report 22-item questionnaire assessing individual differences in self-perception of parental role. Each item includes two contrasting statements describing endpoints of a hypothetical parent's attitude or behavior. For example, one item states "Being a parent is a satisfying experience to some adults BUT for other adults, being a parent is not at all satisfying." Respondents are asked to choose the statement that best describes him/her and check "Sort of true for me" (2 or 3) or "Really true for me" (1 or 4). The items are grouped into four subscales: investment, competence, balance, and satisfaction. The instrument has been implemented in previous research and has been shown to have good psychometric properties (61–63).

## Results

### Preliminary Analyses

Preliminarily, the equivalence of the two groups (incarcerated fathers vs. control ones) was tested with respect to age, years of education, age of the firstborn child, marital status, and number of children. No age differences were found,  $t(293) = -1.83$ , n.s., and the two groups were comparable with respect to the number of children they had (see Table 1). Indeed, the two groups differed with respect to years of education,  $t(293) = -2.09$ ,  $p < 0.05$ , age of the firstborn child,  $t(293) = -2.29$ , and marital status,  $\chi^2(1, N = 295) = 30.70$ ,  $p < 0.001$ , with incarcerated fathers reporting lower education, younger ages of firstborn child and being more frequently involved in a romantic relationship, compared to the control group. When necessary, these variables were treated as covariates in the main analyses. Descriptive statistics of each group are reported in Table 1.

As to the subsample of incarcerated fathers, we preliminarily tested whether the length of sentence was associated marital status, according to the idea that longer sentences lead to more unstable and poor romantic relationships: A  $t$ -test showed no significant difference in the length of sentence between single fathers (either married or engaged in a stable romantic relationship), compared to single ones,  $t(107) = -1.47$ , n.s.,  $M_{\text{married/engaged}} = 66.69$ ,  $SD = 62.79$ ;  $M_{\text{single}} = 88.60$ ,  $SD = 89.66$ .

As to the possible associations between child's characteristics (age and gender) and frequency of contacts, the age of the firstborn was considered in the main analyses as a predictor, according to the idea that the outcome could be influenced by the length of fatherhood. As to the impact of other children's ages, a set of  $t$ -tests allowed to exclude possible differences between the mean ages of the second-/third-/fourth-born children of fathers with frequent and infrequent contacts,  $0.75 < t < 1.45$  all n.s. Similarly, the number of male and female children was cross-tabulated with the frequency of contact (frequent vs. infrequent) and chi-square tests showed no significant association between this variable and the number of male and female children, with  $\chi^2(3) = 6.29$  for female children and  $\chi^2(4) = 9.43$  for male children, respectively.

Overall, these preliminary analyses showed no significant relation of children's age (with the exception of the firstborn's age,

used in the main analyses as an indicator of length of fatherhood) and gender with frequency of contacts, allowing us to further test the main aims.

### Main Analyses

*Profiles in Self-Perceived Paternal*—As the four SPPR dimensions (i.e., investment, competence, balance, and satisfaction) were highly intercorrelated ( $r$ s ranging from 0.53,  $p < 0.001$ –0.01, n.s.), in order to deal with the amount of variance shared across these dimensions, so as to reduce the number of variables and avoid redundancy, a two-phased cluster analytic plan (64) was used to explore the naturally occurring groups of fathers based on the four dimensions. First, we implemented a hierarchical cluster analysis method (i.e., Ward's linkage clustering using minimized squared Euclidean distances as the distancing metric) to provide maximum flexibility for the determination of the appropriate number of groups. Following this procedure, it was possible to identify the number of clusters that maximized the differences between clusters or groups and minimized the within-group differences on the dependent variables. The solution identified by the hierarchical clustering was then validated using a nonhierarchical ( $k$ -means) cluster analysis, which provides a relatively robust identification of clusters of participants. This two-step clustering method "capitalizes on the strengths of both methods and compensates for their weaknesses" (65, p. 124).

