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Parental Self-efficacy in Promoting Children Care and Parenting Quality

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Abstract

Parental self-efficacy (PSE) emerges as a crucial variable into exploring variability in parenting quality. After introducing the link between PSE and parental competence, the role of PSE on parenting quality, its multiple influences, and transactional effects connected to contextual or cultural variables are discussed. The chapter addresses some key issues: (a) the levels of PSE measurement (i.e., domain- or task-specific approach), their inter-relationship and magnitude as mutual predictors (*study 1*); (b) infant-caring, parent's adjustment, and PSE development in the transition to parenthood (*study 2*); (c) parenting difficult children and the role of PSE as a “buffer” variable moderating the effects of negative child's characteristics on parenting skills; and (d) PSE beliefs in family context, the relationships with other family measures (marital self-efficacy and stress), and their associations with children's adjustments (*study 3*). Finally, in the *study 4*, PSE is presented as an outcome variable in a parent training. In all summarized studies, a special attention was devoted to father's PSE as a specific factor affecting childrearing and parent's well-being. As Bandura says, PSE is not a personality trait, but a learnable set of beliefs producing positive effects on parenting quality. Suggestions for family-based interventions enhancing PSE are discussed.

Keywords: parental self-efficacy, parental competence, family-based interventions, family relationships

1. Introduction

When parents take care of their children, they also develop beliefs about their own role. They judge if their educational efforts will have any chance of success in nurturing and comforting the child or in shaping child's socially desirable behaviors. A particular set of individual's beliefs about the role as parent is parental self-efficacy (PSE). As Bandura [6] said, “an efficacy

expectation is the conviction that one can successfully execute the behavior required to produce the outcomes" (p. 193) that he or she wants to achieve. Applied to parenting, the parent's conviction about being capable in influencing their children's behavior is what is commonly called PSE. Jones and Prinz [42] defined it as "the expectation caregivers hold about their ability to parent successfully" (p. 342). Therefore, PSE is parent's "self-referent estimations of competence in the parental role" ([24], p. 128). This evaluation is not a global judgment that a person makes on his or her value (a reference to own ideal Self), but it is a differential estimation expressed on own abilities within different functioning settings. Parents can be requested abilities for many different areas, such as some specific tasks (e.g., "I'm able to help my child solving a quadratic equation"), or a few of broader domains (e.g., "I'm able to discipline my child"), or a yet broadest confidence (e.g., "I'm able to parent my children"), so parents can have self-efficacy beliefs at different degrees of specificity. The more specific a self-efficacy belief, the more accurate are the predictions of a parent's behavioral outcome. Bandura [7] puts self-efficacy beliefs at the center of his social learning theory because these cognitions motive people to begin an activity and they induce them to choose what doing and to persevere and resist discouragement for a momentary failure (Bandura talks of self-determination and self-influence).

Are parental self-efficacy and parental competence the two faces of the same coin? A distinction is necessary: parental competence refers to an external estimation, a "judgment that others hold about the parent's abilities to do something" ([54], p. 391), whereas self-efficacy is a personal subjective estimation, the parent's own judgment. However, the two concepts have several overlapping characteristics and their strong associations were observed [22].

The competent parents select goals, monitor their own and their child's behaviors, implement strategies, and evaluate the effectiveness of their parenting behaviors [65], just as parents with high PSE do. In this view, parental competence is an outcome of the development of parent's self-regulation capacities (as defined by [48, 65]), and self-efficacy beliefs are a component together with self-sufficiency, self-management, and personal agency of those self-regulation skills. Parenting of a competent parent is inspired from the child's needs within a socio-cultural background that depicts objectives, aims, and priorities of the parents' educational enterprise. A competent parent perceives his/her child's needs, readily responds to them, and flexibly adjusts his/her own behaviors as a function of circumstances, settings, and contexts [4].

The higher level of PSE, the more positive is parent's behavior. This relation has been demonstrated for inductive and not-harsh punitive discipline practices, for parental involvement and monitoring, and for responsiveness and warmth toward infants, children, and adolescents [42]. On the contrary, parents with low self-efficacy are at risk of frustration, stress, and depression [66]. PSE levels are also robust predictors of the child's social adjustments and academic achievements [2].

Reviewing empirical literature on PSE, Coleman and Karraker [22] conclude that PSE is linked to multiple contextual or cultural variables (e.g., marital conflict, socio-economic status, and so on) and suggest considering carefully the causal role of self-efficacy, its multiple influences,

and transactional effects. From a methodological point of view, this means that the self-efficacy can be conceptualized as: (a) an antecedent of parental behaviors (e.g., high PSE predicts responsiveness and inductive discipline); (b) a consequence (e.g., “difficult-child” characteristics, as disruptive behaviors, reduce PSE); (c) a mediational variable (e.g., PSE mediates the effect of child behavior problems on harsh discipline methods); and finally (d) a transactional variable, whose effects emerge through longitudinal studies. For example, lower levels of maternal self-efficacy with toddlers at risk for behavioral problems predict higher rates of children’s conduct behaviors 2 years later at age 4; in turn, increased child oppositional problems can lead mothers to experience frustration and learned helplessness, with reduced self-confidence and parental competence [76].

The aim of this chapter is to argue of some key questions related to PSE in promoting parenting quality, primarily, those concerning the specificity levels of *measurement*, their interrelationship and their magnitude as mutual predictors. Subsequently, we discuss the relationship between PSE and other measures of parents’ well-being during infant rearing from a longitudinal perspective: some parents’ beliefs seem to work and affect the future PSE already during pregnancy.

A third set of issues concerns parenting difficult children and the role of PSE as a buffer moderating the effects of negative child’s characteristics on parents’ well-being and skills. Finally, the PSE beliefs in family context, their relationship with other family measures, and their assumption as outcome variables in family-based interventions are discussed. In all sections, a special attention is devoted to fathers’ PSE as a specific factor often neglected in empirical literature.

2. The measurement issues

The assessment of PSE derives from three approaches that differ for their level of specificity: global, domain-, and task-specific self-efficacy. The first approach conceptualizes the self-efficacy broadly as judgments about individual’s capabilities as an overall aspect of human functioning, without focusing on specific tasks or domains of parenting [42]. The domain approach links self-efficacy to common domains of parenting, differentiating salient fields like child’s physical care, emotional needs, or discipline [23]. Finally, the task-specific approach proposes more detailed situations eliciting parents’ judgments about their ability in a specific task (e.g., preventing accidents in home or caring an infant with a fever). Great efforts emerge by researchers for developing PSE measures (mainly self-report questionnaires) consistently grounded in Bandura’s [7] theory. According to Bandura, task-specific measures are the better predictor of parental competence, as well as the specific self-efficacy beliefs guide a person to behave and dictate how well the activities are performed. Parenting behavior is characterized by multiple complex tasks that dynamically change in response to child’s developmental status. For example, mothers generally take care of healthy nutrition of their children, but mothers’ behaviors vary considerably depending on the situation as understanding whether infant has taken breast milk enough, managing child’s rejection of vegetables, or monitoring

adolescent's drink consumption. Furthermore, the feelings of efficacy developed by mothers are related to well-defined circumstances (e.g., successfully infant breast-feeding or bottle feeding), whereby an adequate evaluation of PSE must incorporate tasks at a most specified level of analysis.

Researchers have proposed original domain- and task-specific measures sensible to developmental phases or concrete parenting situations (e.g., newborns, premature infants, toddlers, or adolescents). An example in this direction is the Self-Efficacy for Parenting Task Index (SEPTI), a well-known questionnaire developed by Coleman and Karraker [23] to assess competency beliefs in parents of school-aged children. The authors chose tasks that are representative of parental efforts to support child's cognitive and socio-emotional adjustment to situations as school learning, sports, or social experiences with peers. Some examples are: "I do an adequate job in helping my child with school work" (achievement at school), or "When my child wants to play with a friend, I go out of my way to work it out" (recreation). These domains expand parental influence outside family context and complete the traditional parenting spheres, as disciplining children ("I have trouble deciding on appropriate rules for my child"), assuring physical health ("I work hard to encourage healthy habits in my child"), and emotional nurturance ("I consistently encourage my child to express his/her emotions"). Taken together, these discrete tasks are combined in a multidimensional index defining the construct of self-efficacy at a *domain-specific* level.¹ In their proposal, the authors retain that this multidimensional, domain-specific questionnaire (36 item) results a more robust measurement strategy if compared to a general self-efficacy level (i.e., adult's self-confidence not related to parental role, "When I decide to do something, I commit myself totally").

We must not overlook that expectations about the parenting role are strongly linked with the cultural and family contexts from which different ways of conceiving parental influence on child experiences could derive, as the involvement in school homework, the autonomy granted out the family, or the ways for managing child discipline when he/she misbehaves (i.e., implementing inductive or severe discipline strategies). For example, Dumka et al. [30], comparing Mexican mothers recently immigrated to USA and Anglos resident mothers, found that PSE was inversely linked to inconsistent discipline only among Anglo American mothers.

Another interesting field reflecting cultural factors in parenting is differences in maternal or paternal role (such as involvement in child activity, emotional responsiveness, intimate communication, etc.). This is a relatively neglect research area, considering that most of studies were conducted exclusively with mothers [24, 50, 59, 76].

2.1. Study 1

Based on these premises, we conducted an unpublished study aimed to investigate PSE in rearing school-aged children (5–11 years old) as a function of parent's gender, instruction

¹It's not surprising if the same questionnaire is differently classified in two or more studies (i.e., as task-specific and domain-specific measure). Different formulations are not theoretically in contrast, but they depend on the level of specificity chosen by researcher. The SEPTI is a task-specific measure including a set of discrete childrearing situations (e.g., "I have trouble deciding on appropriate rules for my child"). These tasks in turn can be reunited in a more inclusive category corresponding to a specific parental domain (discipline).

grade, and child-rearing experiences. Since previous researches with Italian families [11, 13, 81] reported in mothers a greater involvement in daily activities with children (as school homework, feeding or comforting the child), we supposed higher levels of domain-specific self-efficacy in mothers than fathers, together with a greater influence of previous experiences with children on maternal beliefs. This hypothesis derives from the Bandura's [7] idea that the direct feedbacks are the primary source of self-efficacy. In other words, even if factors influencing PSE are assumed to be similar for both fathers and mothers, we supposed that daily care of children may differently influence the development of self-efficacy in mothers and fathers.

