RESEARCH PAPER

Parenting competencies: development of an assessment instrument

Competências parentais: construção de um instrumento de avaliação Competencias parentales: construcción de un instrumento de evaluación

Alexandrina Cardoso*; Abel Paiva e Silva**; Heimar Marín***

Abstract

Theoretical Framework: The assessment of parenting competencies is essential for defining Nursing interventions that promote the transition to parenthood.

Objectives: To develop an instrument that guides the assessment of parenting competencies, from pregnancy to the sixth month after birth, and analyse its clinical usefulness and psychometric properties.

Methodology: In the first phase, the learning needs were identified through interviews conducted to 51 parents and through a literature review, and the instrument model was designed. In the second phase, the clinical characteristics and psychometric properties of the instrument were analysed using a sample composed of 630 mothers and 214 fathers.

Results: The Parenting Competencies Assessment Instrument encompassed 17 parenting competencies and 193 indicators. Concerning internal consistency, a KR20=0.94 and a KR20=0.87 were observed in the maternal and paternal versions, respectively. The analysis of the knowledge and skills subscales of both mothers and fathers found significant levels of internal consistency ($\alpha = 0.86$ and $\alpha = 0.66$; $\alpha = 0.89$ and $\alpha = 0.76$, respectively).

Conclusion: This instrument proved to have clinical usefulness and to be reliable to assess parenting competencies from pregnancy to the sixth month after birth.

Keywords: parenting competencies; knowledge; skills; clinical assessment; adaptation to parenting; parenting.

Resumo

Enquadramento: A avaliação das competências parentais é essêncial para a definição das terapêuticas de Enfermagem promotoras da transição para a parentalidade.

Objetivos: Construir um instrumento orientador da avaliação das competências parentais, desde a gravidez até ao sexto mês de idade e analisar utilidade clínica e propriedades psicométricas. Metodologia: Na primeira fase, identificaram-se as necessidades de aprendizagem, através de entrevistas a 51 mães e pais e uma revisão da literatura e, concebeu-se o modelo do instrumento. Na segunda fase analisaram-se as características clínicas e as propriedades psicométricas do instrumento, com recurso a 630 mães e a 214 pais.

Resultados: O Instrumento de Avaliação das Competências Parentais englobou 17 competências parentais e 193 indicadores. Na análise da consistência interna, observou-se KR20=0,94 na versão materna e KR20=0,87 na versão paterna. Na análise das subescalas dos conhecimentos e das habilidades das mães e dos pais foram observados níveis significativos de consistência interna $(\alpha=0.86 \text{ e } \alpha=0.66; \alpha=0.89 \text{ e } \alpha=0.76, \text{ respetivamente})$

Conclusão: O instrumento revelou ter utilidade clínica e fiabilidade para avaliar as competências parentais.

Palavras-chave: competências parentais; conhecimentos; habilidades; avaliação clínica; adaptação à parentalidade; parentalidade.

Resumen

Marco contextual: La evaluación de las competencias parentales es esencial para la definición de las terapias de enfermería que promueven la transición sana a la parentalidad.

Objetivos: Construir un instrumento para guiar la evaluación de las competencias parentales desde el embarazo hasta el sexto mes de edad y analizar la utilidad clínica y las propiedades psicométricas.

Metodología: En la primera fase se identificaron las necesidades de aprendizaje a través de entrevistas a 51 madres y padres y una revisión de la literatura, y se creó el modelo de instrumento. En la segunda fase, se analizaron las características clínicas y las propiedades psicométricas del instrumento con 630 madres y 214 padres.

Resultados: El Instrumento de Evaluación de las Competencias Parentales abarcó 17 competencias parentales y 193 indicadores. En el análisis de la consistencia interna, se observó KR20=0,94 en la versión materna y KR20=0,87 en la versión paterna. En el análisis de las subescalas de los conocimientos y de las habilidades de las madres y de los padres se observaron niveles significativos de consistencia interna (α =0,86 y α =0,66 y α =0,89 y α =0,76 respectivamente).

Conclusión: El instrumento demuestra que tiene una utilidad clínica y una fiabilidad para evaluar las competencias parentales.

Palabras clave: competencias parentales; conocimientos; habilidades; evaluación clínica; adaptación a la parentalidad; parentalidad.

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^{*} Ph.D. in Nursing, Catholic University of Portugal. Adjunct Professor, Porto Nursing College, 4200-**PLD: In Nutsing, Cannoic University of Fortugal. Aquinct Professor, Forto Nutsing College, 4,200702, Porto, Portugal [alex@esenf.pt]. Contribution to the article: bibliographic search, data collection, data analysis and discussion, article writing, content review. Address for correspondence: Rua Dr. Bernardino de Almeida, 4200-072, Porto, Drutugal.