Changes in the agglomeration coefficient from stage to stage suggested a three-cluster solution as the best fit to the data, where the first cluster included 177 fathers (60.0% of the total sample), the second cluster, 116 (39.3%), and the remaining cluster, only two fathers (0.7% of the sample). The results yielded a similar pattern across the two clustering methods: A comparison of cases across the two-cluster analytic methods indicated that 86% (255 of 295;  $\kappa = 0.73$ ,  $p < 0.001$ ) of cases were similarly classified, suggesting robust cluster groups.

As the third group included only two fathers, this was dropped from the following analyses. To explore the features of each cluster, we ran a set of  $t$ -tests to compare the two remaining groups on the fathers' SPPR dimensions. All tests were significant and showed that fathers in group 1 perceived more investment, but less competence, balance, and satisfaction compared to fathers in cluster 2. Given this pattern of results, we labeled cluster 1 as a less optimal profile, because faced with a higher investment, fathers perceive their role as less satisfying, balanced, and competent, compared to their counterparts in cluster 2. Conversely, fathers in cluster 2, although reporting a lower degree of investment compared to their counterparts in cluster 1, perceived themselves as more satisfied, competent, and balanced.

TABLE 2—Descriptive statistics of the SPR dimensions by profiles of fathers' self-perceived parental role.

Dependent variable	M (SD)		$t(291)$
	More optimal ( $N = 116$ )	Less optimal ( $N = 177$ )	
Investment	2.28 (0.45)	2.53 (0.52)	4.21***
Balance	3.33 (0.39)	2.60 (0.48)	-11.28***
Competence	3.14 (0.39)	2.51 (0.49)	-13.96***
Satisfaction	3.63 (0.37)	3.16 (0.48)	-8.92***

\*\*\* $p < 0.001$ .

Therefore, we labeled this cluster as a more optimal profile. Results are reported in Table 2.

The distribution of profiles was independent from fathers' years of education, age of firstborn child both in the total sample and in each sub-sample, and from the length of detention in the incarcerated group,  $-1.09 < t (116 < df. < 291) < 1.29$ , all n.s. The distribution of profiles was then cross-tabulated by the frequency of the fathers' condition (incarcerated vs. control), yielding a significant difference: 74% of the incarcerated fathers ( $N = 109$ ) and 47% ( $N = 68$ ) of the control fathers were included in the less optimal profile, while only 26% ( $N = 39$ ) of the incarcerated fathers and 53% ( $N = 77$ ) of the control fathers were included in the more optimal profile,  $\chi^2 (1, N = 293) = 21.92, p < 0.001$ .

*Patterns of Self-Perceived Parental Role as Predicted by Fathers' Status, Attachment Confidence, and Marital Status*—To predict the two profiles of self-perceived paternal role from fathers' condition, attachment confidence, and marital status, we ran a logistic regression. Fathers' condition (incarcerated vs. control), attachment confidence, and marital status were the predictors. We also added the interaction terms confidence  $\times$  condition, confidence  $\times$  marital status, and condition  $\times$  marital status to verify possible moderating effects in terms of buffering or cascade effects, that is, whether confidence could buffer the negative effect of incarceration on the perceived paternal role; alternatively, whether low confidence associated with incarceration and/or singleness associated with incarceration produced a cascade effect by increasing considerably the risk for the less optimal profile. Confidence was standardized before the entry in the regression, while fathers' condition and marital status were coded as dummy variables (incarcerated = 0 and control = 1; single = 0 and engaged in a romantic relationship/married = 1).

The resulting model was significant,  $\chi^2 (3) = 47.79, p < 0.001$ , Nagelkerke pseudo- $R^2 = 0.20$ ; as shown in Table 3, fathers' attachment confidence and condition (incarcerated vs. control) had an overall significant effect on the outcome variable, while marital status and the interaction terms were not significant. When expressed in terms of the SD increments of the fathers' confidence, for a single SD increment, each father was 2.4 times more likely to be classified in the more optimal profile than in the less optimal one and control fathers were seven times more likely than incarcerated fathers to belong to the more optimal profile than to the less optimal one. In sum, results show that both incarceration and lower confidence in attachment relationships are risk factors for fathers' self-perceived paternal role: Both, in fact, increased the risk of a less optimal profile, characterized by higher investment and lower satisfaction, competence,

and balance. However, the two predictors contribute independently to the outcome and no buffering or cascade effect was found.