Parents (294 women and 115 men) independently completed the SEPTI [23] and the Parenting Sense of Competence Scale (PSOC; [41]), a measure linking parental self-confidence to two distinct constructs: *efficacy* (perceived ability and confidence in handling child problems) and *satisfaction* (feelings associated with parenting, as anxiety or frustration). PSOC is a domain-general measure since its items describe common parental ideas (e.g., "Considering how long I've been a mother/father, I feel thoroughly familiar with the role") regardless of the children's age and the specific tasks that the parent has to face. We included both domain-specific and domain-general self-efficacy measures (SEPTI and PSOC, respectively) to evaluate, following suggestions by Bandura [82], any differences in employing two assessment strategies operating at different levels of specificity. Anyway, the hypothesis was we would find moderate to robust associations between SEPTI and PSOC measures.

Moreover, parents completed the *Italian Questionnaires of Temperament* (QUIT, [3]), a measurement of child's characteristics through six dimensions: *social orientation*, *positive emotionality*, *negative emotionality*, *inhibition to novelty*, *attention*, and *motor activity*. We will discuss the role of child's temperament qualities on the development of PSE in the next section. Studies exploring how PSE relates with differential perception of child's temperament are scarce, since empirical findings are collected almost exclusively with mothers. Therefore, this study aimed to evaluate with an exploratory scope the power of the possible associations between parental perception of child's temperament and PSE, taking into account parent's gender.

Table 1 summarizes the results of our study, first of all the significant correlations between the domain-specific (SEPTI) and the domain-general (PSOC) self-efficacy measures. For both parents, correlations resulted stronger with parental satisfaction, but modest with efficacy. Therefore, these measures appear convergent in capturing parental beliefs, but subjective feelings related to personal experiences emerge as a more powerful aspect than self-judgments about competence in objective parenting behaviors.

Secondly, the results partially confirm the study hypothesis on the existence of gender differences and the more influential role of child-rearing experience on maternal self-efficacy. Fathers and mothers reported similar levels on domain-specific self-efficacy ($M_{\text{fathers}} = 169.97$, $SD = 22.7$; $M_{\text{mothers}} = 171.85$, $SD = 20.1$), but mothers' levels of satisfaction ($M_{\text{mothers}} = 36.48$, $SD = 6.9$) and efficacy ($M_{\text{mothers}} = 29.56$, $SD = 5.1$) were lower than those reported by fathers ($M_{\text{fathers}} = 38.05$, $SD = 6.8$ for satisfaction, $M_{\text{fathers}} = 30.64$, $SD = 4.2$ for efficacy, all $ps < .05$). It is possible that the extensive set of parenting tasks (from physical care to school achievement) in SEPTI has attenuated the differences between the two parents, and these differences may not emerge

	Domain-specific self-efficacy (SEPTI)	
	Mothers (N = 294)	Fathers (N = 115)
<i>Child characteristics</i>		
Age	−0.20**	−0.03
Social orientation	0.36***	0.24**
Positive emotionality	0.33***	0.05
Negative emotionality	−0.24***	−0.01
Inhibition to novelty	−0.27***	−0.09
Attention	0.24***	0.18
Motor activity	−0.17**	−0.13
<i>Parent characteristics</i>		
Instruction	0.12*	0.03
Previous experience with other children	0.05	0.20
Satisfaction with parenting (PSOC)	0.55***	0.61***
Efficacy with parenting (PSOC)	0.40***	0.48***

PSOC = Parenting Sense of Competence Scale; SEPTI = Self-Efficacy for Parenting Task Index.

* $p < .05$.

** $p < .01$.

*** $p < .001$ two-tailed.

Table 1. Summary of correlation indexes (Spearman’s Rho) between measures of parental self-efficacy and child’s and parent’s characteristics.

using a global index of PSE.² This could be seen as a limit of our research. Other studies with toddlers [43] show some gender differences in that fathers evaluated themselves as more efficacious in playing with children (from 1.5 to 3 years old) and mothers in taking care of child’s basic need.

Findings did not support the influence of previous child care experiences on PSE (in both parents), but a negative association ($p < .05$) between child’s age and maternal self-efficacy emerged. Gross et al. [39] reported that prior experiences of infant care before child’s birth (for example, as teacher, volunteer or baby-sitter) were a strong predictor of higher maternal self-efficacy with toddlers. Our data suggest that PSE is not linked to remote activities with other children (that some parents may not have experienced), but to actual and daily exchanges with their own children. School-aged children pose to parents new challenges and stressful situations (i.e., school achievement, socio-emotional adjustment, monitoring activities out of

²Even if SEPTI was developed as a multidimensional measure, Coleman and Karraker decided do not use subscale scores corresponding to the discrete domains (achievement, recreation, discipline, nurturance, and health) because the results of a factor analysis (construct validity) were not compelling. We decided to follow this choice using the total index only, but other studies are necessary.

the house) that are quite different from caring toddlers (i.e., structuring sleep routines or stimulating language). In our study, the evidence of a maternal self-efficacy decrease with older children has a theoretical foundation in the idea that the most robust source of PSE is the *direct* involvement and mastery in concrete tasks. In the transition to preadolescence developmental tasks change and consequently parents must adapt their practices (such as monitoring, communication, support to autonomy, etc.). Parents feel overwhelmed by problems that undermine their confidence, but the more prepared parents (in our sample, the mothers with higher instruction grades) feel more adequate and confident to succeed with their children. Schneewind [67] retains that parental knowledge of the typical developmental tasks at different ages and parental practices functionally coherent are fundamental prerequisites to a sense of parental competence synchronized with growing children.

Regarding the associations between child temperament and PSE, we found strong evidence (all p s < .001) for mothers who reported higher self-efficacy levels when children were perceived more sociable, emotionally positive, and oriented to novelty. In contrast, all negative temperamental qualities, i.e. activity, negative emotionality, and inhibition, resulted associated with decreased self-efficacy for mothers only. Fathers reported a unique positive correlation (p < .01) between self-efficacy and social orientation.

Two multiple regressions, for fathers and mothers separately, were conducted to evaluate if PSOC scores and QUIT measures predicted the SEPTI total scores. Using the stepwise method, it was found that a model with two factors for fathers and three factors for mothers explain significant amounts of the variance in the SEPTI total score: $F(2, 112) = 50.72, p < .001, R^2_{Adj} = .47$ and $F(3, 290) = 71.94, p < .001, R^2_{Adj} = .42$ for fathers and mothers, respectively. For both fathers and mothers, PSOC-satisfaction [$\beta = .52, t(112) = 7.25, p < .001$ and $\beta = .47, t(290) = 10.13, p < .001$, respectively] and PSOC-efficacy [$\beta = .33, t(112) = 4.64, p < .001$ and $\beta = .26, t(290) = 5.63, p < .001$, respectively] predicted SEPTI total score. However, only for mothers, QUIT-social orientation also significantly predicted SEPTI total score ($\beta = .18, t(290) = 3.86, p < .001$).

Additional regression analyses were conducted to test the possibility that domain-specific self-efficacy (SEPTI) was a stronger predictor of general PSE (PSOC total score, summing satisfaction, and efficacy scores). The step-wise regressions analysis provided two models (separate for fathers and mothers) explaining wider amounts of variance in the PSOC scores: for fathers, a two-factor model resulted [$F(2, 112) = 58.38, p < .001, R^2_{Adj} = .50$], and for mothers, a three-factor model resulted [$F(3, 290) = 90.26, p < .001, R^2_{Adj} = .48$].

For fathers, the highest relation was observed for SEPTI measures [$\beta = .66, t(112) = 9.74, p < .001$], followed by QUIT-attention scores [$\beta = .19, t(290) = 2.84, p = .005$]. For mothers, the highest relation resulted for SEPTI measures [$\beta = .54, t(290) = 12.22, p < .001$], followed by QUIT-negative emotionality [$\beta = -.21, t(290) = -4.32, p < .001$] and QUIT-inhibition [$\beta = -.14, t(290) = -2.81, p = .005$] as negative predictors of PSOC scores.

In conclusion, for mothers we found a great weight of child's negative characteristics (negative emotionality and inhibition) that negatively impacts PSE, whereas for fathers only attention predicted satisfaction and efficacy in parental role. These findings are interesting considering that most empirical studies neglected mother-father differences. However, Solmeyer and Freinberg [70] did not find differences in the associations between parental adjustment and

infant's temperament (from 4–8 to 13 months old), and that coparenting relationship (the mutual support for mothers and fathers in their role) buffers the impact of difficult temperament on PSE. Other researches in the future could deepen the differences between the two parents in self-efficacy beliefs even considering other factors (as stress, depression, coparenting, or marital perceived support) that can impact PSE.

Moreover, parents' evaluations of their own abilities in specific situations (SEPTI) seem to capture a set of beliefs that in turn shapes the more general self-confidence and satisfaction in the parental role (PSOC). On the contrary, general domain measures (PSOC) resulted less robust in predicting self-efficacy in concrete domains (SEPTI) and they may operate as an inferior predictor of parental competence. However, Coleman and Karraker [22] remind us that global measures of self-efficacy are also useful in assessing parenting self-perceptions, because they are “predictors of broader construed parental qualities, such as sensitivity, warmth, concern to the child development, etc.” (p. 53). Researchers engaged in this field suggest adopting a flexible or “open-minded” approach [22], first at all checking robust measures well anchored to the Bandurian theory. A multi-level approach of measurement in the same study (i.e., a general domain- and task-specific level) could also be useful.

Furthermore, all measures for assessing PSE are self-reported, therefore potentially biased by social desirability. Jones and Prinz ([42], p. 360) observe that this distortion can occur in two direction: some respondents “may inflate the reported PSE beyond their experienced level of confidence” to satisfy an image of “good parent,” but conversely “parents with high levels of confidence may lower their reported PSE as an act of humility.” However, as Bandura et al. [8] remind us, self-reports necessary remain the only possible search strategy, because self-beliefs are private cognitive events and they are accessible only to the individual who holds those beliefs.