**Ph.D: In Nutsing, University of Porto. Coordinating Professor, Porto Nursing College, 4200-072, Porto, Portogal [abel@esenf.pt]. Contribution to the article: data treatment, data analysis and discussions.

discussion.

*** Ph.D. in Biological Sciences, Federal University of São Paulo. Full Professor, Federal University of São Paulo, 04021-001, São Paulo, Brazil [heimar@denf.epm.br]. Contribution to the article: bibliographic search, data analysis and discussion, content review.

Introduction

The processes of becoming a mother and a father correspond to transitions. The birth of a child is not only a time of change in the life of a family, but also a critical event characterised by a personal, marital and social reorganisation (Emmanuel, Creedy, St John, Gamble, & Brown, 2008; Meleis et al., 2000; Mercer, 2006). Mothers and fathers play one of the most demanding and complex roles within the family, as the performance of the parental role is essential to ensure the child's survival, safety, growth and development (Emmanuel et al., 2008; Cardoso & Paiva e Silva, 2010; Mercer, 2006).

As a focus of attention, parenting involves four dimensions: (1) taking on responsibilities for the effective exercise of the role; (2) optimising the child's growth and development; (3) incorporating the child into the family; and (4) behaving according to the expected behaviours of being a mother/father (International Council of Nurses, 2011). Within the scope of this classification, adaptation to parenting (childbearing) is considered as a type of parenthood, that points to parental needs related to behaviours focussing on adjusting to pregnancy and taking actions to prepare for being a mother/father, thus internalising expectations held by families, friends and the society regarding appropriate or inappropriate behaviours of parents (ICN, 2011). The adaptation to parenting covers the period of time from pregnancy to the earliest times after delivery, including both the preparation and the actual provision of child care during the baby's first month of age as development processes that entail the psychological, social and affective restructuring of every man and woman, thus allowing them to become responsible for their child (Meleis et al., 2000; Mercer, 2006).

Background

Becoming a parent is not a natural talent. Rather, it is a social and cognitive process that is more learned than intuitive (Mercer, 2006). Parents' perceptions, expectations and learning needs are valued within the transition process, very much due to their potential facilitating or inhibitory effect (Meleis et al., 2000). Preparation, knowledge and skills are considered conditions that may facilitate or inhibit transition

(Meleis et al., 2000). In fact, preparing in advance to deal with the new situation may facilitate the transition, while, on the contrary, the lack of preparation seems to be an inhibiting factor (Meleis et al., 2000).

The mastery of parenting competencies influences how each parent interprets his/her own behaviour and his/her child's behaviour. In fact, the higher the parents' level of knowledge and skills, the greater likelihood it is for them both to create a suitable environment for a healthy development and to be more aware of their child's needs (Ribas & Bornstein, 2005). Thus, the acquisition of knowledge and skills related to the child's needs will promote the acquisition and development of parenting competencies, with the subsequent improvement of confidence, satisfaction and mastery in role performance.

Knowledge is understood as the nurses' focus of attention, referring to the specific content of thinking, based upon acquired wisdom, learned information or skills, and cognisance and recognition of information (ICN, 2011). Knowledge refers to both understanding a given information and the ability to mobilise the necessary information to maintain and restore health (Moorhead, Johnson, & Maas, 2008). A skill corresponds to an action that has a particular purpose. The term competencies derives from the Latin word competere, which results from the combination of com, meaning set, and petere, meaning effort. It is defined as a set of theoretical or practical knowledge mastered by an individual, the requirements that he/she meets and which are necessary to achieve a given purpose, and a quality of someone who is capable of solving certain problems or performing certain functions. The analysis of the different meanings indicated two dimensions to be considered: competence and competencies. Competence may be understood as the appropriate mobilisation of multiple cognitive resources (knowledge, information, values, attitudes, skills, intelligence, and patterns of perception, assessment and reasoning) to solve a problem, being recognised by others. Competencies may be defined as the set of knowledge, skills and dispositions (attitudes) which allow for the successful performance of an action, indicating ways of behaving or thinking, and may be improved as the individual learns and adjusts to the environment (Fleury & Fleury, 2001).