*Predicting Frequency of Contacts from Attachment Confidence, Patterns of Self-Perception of Parental Role, and Marital Status*—As frequency of contacts was coded dichotomously, a hierarchical logistic regression was performed to predict it from attachment confidence, patterns of self-perception, and marital status. In order to control for the variance explained by sociodemographic variables and factors related to the incarceration, at the first step, the following variables were inserted: father's age, years of education, firstborn's age (used as an indicator of length of fatherhood), and length of the detention. All continuous predictors were standardized before entry, while the dichotomous predictors were entered as dummy variables. Results are summarized in Table 4: With respect to the frequency of contacts, the overall model was significant,  $\chi^2 (7) = 25.19, p < 0.001$ , Nagelkerke pseudo- $R^2 = 0.26$ ; among the predictors, years of education, confidence in attachment relationships, and marital status were the significant ones: When expressed in terms of the SD increments of incarcerated fathers' years of education and attachment confidence, each father was respectively 1.6 times and 1.5 times more likely to have frequent rather than infrequent contacts with his child/children. Lastly, fathers engaged in a romantic relationship or married were 4.9 times more likely to have frequent contacts with their children compared to single fathers.

**Discussion**

Given the importance of supporting fathers' parenting role and behavior during imprisonment, this study attempted to test whether incarcerated fathers perceived their parenting role in a less optimal way, compared to control fathers, and, secondly, whether confidence in attachment relationships and marital status facilitated a more effective self-perception and involvement with children, in terms of more frequent in-person contacts with them.

As to the test of the first aim, findings show that both incarceration and low confidence in attachment relationships have a detrimental effect on self-perceived parental roles: Both, in fact, increase the risk of a less optimal profile characterized by higher investment and lower satisfaction, competence, and balance. However, the two predictors contribute independently to the outcome and no buffering or cascade effect was detected. Incarcerated fathers were found to be more likely to have a less optimal

TABLE 3—Summary of binary logistic regression analysis predicting the two profiles of self-perceived parental role (0 = less optimal vs. 1 = more optimal).

Category	B	SE B	Wald	OR	95% CI
Fathers' condition	1.95	0.72	7.27**	7.03	[1.70, 29.02]
Attachment confidence	0.86	0.35	6.08*	2.35	[1.19, 4.64]
Marital status	-0.43	0.38	1.28	0.65	[0.31, 1.37]
Condition $\times$ confidence	0.19	0.40	1.47	1.21	[0.89, 1.64]
Condition $\times$ marital status	-0.37	0.38	0.85	0.69	[0.32, 1.51]
Confidence $\times$ marital status	-0.18	0.38	0.24	0.83	[0.40, 1.74]

OR, odds ratio; CI, confidence interval.  
\*\* $p < 0.01$ ; \* $p < 0.05$ .

TABLE 4—Summary of binary logistic regression analysis predicting the frequency of fathers' contacts with their children (0 = infrequent vs. 1 = frequent).

Category	B	SE B	Wald	OR	95% CI
Fathers' age	0.17	0.37	0.21	1.19	[0.57, 2.45]
Firstborn child's age	0.13	0.39	0.12	1.14	[0.53, 2.45]
Father's years of education	0.47	0.23	4.15*	1.59	[1.02, 2.49]
Length of detention	-0.21	0.23	0.80	0.81	[0.52, 1.28]
Attachment confidence	0.42	0.20	4.39*	1.52	[1.03, 2.25]
Profiles of self-perceived parental role	0.16	0.50	0.10	1.17	[0.44, 3.12]
Marital status	1.59	0.41	10.94***	4.92	[1.91, 12.65]

OR, odds ratio; CI, confidence interval.  
\*\*\* $p < 0.001$ ; \* $p < 0.05$ .