Finally, most of studies are correlational and PSE is not to be considered as a stable personality trait, which may explain both the parent's behaviors and the developmental outcomes in children. Multiple factors may influence PSE such as child temperament qualities, parent individual variables (such as gender, grade of instruction, experienced stress, etc.), or family factors (marital support, coparenting, etc.); therefore assuming a causal perspective of influence moving from observed associations may be a mistake. Alternatively, Prinz and Jones [42] suggest two promising strategies for research: (a) longitudinal design, which allows to evaluate the stability or developmental course of PSE and its links with influencing factors (such as child socio-emotional adjustment [76]); (b) experimental designs in which factors that may impact PSE are manipulated (for example, parent training enhancing parental practices or modifying perception of control on child misbehaviors). The studies presented in subsequent sections offer some examples of these two alternative strategies for studying self-efficacy in family and child adjustment.

3. Becoming parent: infant-caring and self-efficacy development

Parental self-efficacy, as judgments or beliefs about individual's capabilities to organize and positively perform a set of tasks related to parenting, is not a fixed personality trait, but a

construct that is dynamically influenced by parent's and child's variables and by their unique history of interactions.

Coleman and Karraker [22], following Bandura [6], remind us that there are four main processes explaining the growth of personal beliefs of efficacy (**Figure 1**): (a) *vicarious experiences* (i.e., watching others achieving outcomes in childrearing) including his/her childhood experiences. Every adult, before becoming parent, in turn learned from others what it means to be a parent (not only the positive models of role but also the mistakes that should not be repeated). Attachment theorists call "working models" these internal representations of patterns of childrearing that parents bring in their experience with their own children. (b) *Verbal persuasion*, through positive feedbacks, realistic messages, and support from significant others. This source of PSE includes also the cultural values and expectations that the community system transmits about what is a "competent parent." However, individuals are not passive recipients of cultural information, but they also filter and reprocess extern messages in agreement with their own beliefs systems. (c) Changes in *physiological/emotional arousal* experienced in a given situation or anticipating the performance of a task. The emotions accompanying the positive outcomes in the care of children (for example, satisfaction for school achievements) make the parent confident to effectively face similar challenges in the future. On the contrary, negative affective states (such as anxiety, guilt, etc.) and/or elevate stress levels experienced in caregiving situations can threaten the trust of the parent (particularly with "difficult" or demanding children, *see below*). This component is essential in motivational processes, influencing the task-related goals referring parenting or the avoidance of situations when stress or disappointment following failures are expected. (d) The *direct experiences* with the children, which are considered the most powerful source of competence information. Feedbacks parents receive in daily interactions with children shape the perceptions to possess the abilities to deal with effectively as a parent. However, it surprising how scarce are longitudinal researches studying the course and developmental trajectories of PSE [43, 61, 76], but studies in this area are growing.

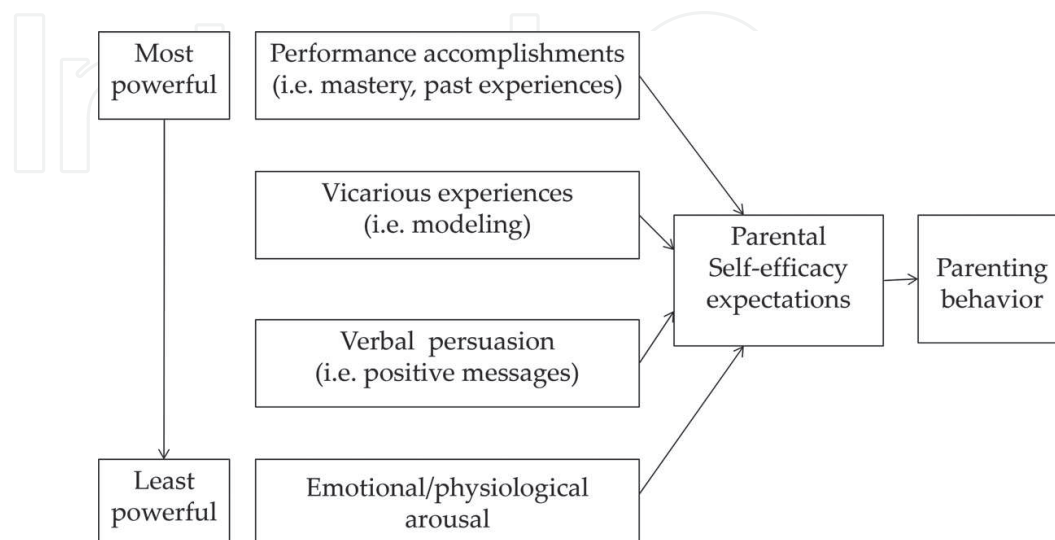


Figure 1. Parenting self-efficacy sources according to Bandura's theory [6] (adapted from Pennel et al. [59]).

3.1. Study 2

Bartolo et al. [9] evaluated by a short-term longitudinal design (from the last trimester of the pregnancy to the 6th month from child’s birth) the parental and couple adjustment during the transition to parenthood. The research interest was also addressed to gender differences, since literature has a great emphasis on maternal consequences (particularly anxiety, stress, and depressed mood) during the intense newborn care, while little is known about paternal adjustment following this crucial transition of family life [60]. Nineteen couples of parents completed at three points (1, 3 and 6 months after child’s birth) the PSOC [41] for assessing PSE, and the *Parenting Stress Index* (PSI-SF; [1]) for measuring caregiver’s stress as a result of child’s characteristics (i.e., difficult temperament), parental variables (i.e., anxiety or low perceived support), and parent-child reciprocal interactions. Other measures related to couple adjustment (cohesion, intimacy, etc.) were also administered before childbirth (but they are not discussed here). The most interesting results are the individual differences in parents’ adjustment trajectories. Parental stress (see **Figure 2**) dramatically increased in the 3rd month after birth [phases effects $F(2, 72) = 17.22, p < .001$]. Mothers reported higher stress levels [gender effect $F(2, 36) = 11.67, p = .002$], with a different trend in comparison to fathers: for men, stress perceived at the 6th month of the baby returns to initial baseline level; for women, PSI scores continue to be higher than baseline reports [interaction gender \times phases $F(2, 72) = 3.90, p = .03$]. Mothers and fathers did not differ in self-efficacy scores (see **Figure 3**), and on the 3rd month after the birth, a sharp decline of PSE is observed for both parents [only the phase effect was significant, $F(2, 72) = 12.28, p < .001$].

These findings appear in contrast with other studies (e.g., [61]) showing an increased self-efficacy 3 months after birth. Some methodological aspects could explain these different results. Our study adopted a domain measure (PSOC), whereas Porter and Hsu [61] chose a task-

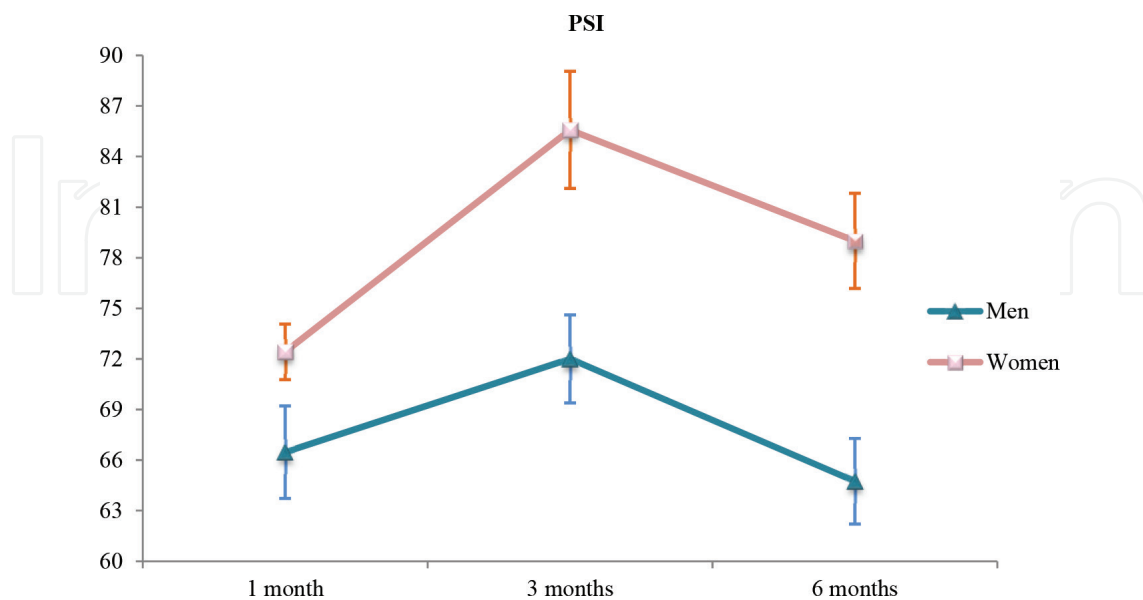


Figure 2. Trend of the parental stress indexes from T₂ to T₄. Error bars represent standard errors.