In this study, the concept of *parenting competencies* is defined as the set of knowledge, skills and attitudes

that facilitate and optimise the performance of the parental role with the necessary mastery to ensure the maximum potential for the child's growth and development. Within the scope of parenting, parental knowledge and skills may be defined as the understanding of the child's development and the familiarity with parental tasks related to health care decisions, the ability to assess and interpret the child's behaviours, the performance of parental tasks, and the interaction with the child (Ribas & Bornstein, 2005; Ribas, Moura, & Bornstein, 2007).

The literature review brought to light various themes related to learning needs associated with the exercise of the parental role (Baker, Wilson, Nordstrom, & Legwand, 2007; Bowman, 2005; Nolan, 2009; Reich, 2005; Ribas & Bornstein, 2005; Ribas et al., 2007; Sink, 2009; Senarath, Fernando, Vimpani, & Rodrigo, 2007; Svensson, Barclay, & Cooke, 2006). In the studies analysed, most data collection instruments were selfadministered and had been built expressly for that purpose. No study included a specific instrument that systemised the clinical assessment of parental competencies during pregnancy and the first months of the child's life.

Assuming that the mission of the nurses dealing with parents is to facilitate their transition to parenthood, the first step in the care process is the diagnosis of needs, thus contributing to the parents' adjustment to the new circumstances and challenges (ICN, 2011; Moorhead et al., 2008; Meleis et al., 2000; Mercer, 2006). In this way, the assessment of parental competencies corresponds to the diagnosis of the learning needs related to the knowledge and skills needed for an adequate performance of the parental role.

Therefore, taking as reference the concept of parenting competencies described above and in the absence of an instrument to organise the assessment of such competencies, an instrument was designed to guide their clinical assessment, from pregnancy to the child's sixth month of age.

Research questions

The study involved two stages. The first stage comprised two phases. In the first phase, this study aimed to answer the following question: Which parenting competencies and respective indicators

ensure child care, from pregnancy to the child's sixth month of age? In the second phase, it aimed to answer the following question: What are the characteristics (content, organisation and period of assessment) of the model of the competencies assessment instrument? In the second stage, it aimed to answer the following question: What are the psychometric properties of the instrument developed?

Methodology

The studies aimed to develop instruments are considered methodological studies, and are vital to any discipline of knowledge. The clarification of what is intended to be measured and the definition of the construct dimensions guide the development of the instrument. A study was conducted involving two sequential stages, whose objectives were: to build an instrument designed to assess parenting competencies and analyse the clinical usefulness and psychometric properties of the instrument.

The study was approved by the Ethics Committee of the Local Health Unit where it was developed and the participants' informed consent was obtained.

Stage I

The instrument's content was defined based on the perspective of both mothers and fathers of the metropolitan area of Porto and the literature review. A descriptive qualitative study was conducted to identify the parents' perceived learning needs. The semi-structured interview was used as a data collection technique and participants were selected based on a non-probability convenience sample. The inclusion criteria were as follows: being a parent during pregnancy or having a child aged less than six months and agreeing to participate in the study. A total of 51 interviews were conducted between March and August, 2007. In total, 40 mothers and 11 fathers were interviewed, some during pregnancy (n=27)and others within the first six months of birth of their child (n=24). The mothers' mean age was 30 years and the fathers' mean age was 32 years. Parents had an average of 12 years of education. As for marital status, 96% were married or cohabiting. It was the first child for 63% of the parents.

The analysis procedures followed the principles of qualitative methodology, taking as reference the processes of analysis described in the *grounded theory analysis* (Strauss & Corbin, 2008). The *grounded theory analysis* guides the analysis toward the identification of categories based on concepts emerging from data (Fernandes & Maia, 2002). These procedures are consistent with those described by Strauss and Corbin (2008) as micro-analysis, reflecting the combination of open and axial coding.

The same designation was given to units of analysis representing similar ideas (Strauss & Corbin, 2008). Thus, categories representing the parenting competencies and subcategories representing the indicators of parenting competencies and knowledge and skills domains emerged throughout the process of analysis. NVivo7 software was used to facilitate data processing and the organisation of results, categories and subcategories. A total of 17 parenting competencies (categories) and 178 knowledge and skill indicators emerged from the content analysis.