self-perception of their parental role: Although highly invested, they seem less satisfied and competent in their role and perceive less balance. Due to the forced separation of incarceration, fathers are actually unable to exert their parental role in daily life and receive feedback from their children about the goodness of their behavior and this may impact negatively their self-perception. Existing evidence on this issue is inconsistent: On the one hand, incarcerated fathers seem exposed to parental stress concerning their attachment to children and their competence as parents (9). Moreover, inmate fathers have reported to feel disconnected and dissatisfied with their parental engagement (28) and have been found to experience, due to incarceration, depression, psychological difficulties, and adjustment problems that weaken their parenting capacity and role (7). On the other hand, incarcerated fathers have been found to perceive a close relationship to their children (5,28,29). Our findings show that incarcerated fathers are exposed to the risk of perceiving their paternal role in a more negative way compared to control fathers because in the face of a strong feeling of investment, they also feel less balanced, competent, and satisfied compared to the other parents. Therefore, our findings add to the existing knowledge on the paternal experience of incarcerated fathers, proving further that imprisonment has a negative impact on the way men perceive themselves as fathers. Because fathers' self-perceived role has been found to predict their behavior with children (25,26), we might expect this negative perception to interfere with the quality of their involvement with their children.

Faced with this risk, confidence in attachment relationships seems to act as a protective factor as it increases the likelihood of having a more optimal self-perception as a father. Previous findings show that confidence predicts feeling of closeness to children and parental satisfaction. Furthermore, confidence is linked to a more positive outlook on parenthood and to a more positive perception of the parent-child relationship (38). Our findings show that confidence is also related to a more effective and optimal self-perceived parental role. Such findings are quite striking if we consider that this was found specifically among fathers: The current state of art supporting the relation between attachment styles and parenting behaviors and feelings (38) relies mainly on data collected on mothers and very few studies have involved fathers (39,65).

With regard to the dimensions which affect the frequency of visits, besides fathers' education, attachment confidence and marital status were found to increase the likelihood of fathers engaging in more frequent contacts with their children, while profiles of self-perception did not. This finding is in line with literature showing that insecure attachment styles are associated with lower levels of parental involvement (38) and that marital support is linked to higher parental engagement (43). Nevertheless, we found no relation between profiles of self-perceive paternal role and frequency of contacts, despite existing findings supporting such a prediction in low-risk conditions (25,26).

These findings suggest that even if incarceration and attachment style affect self-perceptions of parental role, this last construct is unrelated to the ability to maintain in-person contacts with children. In contrast, this ability probably depends on deeper intrapersonal and interpersonal dimensions such as confidence in attachment relationships and the presence of a romantic partner. The findings suggest therefore that a negative self-perception of parental role does not impede incarcerated fathers from keeping in touch with their children, as long as they feel confident in close relationships and supported by their partners.

This of course does not mean that self-perception of parental role is unimportant as it is still a relevant dimension to adjustment during incarceration and it might impact parental behaviors other than the frequency of contacts with children.

Some limitations need to be addressed. First of all, this research is based on self-reported measures, which implies that participants may have intentionally controlled their answers. Secondly, incarcerated fathers could not be randomly selected, as they volunteered to participate in the study. Therefore, the self-selection of inmate participants could have affected the results. Thirdly, the study concentrated on in-person contacts, thus neglecting the importance of other forms of contact. Furthermore, the cross-sectional design of this work did not allow to test the direction of causality. Thus, we are unable to draw clear conclusions on the direction of the influences, as we are unable to exclude alternative explanations which could fit our data. Existing findings led us to suggest that confidence and marital status were factors promoting both a more positive self-perception as a father, as well as more frequent contacts with children, but it might also be possible that a positive self-perception as a father promotes positive feelings and expectations in affective relationships: Experiencing more contacts with children might have supported fathers in developing a positive representation of how affective relationships function, and more confidence in significant others. Also, it is plausible to suggest that regular visits lead to the inmates having higher confidence and positive perception of parental role. It is important to underline that our predictions were theoretically driven, based on attachment theory and research, according to which parental confidence and security, as well as a stable romantic relationship support parental behavior and one's physical and emotional availability for children (38-40). Nevertheless, only a longitudinal design, which is the gold standard for testing reliably predictions over time, could allow in future studies to disentangle the way of causation between the variables of interest in the present study.