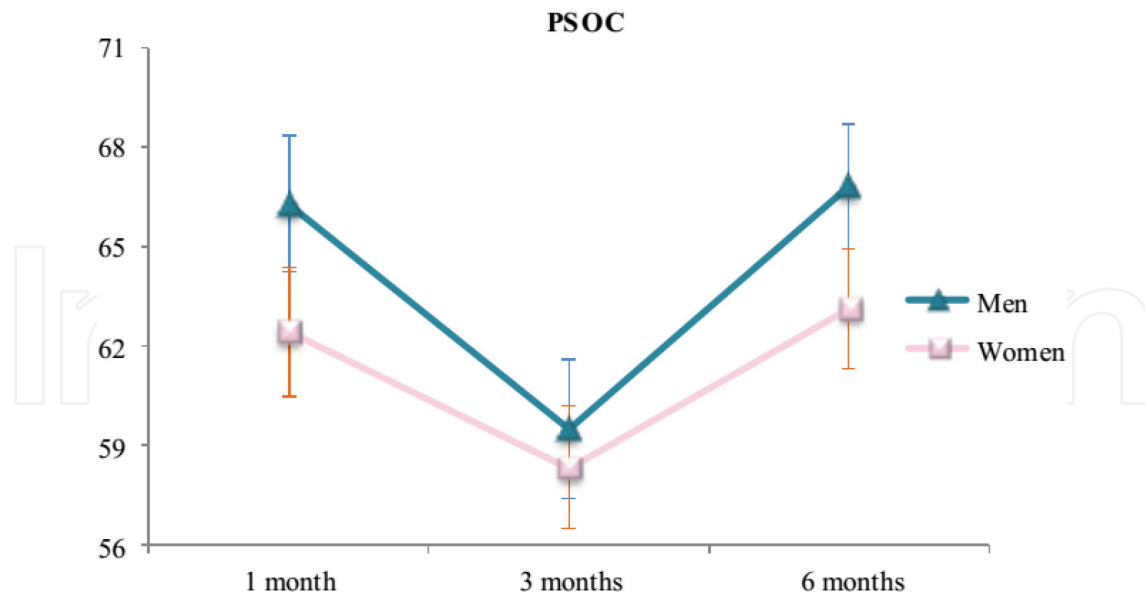


Figure 3. Trends of the parental self-efficacy scores from T_2 to T_4 . Error bars represent standard errors.

specific approach more suitable to assess changes in self-confidence related to infant care (as interpreting baby signals or performing nurturing routines). Other variables, as parental perception of infant temperament (also assessed in our study, but not discussed here) could explain these findings (parents who rated negative temperament qualities had lower self-efficacy; cf. [72]). In our data, PSE begins to grow after third month, when infants generally begin to regulate their physiological routines (i.e., breastfeeding) and show increased social interactions. These changes in infant's behaviors interact with parents' skills and reassure their efforts, even if mothers in our sample remained more fatigued and stressed than fathers. Together with infant's characteristics, other factors influencing PSE in the transition to parenthood are maternal emotional status (particularly, post-partum depression) and perceived support from the spouse or extended family in infant caring [5]. Bandura [7] retains that social support may affect self-efficacy in women through modeling processes (i.e., observing significant others performing parenting tasks), because watching others acting successfully shapes expectations for maternal role. In addition, encouragement and verbal persuasion maintain self-efficacy beliefs when others reinforce maternal efforts and believe in her capabilities.

Verhage et al. [74] conducted an interesting experimental study where they manipulated in a simulated situation the success or failure in a child-rearing task. First-time pregnant women listened to audio-recorded baby cries in a baseline situation, then in an easy-to-soothe condition (baby's cry stopped after 15–20s, mother received 80% of positive feedback for soothing), and finally in a difficult-to-soothe condition (cry termination after 30 s, 20% of positive soothing). Repeated measures showed an increase in maternal self-efficacy levels after easy task, whereas PSE decreased after difficult-to-soothe task. Furthermore, women who reported negative perceptions of baby cry also reported the larger decreases in self-efficacy. Some practical suggestions derive from these findings: parents should be reassured that difficulties they face are typical in new parenthood and "try to persevere in soothing behaviors, because their ultimate success will

boost their self-efficacy. Furthermore, both family and health care practitioners should pay close attention to the way mothers speak about their infants and their mothering capabilities. When declines in positive affect of mothers regarding their infants are noted, parenting support may be indicated to prevent a possible negative cascade in parenting" ([74], p. 261).

Contrary to expectations, premature birth (before 35 weeks of pregnancy, or before 32 for very premature newborns) is a condition that does not seem to affect PSE, but other parental factors as depressive mood, anxiety, and stress [58]. Preterm infants appear vulnerable to parents, especially during hospitalization and intensive medical care; in addition, they are less responsive in parent-child interactions and rewarding in early social interactions. Particularly with high-risk preterm infants, parents experience distress and fear for health, future disability, or developmental delays [44]. Studies report no differences between mothers of preterm and full-term infants when distress and self-efficacy were assessed at 4 and 14 months [35]. Pennell et al. [58] conclude that, after leaving the hospital, probably parent's concerns focus on child-rearing tasks common to other parents: in fact PSE does not differ among mothers of very preterm, preterm, and full-term infants and it mediates the impact of psychological symptoms (depression, anxiety, and tension/stress) on parental competence.

Finally, some authors (e.g., [17, 78]) speculate that PSE precedes in a certain extent the birth of the child. Pregnancy could be considered as an anticipatory phase of the parenting role: future parents could imagine themselves in infant caring situations and estimate how well they expect to perform in future circumstances as bathing or comforting the newborn. Longitudinal studies reported that strong beliefs in caregiving efficacy, as measured 3 months before the birth of the first child, predict maternal attachment style, her emotional state, and better mother-child adjustment [79]. Recently, Verhage et al. [75] found that maternal self-efficacy measured during pregnancy partially influences the perception of negative temperamental qualities in newborn. This is an interesting finding because temperament is generally considered a child's factor influencing PSE and child-rearing experiences during the first-year life. Therefore, pre-pregnancy education on self-efficacy, parenthood, and newborn's needs can be an effective intervention strategy for preparing new parent in their role, even for adolescents disadvantaged (in poverty, single parents, with low family support, etc.) who are at risks for teen pregnancies, poor parenting, and infant's neglect [53].

4. Parental self-confidence with "difficult children"

According to Bandura [83], in stressful situations, individuals with low self-efficacy beliefs internalize failure, give up easier, and experience a decrease in role satisfaction. Considering parental role, these stressful situations are often represented by children with particular needs, that is, difficult temperamental qualities, ADHD or severe oppositional-deviant behaviors, autism, and developmental disabilities [22].

Most of the child's individual qualities appear during infancy and early childhood, when parents are required the most intense efforts to caring, comfort, stimulate, and then discipline their

children. Among child's factors influencing parent-child relationships [10], temperament is that distinctive profile of feelings and behaviors that originate in the child's biology and appear early in development [47]. Temperament permeates the parent-child system with a circular process. Infants who exhibit "difficult temperament," that is, negative reactivity (i.e., persistent crying), low level of social orienting, and approach to environment (i.e., fear) can lead mothers to feel increased stress that, in turn, leads to inadequate parenting as lower emotional sensitivity and harshness [56]. Since these parental reactive practices generally do not placate child's negative behaviors, parents become more hopeless and in the long term they develop low feelings of self-efficacy, which maintain ineffective parenting, as lower maternal sensitivity [73]. When parents perceive their child to have difficult temperament, they tend to report less satisfying experiences, decreased self-efficacy, and higher stress than do parents of temperamentally easier children [84]. Still, high parental self-efficacy is a crucial mediational variable that attenuates the effects of a "difficult temperament" perception on parental competence [72].

On the contrary, children who display characteristics perceived as positive, like sociability (the degree of interest and adaptability to people) and orientation to the novelty (i.e., attention and curiosity for changes in the environment) often have enjoyable and effective interactions with their parents, who in turn report high self-efficacy [23].

Having a child with behavioral problems (disobedience, impulsivity, moderate to severe aggression, etc.) is considered another stressor that impacts family adjustment and PSE [76]. In children with oppositional defiant disorder (ODD) negativistic, hostile and defiant behaviors are persistent. Children often refuse or actively defy adult's requests, lose temper, have conflicts, appear angry or resentful, argue and blame others for their mistakes, and exacerbate parental negative emotions (anger, helplessness, etc.) and discipline attempts. Moving from classical observations by Patterson [57], several studies report a pattern of conflicting or "coercive" interchanges characterized by increasing the use of inconsistent parenting practices (i.e., physical punishment of child's minor provocations, negative reinforcement of aggressions) that are partly responsible for maintaining the child's misbehaviors. Mostly parents are exasperated for repeated conflicting episodes, often they feel responsible for failures in regulating child's behavior. This history of failures in parent-child interactions is a basic process for the development of low parental self-efficacy beliefs: studies report that low PSE among mothers of children diagnosed with conduct problems was associated with higher ratings of children's disruptive behaviors [66]. Interestingly, higher maternal PSE assessed when children at risk for early conduct problems were aged 2 years predicted lower incidence of conduct problems at age 4; however, depression mediated the link between PSE and children's behaviors, weakening maternal confidence on parenting skills [59].

Children with ADHD present inattention and/or excessive hyperactivity that negatively influence their interpersonal interactions across different contexts (primarily, at home, school and with peers). A child with ADHD frequently changes activity, forgets to do a planned task, appears distracted or refuses parent's commands, and often is worried and irritated with siblings (or peers) increasing parental reactivity in the form of verbal directivity, disapproval, lack of affection and punishment. This poor and negative parenting is common in families

of children with ADHD and comorbid externalizing disorders [16, 38]. Parents also report increased stress level, more negative interchanges with other children, lower PSE and family satisfaction if compared to non-clinical families [85, 27]. Interestingly, studies show that the developmental course of PSE with ADHD children is inverse: in fact, whereas in parents of children without behavioral problems self-efficacy increases as the child grows, in family with behaviorally difficult children during school-ages (8.4 years old) PSE is lower than preschool period [51]. Parents also develop a low perception of control over child's behaviors [19], a dysfunctional attribution style in which parents assign the reasons of failure of difficult interactions to low self-control and high child-control [13, 14]. In parents of ADHD children, low perceived control resulted associated with increments of inconsistent and punitive discipline [14]. Other studies report that parenting stress and reduced PSE are linked to other sources in addition to the direct parent-child interactions, for example, interactions with school teachers or with parents of the child's friends; in fact, these other adults being unaware of the genetic and neurological causes of ADHD often attribute child's impairment at school and socially inappropriate behaviors to inadequate parenting skills [33]. However, equipping the parents with more adequate skills to regulate and manage child's behaviors is a very effective form of treatment (*see* the concluding paragraph), especially if parent recognize that improvements in ADHD symptoms are linked to his/her own efforts and behaviors.

Finally, parents of disabled children often report negative consequences (stress, anxiety/depression, guilt, fatigue, etc.) due the need to cope with their child's special needs. These consequences appear linked not so much to child's delay (i.e., difficulty in acquiring language, basic self-help, or social skills) as to disruptive and atypical behaviors [36]. Particularly in children with autistic spectrum disorders (ASD), severity of symptoms (socially inappropriate, repetitive and stereotyped behaviors) increases mother's perceived stress that, in turn, impacts PSE increasing maternal feelings of anxiety/depression [62]. In other words, decreased self-efficacy mediated the relationship between parenting stress and increased maternal symptoms. Furthermore, PSE moderates the impacts of child's problems on anxiety: fathers (but not mothers) with high self-efficacy resulted less anxious than those with low self-efficacy when children exhibited high incidence of behavior problems [63].