The main purpose of the literature review was to complement the already identified learning needs. Two main sources were used to select the contents for analysis: the databases available and the Nursing Outcomes Classification (NOC). A search was performed in CINAHL and various repositories of studies, dissertations and theses in portuguese. The following english keywords were used: transition to parenthood; parenting; parental competence; maternal competence; parental learning needs; maternal learning needs; learning needs during pregnancy; parental efficacy; mother and child care; as well as the following portuguese keywords: parentalidade, maternidade, paternidade, necessidades de aprendizagem da mãe/pai durante a gravidez. The search retrieved relevant articles and theses since, after reading their abstracts, we concluded that they addressed contents related to the parents' learning needs to take on the parental role, from pregnancy to the child's sixth month of age. In addition to the literature review, the outcomes and respective NOC indicators (2008) were analysed. This classification was used because its development and improvement resulted from clinical research (Moorhead et al., 2008). Seven child care-related outcomes were identified both in the field of knowledge and in the field of performance (skill). The literature review confirmed the parenting competencies which had already been identified in

the interviews, but allowed adding 15 more indicators, in a total of 193 indicators.

The analysis of the interviews and the literature review allowed for the identification of a set of indicators in the knowledge and skill fields related to the parents' decisions and actions (Figure 1).

The second phase of Stage I aimed at defining the model of the parental competencies assessment instrument. The set of parenting competencies and respective indicators represented the substantive content for the development of the instrument. The 193 indicators of parenting competencies were organised based on the moments considered to be more relevant for their assessment - pregnancy, 1st/2nd week, 1st/2nd month; 3rd/4th month and 5th/6th month.

The clinical usefulness of the instrument to guide the diagnostic process was a postulate in its development. It was, therefore, assumed that data relating to the assessment of parenting competencies constituted the raw material for the diagnostic process and the nurse's clinical decision. The choice of this data collection model influenced the structure of the instrument, namely the organisation of indicators and their application, in particular the systematisation of diagnostic criteria. Data collected using this instrument are a product of the nurse's clinical judgment. Yes and No were defined as diagnostic judgements used to document the clinical judgment resulting from the assessment of the parents' knowledge and/or skills. These are, therefore, dichotomous variables. The yes variable represents the adequacy of the level of knowledge, which means that the parents' knowledge is enough for them to make decisions and/or take action. In the same line of thought, considering the performance of a particular skill to be appropriate is synonymous of mastery or potential to improve the level of mastery in performing the given task. The no variable represents the identification of an opportunity to develop knowledge and/or skills, pointing to an insufficient, incorrect or absent level of knowledge for them to make decisions or take action or the inability, difficulty, negligence or dissatisfaction in the performance of a given parental task, with the resulting harmful consequences to the health of both the child and parents (ICN, 2011; Moorhead et al., 2008).