Moreover, we never met and we did not assess in any way the children of the incarcerated fathers. Therefore, we do not have data concerning the quality of the relationship between fathers and children prior to incarceration. It is likely that the quality of the relationship between fathers and children before incarceration impacted the continuity/discontinuity of their contacts during detention; unfortunately, we are unable to address this issue and future research should investigate both child's and father's perception of the quality of their relationship prior detection through a retrospective design in order to verify whether these perceptions relate to the frequency of contacts.

As to the motivation of family members to visit inmate fathers, we assured during recruitment a strong will to guarantee the continuity of visits without affecting school attendance in line with what expected and required by the Penitentiary Administration. This is in line with empirical evidence recognizing the importance of the stability of contacts between incarcerated parents and children (66,67). Nevertheless, it must be recognized as a limitation of the present study that we had no measures of other factors related to the family organization and predisposition toward incarceration, which might have impacted the frequency of contacts.

We do not have data concerning the impact of parental incarceration on children and on the possibility that regular contacts could have a negative impact on them. However, it is important to highlight that on the one hand, parental incarceration might be a risk factor for deviant behavior, victimization, and psychopathology of children. On the other hand, contacts between

incarcerated fathers and children have been shown to have a beneficial effect both on fathers and children (2,27,68–73).

Finally, we did not have specific data concerning the crime committed by inmates. We only know that all the crimes have been committed against patrimony and people, or they relate to drug use and trafficking. Therefore, we were unable to investigate whether the nature of crime had an impact the quality of the relationship between fathers and children, and the frequency of contacts between them.

Notwithstanding the limitations described above, this research sheds light on a very important social issue as it highlights that there are some dimensions which affect the possibility of incarcerated fathers maintaining a positive self-perception and contacts with their children. Even if several studies have emphasized how much contacts with children are important for imprisoned men, little research has been carried out on the factors that facilitate contacts between fathers and children and, more in general, on incarcerated fathers in the Italian context. This study has made it clear that confidence in attachment relationships and being engaged in a romantic relationship support fathers in keeping contacts with children. Therefore, any intervention aimed at supporting parenting of incarcerated fathers should take into account this conclusion; that is, it has to involve the attachment style of fathers more than their perception of parental role. Moreover, greater support has to be given to single fathers as they do not benefit from the support of a partner. Potential advantages for children, fathers, and the community are evident.

Given these potentials, further research on the nature of crime, on the difference between violent and nonviolent offenders and on the prisoner's sentence is needed (5,74). Moreover, a deeper investigation into the quality of visitation beyond frequency of contacts can shed light on how positive parenting may be played out during incarceration and on its impact on fathers and children (1). Other factors, such as offenders' psychological adjustment, quality of family relationships prior to incarceration, and efforts of offenders' family members also affect the maintenance and quality of relationships during incarceration. It might also be interesting to explore whether confidence in attachment relationships and marital status predict not only the frequency of contacts with children during incarceration but also the quality of these contacts. Moreover, the quality of parenting alliance and co-parenting seems closely related to the maintenance of contacts between inmate fathers and children (1,9,46,75) and needs to be further explored. The mediating and moderating factors connecting confidence in attachment relationships and marital status with contacts should be further investigated. For example, one possible factor exerting an impact in this process in the child's perception of the prison environment, which might depend on how this environment is organized and presented to the child. Research (73) underscores the importance of using children friendly rooms, with age appropriate furniture, in order to make the prison environment more familiar for children, so that they can reduce the anxiety of entering a hypercontrolled environment, the parental function of inmates can be facilitated during and after incarceration, and they can appreciate having an area where it is possible to stay with children without the interference of thoughts and practices connected with detention. Lastly, although no empirical evidence is available thus far suggesting that marital status and attachment styles might exert differential effects according to different cultural backgrounds, further research should attempt to replicate these findings in other cultural contexts to draw generalized conclusions.

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