Parental self-efficacy beliefs, together with emotional support perceived by parents [21] and family hardiness [77], result a crucial subjective resource that can protect parents from family adversities and help them to cope with the chronic developmental difficulties of their children.

5. Self-efficacy in family context

The conceptual model of Belsky [10] poses that parenting behaviors are influenced by parent's characteristics (personality, health, personal history, etc.), child's characteristics (temperament, behavioral competence, health, etc.), and other interpersonal and contextual factors influencing child development. The model focuses on parental behaviors, highlighting primarily the bidirectionality of parent-child influence (i.e., difficult temperament negatively impacts parenting and it is influenced by parental care behaviors). Belsky's interest is not

only for parental practices (i.e., low warmth, harsh discipline, etc.) but also for cognitive factors (for example, mother's affection for her husband) that can be linked to parenting behaviors (the mother warmth, as embracing the baby). The model also includes contextual factors external to the family (as the social network or the parent's work) and interpersonal variables inside the family system (marital relationship, cohesion, communication, etc.) that could work as a source of stress or support for the parent. Several studies support the assumption of Belsky's process model for comprehending parenting quality. Among interpersonal factors, marital conflict resulted linked to distress and ineffective parenting (as punitive discipline, low involvement and affection), particularly when open disagreements between parents are related to child-rearing issues [15]. Parental disagreement on discipline management is related to increased stress and more emotional and behavioral problems in children [12]. Parenting stress and marital functioning (the latter assessed as satisfaction for spouse and family life) predicted PSE in parents of toddlers [68]. Other studies evidence that criticism coming from extended family (i.e., woman's own mother) affects mother's well-being, whereas marital support reduces parenting stress which, in turn, affects PSE [71].

In contrast, marital positive qualities and coparenting (when partners share and support each other in matters related to parenting) are predictive to high PSE [52]. However, there are not many studies investigating self-efficacy in family context, especially because family is a complex system where relationships are hardly interdependent and adults live simultaneously their roles (both spouses and parents). Consequently, it is necessary to differentiate these familial relationships and to capture the feeling of competence derived from different demands and roles.

Caprara et al. [20] proposed the marital self-efficacy (MSE) construct as a distinct system of beliefs focusing on typical situations that couples face in maintaining a satisfactory marital relationship and effectively managing family challenges. The MSE reflects the spouses' confidence to be able to communicate openly, to confide in each other, to provide the necessary support, manage the family routines, and find agreement about child-rearing. These beliefs contribute to family adjustment, since higher marital MSE resulted positively associated with several variables as couple's satisfaction and communication, marital support, non-aggressive management of conflicts, and effective monitoring of children's behaviors [20]. This dyadic couple efficacy, together with the collective sense of *family efficacy* (perceived capabilities of family to functioning as a whole, i.e., consensus in decision-making, coping together with adversities, etc.), can be seen as a factor mitigating family stress and difficulties and also influencing the adolescent's well-being [8].

5.1. Study 3

The role of MSE in relation to parental adjustment (self-efficacy and perceived stress) remains relatively not investigated by literature, so we explored the interrelationships between scales assessing different familial self-efficacy constructs. We hypothesized positive associations between self-efficacy in marital (MSE) and parenting (PSE) relationships but negative associations between parental stress and self-efficacy in both domains (marital and parental relationships). In addition, we explored the relative contribution of child's characteristics, assuming

that difficulty to manage children could act as a source of parental stress and decreased marital and parental self-efficacy.

A sample of 106 married and cohabiting parents (equally split by gender) independently compiled the cited SEPTI [23], and the marital self-efficacy (MSE) scale, the self-report questionnaire (15 items) developed by Caprara et al. [20] for assessing efficacy beliefs of the couple members. Stress levels in parent-child relationship were assessed by *Parenting Stress Index* (PSI-SF; [1]). Each parent also compiled for the child (age range 5–12 years old) the *Strength and Difficulties Questionnaire* (SDQ; [37]), a brief questionnaire describing child’s functioning through prosocial behavior subscale and behavioral/emotional problem subscales (hyperactivity, poor peer relations, etc.). The results of correlational analysis (Pearson’s r) are presented in **Figures 4** and **5**. Since no gender differences emerged ($ps > .05$) in marital (MSE, $M_{\text{fathers}} = 79.13$, $SD = 14.6$; $M_{\text{mothers}} = 80.94$, $SD = 13.5$) and parenting self-efficacy (SEPTI, $M_{\text{fathers}} = 166.19$, $SD = 26.3$; $M_{\text{mothers}} = 170.22$, $SD = 21.4$; PSI, $M_{\text{fathers}} = 70.73$, $SD = 19.4$; $M_{\text{mothers}} = 70.11$, $SD = 16.3$), we excluded parent’s gender in the subsequent statistical analysis. Robust positive correlations ($p < .001$) emerged between the two domains of parental and marital self-efficacy, suggesting that stronger is the mutual confidence of the spousal partners, more efficacious each parent feels in managing parent-child relationships. Perceived stress is a condition negatively associated ($p < .001$) with both domains of marital and parental efficacy. In turn, stress level is linked to child’s behavioral characteristics: it decreases in the presence of elevate child’s positive social qualities, but it increases if the more frequent and severe are child’s behavioral problems. Furthermore, higher levels of marital self-efficacy (MSE) and parental self-efficacy (SEPTI) result directly linked ($p < .01$) to lower frequency of children behavioral and emotional problems (**Figures 4** and **5**).

These findings are promising considering the lack of studies that explore self-efficacy beliefs arising from different roles in the ecology of family. The marital and parenting beliefs are different domains of personal expectances, but they are also interdependent and linked to the child’s behavioral outcomes. Several studies support the association between self-efficacy

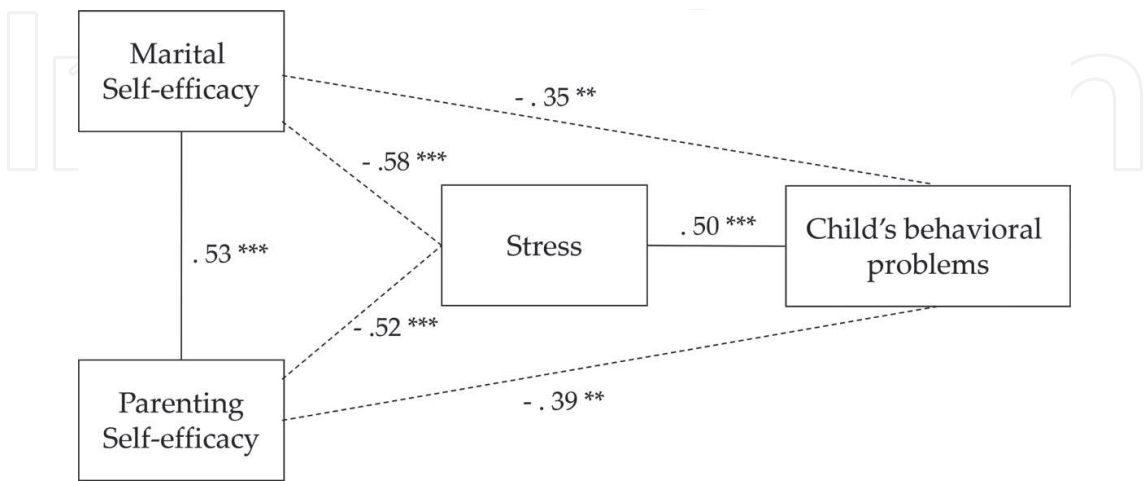


Figure 4. Correlation coefficients (r) between marital and parenting self-efficacy, stress, and *child’s behavioral problems* ($^{**}p < .01$, $^{***}p < .001$; two-tailed).

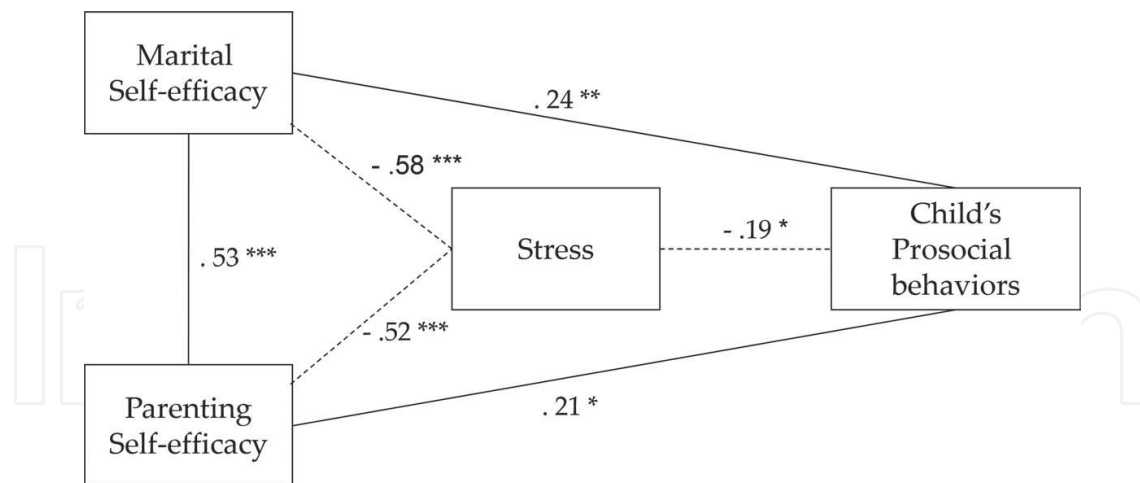


Figure 5. Correlation coefficients (r) between marital and parenting self-efficacy, stress, and *child's prosocial behaviors* (* $p < .05$, ** $p < .01$, *** $p < .001$; two-tailed).

beliefs and child's outcomes, but they are limited to the parental domain: for example, in mothers of school-aged children, higher PSE resulted linked to less negative emotionality and more sociable behaviors [23], whereas parents of adolescents with fewer behavioral problems reported higher PSE levels. Jones and Prinz [42] remind us that PSE could be considered both as directly influencing child's outcomes (such as socio-emotional adjustment, parent-child compliance, and school achievement and learning), as well as indirectly through competent parenting (e.g., warmth, coherence in discipline strategies, and involvement). In other words, the influence of PSE on child's developmental outcomes seems to be mediated by parental practices. Less is known about MSE, but these data suggest that high couple self-efficacy beliefs could enable parents to cope together with stressful situations and to maintain a positive parenting supporting children's adjustment and self-regulation.

However, there are some limitations in this study, first of all the small convenience sample and the use of parent's reports to assess children's behavioral problems. Even if parent's rating of child's behaviors is a common assessment strategy in developmental and clinical studies, we must assume prudently our findings and replicate them in future with other larger samples and independent measures (i.e., teacher's reports). In fact, parents with lower domain-specific self-efficacy (discipline) tend to perceive the behavior problems of their school-aged children as more serious than parents with higher PSE do [26]. Therefore, parental self-efficacy levels could represent a potential source of distortion.

Second, the study is correlational; therefore, it should be replicated with the scope to better explore the role of other factors that potentially could mediate the associations between self-efficacy beliefs and children's adjustment. Although data show that both domains of self-efficacy (i.e., marital and parental beliefs) are linked to children's outcomes, we do not know how these beliefs differentially are associated to parental competence. Because our exploratory study did not included objective measures of parental practices, we do not know to what extent they are involved and how they potentially mediate the link between beliefs systems (MSE or/and PSE) and children's outcomes. Self-efficacy beliefs could be assumed

as variables that indirectly affect child's behaviors through parenting practices [42], but researches including MSE as a study variable are scarce. Dumka et al. [29] employed the near construct of parenting alliance (maintaining constructive communication, sharing child-rearing tasks and responsibilities, etc.) for exploring how couple relationship contributes to adolescent conduct problems. They found that parenting alliance indirectly affects adolescent's outcomes through self-efficacy. Both low maternal self-efficacy and low parental alliance were directly related to adolescent's problems and the two maternal constructs were correlated. High parenting alliance also resulted a strong predictor of maternal self-efficacy. These findings seem to suggest that marital relationship works as an antecedent for parenting self-efficacy. Again, this is coherent with Bandura [7] who retains that a supportive relationship with other significant (as his/her own spouse) is a potential source of feedback of competence and an antecedent for PSE.

6. Conclusions and suggestions for family-based interventions

There are several reasons for incorporating PSE as a core component within family-based interventions and as a variable of applied research projects. Bandura [7] emphasizes that self-efficacy is not a fixed personality trait, but a dynamic process modified by individual's performance mastery in concrete situations and other influencing factors (such as modeling, social persuasion, coping, and positive emotions). Therefore, family supporting interventions could put in equal emphasis not only changes in overt parental behaviors (i.e., altering coercive discipline) but also in parents' confidence to effectively manage parenting challenges. Following these suggestions, a growing number of empirically based programs assumed PSE as outcomes measure, beside the changes traditionally documented in both parental behaviors and children's adjustment [28].

Most of these programs are behavioral parent trainings aimed to improve stressful family interactions with "difficult children" (i.e., autistic, ADHD, non-compliant children) by teaching parents appropriate discipline techniques. Studies confirm that participation in parent training is related to changes in PSE and to significant decreases in children behavioral problems [66]. Higher parental self-efficacy, measured before the start of the intervention, is also predictive to better outcomes in parenting skills and improvements in child's problems [46].

6.1. Study 4

We conducted a behavioral parent training (BPT) with parents (10 mothers and 7 fathers) of school-aged children (10 males, main age 9.5 years old, range 9–11) in which parental beliefs and stress levels were included as intervention outcomes [16]. The ADHD profile of children was assessed by the Conner's Parent Rating Scales (CPR-S, [25]), the severity of non-compliance behaviors through the Home Situations Questionnaire [31]. The measurements for parents' adjustment and changes following BPT were: the perceived stress within the parent-child system (PSI-SF; [1]), the perception of control over child's behaviors by Parent Attribution Test (PAT; [19]), and self-efficacy (PSOC; [41]). Positive (involvement and warmth) and negative (inconsistent discipline and punishment) parenting practices were assessed by the Alabama

Parenting Questionnaire (APQ; [34]). All measures were independently collected for mothers and fathers at baseline (T_1) and post-treatment (T_2). Correlational analysis (Pearson's coefficient) at T_1 evidenced robust positive associations between severity of ADHD symptoms and both stress levels ($r = .61, p = .04$) and inconsistent discipline ($r = .65, p = .02$); ADHD symptoms also correlated with decreasing in PSE ($r = -.60, p = .03$) and in positive parenting ($r = -.62, p = .02$). Furthermore, more frequent non-compliant behaviors, lower was PSE ($r = -.70, p < .001$) and inconsistent discipline ($r = -.62, p = .02$). Parents participated on a group program (10 sessions) that began with an introductory session on the causes of ADHD and how it interferes in family life (parent's stress and negative emotions, maladaptive attributions, coercive interactions, siblings' conflicts, etc.). The further sessions (every 2 weeks, except the last after a month) were focused on behavioral techniques for enhancing desirable child's behaviors (positive reinforcement, rules, and appropriate commands), non aversive techniques for managing minor problems (i.e., non compliance), and time-out for severe misbehaviors. Home charts (Antecedent-Behavior-Consequences schedules for recording parent-child interactions) and homeworks (i.e., practicing with ignoring technique) were assigned for stimulating parents to implement acquired skills at home or to write down the feelings and cognitions they experienced (i.e., attributions for child's behaviors).

At the beginning of new session, parents discussed the successes or obstacles they run implementing the new techniques at home. These group exchanges are crucial in modifying parent's feeling of competence, via mechanisms as reciprocal support and reinforcement, modeling from other parents and suggestions for persevering in face of difficulties. Particularly, the verbal persuasion coming from other parents (who experience similar conflicts and stressful interactions with their ADHD child) works as a powerful source influencing PSE, because it is much more credible than feedbacks and verbal persuasion by the group trainer. These mechanisms, together with the mastery experienced at home when behavioral strategies are implemented, create the positive conditions for increasing PSE [7]. In the session focused on problem solving parents independently try how to manage new difficult situations (for example, sibling conflicts); finally a follow-up session is useful for monitoring the maintenance of improvements in child's behaviors.

Post-treatment measures (T_2) indicate a significant decrease in severity of ADHD symptoms [$M_{T_1} = 24.42, SD = 6.85$ vs. $M_{T_2} = 19.75, SD = 6.06, t(9) = 2.47, p < .05$] and non-compliance ratings [$M_{T_1} = 12.11, SD = 3.10$ vs. $M_{T_2} = 8.56, SD = 3.13, t(9) = 3.41, p < .01$]. Parents reported lower stress levels [$M_{T_1} = 100.16, SD = 25.92$ vs. $M_{T_2} = 94.58, SD = 25.68, t(16) = 2.13, p < .05$] and punitive discipline [$M_{T_1} = 6.11, SD = 1.73$ vs. $M_{T_2} = 4.88, SD = 1.49, t(16) = 3.11, p < .01$]. We also observed a significant increase of sense of competence scores [$M_{T_1} = 59.00, SD = 13.56$ vs. $M_{T_2} = 63.12, SD = 10.75, t(16) = -.771, p < .05$], while decreased the number of parents with a low sense of perceived control over interactions. BPT produced positive changes in both child's ADHD symptoms and parental reactive responses to child's behaviors (parental stress and punishment). In addition, parents felt more efficacious and positive in their role and gained a better perception of power in influencing the success of child-rearing situations. In other words, parents discovered that some aspects of child's misbehaviors can be influenced by their own parenting skills (that is, effective behavioral tactics), and so acquired confidence in their role. This study, consistent with other clinical applications [46], supports the notion that BPT can be beneficial for parent's well-being and helps them to cope with challenges associated to child's behavioral

problems and ADHD. High sense of efficacy must be seen as a factor maintaining effects of treatment. According to social learning theory [6], self-efficacy is a power factor influencing individual's effort and longer persistence in future tasks. For parents of difficult-to-manage children, this means to maintain positive expectancies of successes and to persist in applying effective parenting practices that, in turn, maintain child's socially desirable behaviors [45].

Johnston et al. [40] suggest another important rationale for including the assessment of PSE in parent training: parental beliefs result an *antecedent* of treatment outcomes. Mothers with higher confidence on their parenting skills have more positive expectations that change is possible, and they report greater success in acquiring behavioral strategies for managing child's misbehaviors during parent training. As a consequence, professionals should not neglect that PSE is a key motivational variable for intervention processes. Those parents with low self-efficacy could benefit from a brief pre-intervention session to gain a more optimistic expectation of BPT: "part of success of this program may have been achieved through increases sense of efficacy and confidence in their ability to carry out the changes required in BPT program" ([40], p. 501).

Further applied researches reinforce the idea that self-efficacy can be a core target of supportive interventions for families. Enhancing parental self-efficacy can act as a "buffer," that is, a variable mitigating the impact of adverse conditions on children, as such severe illness [18], parent's divorce, and socio-economic disadvantage [2]. Interventions often assume the form of home-visiting programs, since practitioners go to parents in their home in order to assess family needs and offer a wide range of support: informational (e.g., helping parents to find health services in the community), practical (e.g., volunteers or babysitting), and particularly emotional (e.g., listening to the parent's concerns). Other programs include parents as a resource in the treatment of child's emotional [32] and health problems [49]: even in these cases PSE is resulted a predictor of positive outcomes.

Finally, interventions focusing on PSE have been extended from small group of families with children "at risk" (behavioral, emotional or health problems) to the large population. These programs more often assume the form of preventative strategy of intervention since they are devoted to support parents in the early years (preferably, in the transition to parenthood) empowering their skills, the family well-being, and enhancing the environment where children live. An important and well-known example of this promising approach is the *Triple P-Positive Parenting Program* developed by Sanders [64]. This program realizes a shift toward a community level of intervention with the scope of assuring support to parents and safe home environment to children. With flexible methods (web information, brief parent advices, educational groups, etc.) parents improve their positive practices and self-efficacy in managing common parenting tasks (e.g., bathing or feeding the infant, helping child with homework, disciplining without spanking, etc.). More intensive parent training (i.e., home visiting) is programmed for families of "difficult children" (disabilities, ADHD, conduct disorders, etc.) or parents vulnerable for problems that negatively impact their parenting skills (i.e., depression, marital conflicts, divorce, etc.). Findings from several implementations of *Triple P-Positive Parenting Program* support the effectiveness of this systematic and preventative approach: a meta-analysis of 101 studies (more than 16,000 families) reports significant positive effects on children's behavioral and socio-emotional adjustment, adequate parenting skills, and self-efficacy [64].

In conclusion, practitioners would follow some suggestions when they organize interventions supporting parents. These suggestions derive from a recent meta-analysis [80] on the impact of group-based interventions for parents of preschool children on parental self-efficacy. The components of the programs related to better post-treatment outcomes (that is, increase in parental self-efficacy measures) are: (a) empirically based interventions, with active parents' involvement following a manual protocol for adherence to treatment. Most of the programs were behavioral or cognitive-behavioral interventions inspired to Sanders's Triple P-Positive Program, with some exceptions, for example programs focused on child's temperament [69]. (b) Levels of PSE measurement (task-specific or general measures) and magnitude of the change following the group intervention. Effect sizes (Cohen's *d*) were medium to large (0.42–1.25) when task-specific measures were employed, but small to medium (0.26–0.74) with general measures of PSE. (c) Length of interventions, ranging from brief group interventions (in some cases, single or few sessions) to programs with 15 sessions. A time-limited intervention with few sessions resulted efficacious in increasing PSE when the program was focused on specific child-rearing problems (e.g., mealtimes). However, regardless of their length, the efficacy of interventions depended on the presence of the factors that Bandura [6] identified as crucial for the development of self-efficacy: previous experiences, modeling by others, verbal persuasion, and physical and psychological well-being. (d) Father's participation to group program, even if the studies involving both parents were very scarce. Most studies, indeed, reported only maternal self-efficacy measures. On this point, Murdock [55] has recently evidenced that the most common measures of task-specific self-efficacy are constructed thinking to maternal role, whereas differentiating typical tasks for mothers and fathers could be a more valid strategy of measurement. This is a challenging area for further researches, even considering the positive influence of father's involvement and supportive coparenting on parent's well-being and children's adjustment [29, 52].

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References

- [1] Abidin RR. Parenting Stress Index, Manual. 3rd ed. Charlottesville, VA: Pediatric Psychology Press; 1995
- [2] Ardelt M, Eccles JS. Effects of mothers' parental efficacy and promotive parenting strategies on inner-city youth. *Journal of Family Issues*. 2001;**22**:944-972
- [3] Axia G. QUIT: Questionari italiani del temperamento [Italian Questionnaires of Temperament]. Gardolo: Erikson; 2002

- [4] Azar ST, Cote LR. Sociocultural issues in the evaluation of the needs of children in custody decision making: What do our current frameworks for evaluating parenting practices have to offer?. *International Journal of Law and Psychiatry*. 2002;**25**:193-217
- [5] Azmoude E, Jafarnejade F, Mazlom SR. The predictors of maternal self-efficacy in early parenthood. *Journal of Midwifery & Reproductive Health*. 2015;**3**:368-376. DOI: 10.22038/jmrh.2015.4050
- [6] Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*. 1977;**84**:191-215
- [7] Bandura A. Self-efficacy: The Exercise of Control. New York: W.H., Freeman and Company; 1997
- [8] Bandura A, Caprara GV, Barbaranelli C, Regalia C, Scabini E. Impact of family efficacy beliefs on quality of family functioning and satisfaction with family life. *Applied Psychology: An International Review*. 2011;**60**:421-448. DOI: 10.1111/j.1464-0597.2010.00442.x
- [9] Bartolo G, Benedetto L, Ingrassia M. Couple's well-being and parenting in the transition to parenthood: What are the gender differences?. *Interdisciplinary Journal of Family Studies*. 2013;**XVIII**(1):30-50
- [10] Belsky J. The determinants of parenting: A process model. *Child Development*. 1984;**55**:83-96
- [11] Benedetto L, Ingrassia M. Parenting. Rome: Carocci; 2010
- [12] Benedetto L, Fazzari E. Similarità del parenting e benessere in età prescolare: quanto è importante la coerenza educativa tra i genitori? [Parenting similarity and well-being in preschool children: how important is parental educational agreement?]. *Psicologia dell'Educazione*. 2010;**4**:295-312
- [13] Benedetto L, Ingrassia M. Parent practices and self-perceived control: Evidence from parent gender and children's behavioural problems. In Zukauskienė R, (Ed.). *Proceedings of the XIV European Conference on Developmental Psychology*. Pianoro (Bo): Medimont; 2010. pp. 259-263
- [14] Benedetto L, Ingrassia M. Parent perceived control and stress in families of children with attention-deficit/hyperactive disorder. *Life Span and Disability*. 2013;**XVI**:39-55
- [15] Benedetto L, Ingrassia M. What connections between marital conflict and parenting quality? Evidence from parent's gender in spillover effects. *Mediterranean Journal of Clinical Psychology*. 2015;**3**(2):1-19. DOI: <http://dx.doi.org/10.6092/2282-1619/2015.3.1066>
- [16] Benedetto L, Ingrassia M, Gagliano A, Germanò E, Ilardo G, Rando A, Siracusano R. Il parent training modifica le credenze dei genitori? Effetti sull'autoefficacia e sulla percezione di controllo nelle interazioni con bambini ADHD [Does parent training change parents' beliefs? Effects on self-efficacy and perceived control in parent-child interactions with ADHD children] *Psicologia Clinica dello Sviluppo*. 2012;**XIV**(2):651-660

- [17] Biehle SN, Mickelson KD. Personal and co-parent predictors of parenting efficacy across the transition to parenthood. *Journal of Social and Clinical Psychology*. 2011;**30**:985-1010. DOI: 10.1521/jscp.2011.30.9.985
- [18] Bingen K, Kupst MJ, Himmelstein B. Development of the palliative care parental self-efficacy measure. *Journal of Palliative Medicine*. 2011;**14**(9):1009-1016. DOI: 10.1089/jpm.2011.0069
- [19] Bugental DB. Parent Attribution Test. Revised Manual, Unpublished Research Measure. Santa Barbara: University of California; 1998
- [20] Caprara GV, Regalia C, Scabini E, Bandura A. Assessment of filial, parental, marital, and collective self-efficacy beliefs. *European Journal of Psychological Assessment*. 2004;**20**:247-261
- [21] Cohen SR, Holloway, Domínguez-Pareto I, Kuppermann M. Support and self-efficacy among Latino and white parents of children with ID. *American Journal on Intellectual and Developmental Disabilities*. 2015;**120**(1):16-31
- [22] Coleman PK, Karraker KH. Self-efficacy and parenting quality: Findings and future applications. *Developmental Review*. 1998;**18**:47-85
- [23] Coleman PK, Karraker KH. Parenting self-efficacy among mothers of school-age children: Conceptualization, measurement, and correlates. *Family Relations*. 2000;**49**:13-24
- [24] Coleman PK, Karraker KH. Maternal self-efficacy beliefs, competence in parenting, and toddlers' behaviour and developmental status. *Infant Mental Health Journal*. 2003;**24**:126-148
- [25] Conners CK. Conners' Rating Scales-Revised. North Tonawanda, NY: Multi-Health Systems; 1997
- [26] Day DM, Factor DC, Szkiba-Day PJ. Relations among discipline style, child behaviour problems, and perceived ineffectiveness as a caregiver among parents with conduct problem children. *Canadian Journal of Behavioural Science*. 1994;**26**:520-533
- [27] Deault LC. A systematic review of parenting in relation to the development of comorbidities and functional impairments in children with attention-deficit/hyperactivity disorder (ADHD). *Child Psychiatry and Human Development*. 2010;**41**:168-192. DOI: 10.1007/s10578-009-0159-4
- [28] Deković M, Asscher JJ, Hermanns J, Reitz E, Prinzie P, van den Akker AL. Tracing changes in families who participated in the home-start parenting program: Parental sense of competence as mechanism of change. *Prevention Science*. 2010;**11**:263-274
- [29] Dumka LE, Prost J, Barrera M. The parental relationship and adolescent conduct problems in Mexican American and European American families. *Journal of Couple & Relationship Therapy*. 2002;**1**(4):37-57. DOI: 10.1300/J398v01n04_02
- [30] Dumka LE, Stoerzinger HD, Jackson KM, Roosa MW. Examination of the cross-cultural and cross-language equivalence of the parenting self-agency measure. *Family Relations*. 1996;**45**:216-222

- [31] DuPaul GJ, Barkley RA. Situational variability of attention problems: Psychometric properties of the revised home and school situations questionnaire. *Journal of Clinical Child Psychology*. 1992;**21**:178-188
- [32] Esbjørn BH, Caspersen ID, Sømhovd MJ, Breinholst S, Reinholdt-Dunne ML. Exploring the contribution of parental perceptions to childhood anxiety. *Scandinavian Journal of Child and Adolescent Psychiatry and Psychology*. 2014;**2**:115-123
- [33] Finzi-Dottan R, Triwitz YS, Golubechik P. Predictors of stress-related growth in parents of children with ADHD. *Research in Developmental Disabilities*. 2011;**32**:510-519
- [34] Frick PJ. The Alabama Parenting Questionnaire, Unpublished Test. University of Alabama; 1991
- [35] Gennaro S. Postpartal anxiety and depression in mothers of term and preterm infants. *Nursing Research*. 1988;**37**:82-85
- [36] Gilmore L, Cuskelly M. Parenting satisfaction and self-efficacy: A longitudinal study of mothers of children with Down syndrome. *Journal of Family Studies*. 2012;**18**:28-35
- [37] Goodman R. The strength and difficulties questionnaire: A research note. *Child Psychology and Psychiatry*. 1997;**38**:581-586
- [38] Graziano PA, McNamara JP, Geffken GR, Reid A. Severity of children's ADHD symptoms and parenting stress: A multiple mediation model of self-regulation. *Journal of Abnormal Child Psychology*. 2011;**39**:1073-1083
- [39] Gross D, Rocissano L, Roncoli M. Maternal confidence during toddlerhood: Comparison of preterm and fullterm groups. *Research in Nursing and Health*. 1989;**12**:1-9
- [40] Johnston C, Mah JWT, Regambal M. Parenting cognitions and treatment beliefs as a predictor of experience using behavioural parenting strategies in families of children with attention-deficit/hyperactivity disorder. *Behavior Therapy*. 2010;**41**:491-504
- [41] Johnston C, Mash E. A measure of parenting satisfaction and efficacy. *Journal of Clinical Child Psychology*. 1989;**18**:167-175
- [42] Jones TL, Prinz RJ. Potential roles of parental self-efficacy in parent and child adjustment: A review. *Clinical and Psychology Review*. 2005;**25**:341-363
- [43] Junttila N, Aromaa M, Rautava P, Piha J, Rähä H. Measuring multidimensional parental self-efficacy of mothers and fathers of children ages 1.5 and 3 years. *Family Relations*. 2015;**64**:665-680. DOI: 10.1111/fare.12161
- [44] Halpern LF, Brand KL, Malone AF. Parenting stress in mothers of very low birth weight and full-term infants: A function of infant behavioural characteristics and child rearing attitudes. *Journal of Pediatric Psychology*. 2001;**26**:93-104
- [45] Hoza B, Johnston C, Pillow DR, Ascough J. Predicting treatment response for childhood attention-deficit/hyperactivity disorder: Introduction of a heuristic model to guide research. *Applied and Preventive Psychology*. 2006;**11**:215-229

- [46] Hoza B, Owens JS, Pelham WE, Swanson JM, Conners CK, Hinshaw SP, Arnold LE, Kraemer HC. Parents cognitions as a predictor of child treatment response in attention-deficit/hyperactivity disorder. *Journal of Abnormal Child Psychology*. 2000;**28**: 569-583
- [47] Kagan J, Snideman N. Temperamental factors in human development. *American Psychologist*. 1991;**46**:856-862
- [48] Karoly P. Mechanisms of self regulation: A systems view. *Annual Review of Psychology*. 1993;**44**:23-52
- [49] Lafrance Robinson A, Strahan E, Girz L, Wilson A, Boachie A. 'I know I can help you': Parental self-efficacy predicts adolescent outcomes in family-based therapy for eating disorders. *European Eating Disorders Review*. 2013;**21**(2):108-114. DOI: 10.1002/erv.2180
- [50] Leerkes EM, Burkey RV. The development of parenting efficacy among new mothers and fathers. *Infancy*. 2007;**12**:45-67. DOI: 10.1080/15250000701298964
- [51] Mash EJ, Johnston C. Parental perceptions of child behaviour problems, parenting self-esteem, and mother's reported stress in younger and older hyperactive and normal children. *Journal of Consulting and Clinical Psychology*. 1983;**51**:68-99
- [52] Merrifield KA, Gamble WC. Associations among marital qualities, supportive and undermining coparenting, and parenting self-efficacy testing spillover and stress-buffering processes. *Journal of Family Issues*. 2013;**34**:510-533
- [53] Meyer BW, Jain S, Canfield-Davis K. The effect of parenthood education on self-efficacy and parent effectiveness in an alternative high school student population. *The Professional Counselor*. 2011;**1**:29-40. DOI: 10.15241/bwm.1.1.29
- [54] de Montigny F, Lacharité C. Perceived parental efficacy: Concept analysis. *Journal of Advanced Nursing*. 2005;**49**:387-396. DOI: 10.1111/j.1365-2648.2004.03302.x
- [55] Murdock KW. An examination of parental self-efficacy among mothers and fathers. *Psychology of Men & Masculinity*. 2013;**14**:314-323. DOI: <http://dx.doi.org/10.1037/a0027009>
- [56] Oddi K, Murdock K, Vadnais S, Bridgett D, Garstein M. Maternal and infant temperament characteristics as contributors to parenting stress in the first year postpartum. *Infant and Child Development*. 2013;**22**:553-579
- [57] Patterson GR. *Coercive Family Process*. Eugene, OR: Castalia; 1982
- [58] Pennell C, Whittingham K, Boyd R, Sanders M, Colditz P. Prematurity and parental self-efficacy: The preterm parenting & self-efficacy checklist. *Infant Behavior & Development*. 2012;**35**:678-688
- [59] Pierce T, Boivin M, Frenette E, Forget-Dubois N, Dionne G, Tremblay RE. Maternal self-efficacy and hostile-reactive parenting from infancy to toddlerhood. *Infant Behavior and Development*. 2010;**33**:149-158

- [60] Pinto TM, Figueiredo B, Pinheiro LL, Canário C. Fathers' parenting self-efficacy during the transition to parenthood. *Journal of Reproductive and Infant Psychology*. 2016;1-13. DOI: <http://dx.doi.org/10.1080/02646838.2016.1178853>
- [61] Porter CL, Hsu H. First-time mothers' perception of efficacy during the transition to motherhood: Links to infant temperament. *Journal of Family Psychology*. 2003;17:54-64
- [62] Rezendes DL, Scarpa A. Associations between parental anxiety/depression and child behavior problems related to autism spectrum disorders: The roles of parenting stress and parenting self-efficacy. *Autism Research and Treatment*. 2011; Article ID. 395190, 10 pages. DOI: 10.1155/2011/395190
- [63] Sanders MR. Development, evaluation, and multinational dissemination of the Triple P-Positive Parenting Program. *Annual Review of Clinical Psychology*. 2012;8:345-379. DOI: 10.1146/annurev-cinpsy-032511-143104
- [64] Sanders MR, Kirby JN, Tellegen CL, Day JJ. Toward a public health approach to parenting: A systematic review and meta-analysis of the Triple P-Positive Parenting Program. *Clinical Psychology Review*. 2014;32:337-357. DOI: 10.1016/j.cpr.2014.04.003
- [65] Sanders MR, Markie-Dadds C, Turner KMT. Theoretical, scientific and clinical foundations of the Triple P-Positive Parenting Program: A population approach to the promotion of parenting competence. *Parenting Research and Practice Monograph*. 2003; No. 1:1-24
- [66] Sanders MR, Woolley ML. The relationship between maternal self-efficacy and parenting practices: Implications for parent training. *Child: Care, Health & Development*. 2005;31:65-73
- [67] Schneewind KA. Impact of family processes on control beliefs. In Bandura A, editor. *Self-efficacy in Changing Societies*. New York: Cambridge University Press; 1995. pp. 114-148
- [68] Sevigny PR, Loutzenhiser L. Predictors of parenting self-efficacy in mothers and fathers of toddlers. *Child: Care, Health, and Development*. 2010;36:179-189. DOI: 10.1111/j.1365-2214.2009.00980.x
- [69] Sheeber LB, Johnson JH. Evaluation of a temperament-focused, parent-training program. *Journal of Clinical Child Psychology*. 1994;23(3):249-259. DOI: 10.1207/s15374424jccp2303_3
- [70] Solmeyer AR, Freinberg ME. Mother and father adjustment during early parenthood: The roles of infant temperament and coparenting relationship quality. *Infant Behavior and Development*. 2011;34:504-514
- [71] Suzuki S. The effects of marital support, social network support, and parenting stress on parenting: Self-efficacy among mothers of young children in Japan. *Journal of Early Childhood Research*. 2010;8:40-46. DOI: 10.1177/1476718X09345506
- [72] Teti DM, Gelfand DM. Behavioral competence among mothers of infant in the first year: The mediational role of maternal self-efficacy. *Child Development*. 1991;62:918-929

- [73] Teti DM, O'Connell M, Reiner C. Parenting sensitivity, parental depression, and child health: The mediational role of parental self-efficacy. *Early Development and Parenting*. 1996;**5**:237-250
- [74] Verhage ML, Oosterman M, Schuengel C. Parenting self-efficacy is associated with cry perception, not autonomic responses, during a cry response task. *Parenting: Science and Practice*. 2013;**13**:253-265
- [75] Verhage ML, Oosterman M, Schuengel C. Parenting self-efficacy predicts perceptions of infant negative temperament characteristics, not vice versa. *Journal of Family Psychology*. 2013;**27**:844-849. DOI: <http://dx.doi.org/10.1037/a0034263>
- [76] Weaver CM, Shaw DS, Dishion TJ, Wilson MN. Parenting self-efficacy and problem behavior in children at risk for early conduct problems: The mediating role of maternal depression. *Infant Behavior and Development*. 2008;**31**:594-605
- [77] Weiss JA, Robinson S, Fung S, Tint A, Chalmers P, Lunskey Y. Family hardiness, social support, and self-efficacy in mothers of individuals with autism spectrum disorders. *Research in Autism Spectrum Disorders*. 2013;**7**:1310-1317
- [78] Wernand JJ, Kunseler FC, Oosterman M, Beekman ATF, Schuengel C. Prenatal changes in parenting self-efficacy: Linkages with anxiety and depressive symptoms in primiparous women. *Infant Mental Health Journal*. 2014;**35**:42-50. DOI: 10.1002/imhj.21425
- [79] Williams TM, Joy LA, Travis L, Gotowic A, Blum-Steele M, Aiken LS, Painter SL, Davidson SM. Transition to motherhood: A longitudinal study. *Infant Mental Health Journal*. 1987;**8**:251-265
- [80] Wittkowski A, Dowling H, Smith DM. Does engaging in a group-based intervention increase parental self-efficacy in parents of preschool children? A systematic review of the current literature. *Journal of Child and Family Studies*. 2016;**25**(11):3173-3191. 10.1007/s10826-016-0464-z
- [81] Ingrassia M, Benedetto L. Children's evaluation of parenting practices. In Zukauskiene R. (Ed.). *Proceedings of the XIV European Conference on Developmental Psychology*. Pianoro (BG): Medimont; 2010. pp. 265-269
- [82] Bandura A. Regulation of cognitive processes through perceived self-efficacy. *Developmental Psychology*. 1989;**25**:729-735
- [83] Bandura A. Self-efficacy mechanism in human agency. *American Psychologist*. 1982;**37**: 122-147
- [84] Cutrona CE, Troutman BR. Social support, infant temperament, and parenting self-efficacy: A mediational model of postpartum depression. *Child Development*. 1986;**57**: 1507-1518
- [85] Johnston C, Mash EJ. Families of children with attention-deficit/hyperactivity disorder: Review and recommendations for future research. *Clinical Child and Family Psychology Review*. 2001;**4**:183-207