Competências parentais Preparar a casa Amamentar Assegurar higiene e manter pele saudável Conhecimento sobre os beneficios da amamentação Conhecimento sobre os critérios para escolher os produtos de higiene a usar Conhecimento sobre as características do quarto Conhecimento sobre as características do colostro e do leite Conhecimento sobre os critérios para decidir quando oferecer 1 ou as 2 mamas Conhecimento sobre a frequência e horário do banho Conhecimento sobre como lavar os olhos (pálpebras) / ouvidos do recém-nascido • Conhecimento sobre as características do Conhecimento sobre os critérios para decidir o intervalo e duração das mamadas Conhecimento sobre os sinais de ingestão nutricional suficiente Conhecimento sobre como dar banho Conhecimento sobre como e quando cortar as unhas berço/cama • Conhecimento sobre as características do Conhecimento sobre o material necessário para a troca da fralda equipamento auderirá dapatra, para dar banho Conhecimento sobre as características do equipamento a adquirí, adeira de transporte Conhecimento sobre as características do equipamento abre as características do equipamento a adquirir. carrinho de passeio Conhecimento sobre os sinais de sacieda Conhecimento sobre os critérios de uso sobre os produtos de higiene perineal Conhecimento sobre a posição da mãe e do filho Conhecimento sobre os sinais de pega adequada Conhecimento sobre como lavar o períneo (se menino/se menina) Conhecimento sobre os sinais de eritema pela fralda Conhecimento sobre os fatores de risco/medidas de prevenção do eritema da fralda Conhecimento sobre as estratégias para manter o bebé acordado durante a Conhecimento sobre os sinais de produção e libertação de leite Habilidade para reunir o material necessario para dar banho, preparar a roupa, aquec o ambiente, preparar a água e testar temperatura Habilidade para dar banho Habilidade para dotar medidas para prevenir acidentes durante o banho Habilidade para rourar su unha Habilidade para reunir o material necessário para a higiene perineal e troca da fralda Habilidade para leaver sexez roura coberta pada fraida Habilidade para factor medidas de prevenção do enterna da fraida Conhecimento sobre as medidas que estimulam a lactação Conhecimento sobre a diferença entre a subida de leite vs ingurgitamento mamário Conhecimento sobre os fatores de risco de ingurgitamento mamário Conhacimento sobre os fatores de risco de ingurgistamento mamário Conhacimento sobre a medida de pervenção de ingurgistamento mamário Conhacimento sobre as medidas de prevenção de ingurgistamento mamário Conhacimento sobre as medidas de prevenção de fissura do mamilo Conhacimento sobre a influência da a alimentação da mês no letite (composição) Conhacimento sobre os efeitos da ingestão de sedian a criança Conhacimento sobre os efeitos da ingestão de bedias alcodicas na criança Conhacimento sobre os efeitos da ingestão de bedias alcodicas na criança Conhacimento sobre os efeitos da ingestão de bedias alcodicas na criança Conhacimento sobre os efeitos da ingestão de bedias alcodicas na criança Conhecimento sobre os critérios de escolha da Conhecimento sobre os critérios de escolha da roupa para o bebé ciudados gerais no tratamento da roupa do bebé Conhecimento sobre os critérios de escolha e de uso de chupeta Conhecimento sobre os critérios de escolha das finidas etoalhetes Conhecimento sobre os critérios de escolha das finidas etoalhetes Conhecimento sobre o que é necessário preparar para levar para o hospital Habilidade para identificar sinais de ejeção de leite Habilidade para adotar posição confortável e posicionar a criança Habilidade para assegurar pega adequada Habilidade para estimular a criança durante a mamada, mantendo-a acordada Habilidade para interromper a succión antes de retirar a criança da mama Conhecimento sobre o material necessário para a desinfeção do coto umplical Conhecimento sobre quando é esperado a queda do coto umbilical Conhecimento sobre como e com que frequência desinfetar o coto umbilical Alimentar a criança Habilidade para interromper a sucção antes de retirar a criariç Habilidade para adotar medidas adequadas de higiene das ma umpincai Conhecimento sobre as estratégias para promover a mumificação Conhecimento sobre os sinais de infeção do coto umbilical Habilidade para reconhecer o efeito na crianca dos alimentos que a mãe ingere Conhecimento sobre a frequência das refeições Habilidade para reconhecer sinais de fissura do mamilo Conhecimento sobre as necessidades nutricionais e hídricas . Habilidade para implementar medidas de tratamento da fissura do mamilo Habilidade para reunir o material necessário para a desinfeção do Habilidade par a reconhecer sinais de cicatrização da fissura Habilidade para reconhecer sinais de ingurgitamento mamário Habilidade para reconhecer sinais de ingurgitamento mamário Habilidade para extrair leite manualmente/com bomba Habilidade para identificar sinais de ingestão nutricional suficiente coto umbilical Habilidade para desinfetar coto umbilical Habilidade para manter coto umbilical seco e apertar a fraida abaixo do local de inserção Habilidade para identificar sinais de fome Conhecimento sobre as estratégias para o Conhecimento sobre as estratégias para manter a lactação/amamentação Conhecimento sobre como extrair leite para armazenar Conhecimento sobre as condições e material para armazenar leite materno Conhecimento sobre como descongelar o leite materno desmame Conhecimento sobre os sinais de desenvolvimento que indiciam que a criança está apta para iniciar outros alimentos Conhecimento sobre os critérios de introdução de novos alimentos na dieta da criança Reconhecer o padrão de crescimento e desenvolvimento normais Conhecimento sobre a aparência esperada do recém-nascido e achado: conhecimento sobre as parencia esperada do recemenascido e conhecimento sobre as capacidades dos órgãos dos sentidos Conhecimento sobre os reflexos presentes/respostas espontân Conhecimento sobre as possíveis reações Alimentar com leite adaptado/ por biberão gastrointestinais ao alimento • Conhecimento sobre o modo de preparar os Conhecimento sobre a regurgitação e medidas de prevenção alimentos Conhecimento sobre os critérios de escolha do equipamento para alimentar a criança Conhecimento sobre o material: biberões e tetinas e critérios de escolha Conhecimento sobre os métodos de lavagem e esterilização Conhecimento sobre os como preparar o leite adaptado Conhecimento sobre os como alimentar a critança por biberão Conhecimento sobre os tecno alimentar a critança por biberão Conhecimento sobre o naterial: biberões e tetinas e critérios de escolha Conhecimento sobre a capacidade motora ao 3.9/4.8 mês Conhecimento sobre a capacidade para comunicar ao 3.9/4.9 mês Conhecimento sobre a capacidade sensorial ao 3.9/4.9 mês Conhecimento sobre os marcos de desenvolvimento ao 3.3/4.9. mís Colocar a eructar Conhecimento sobre o misetrali. Diservos e delinas e cinertos de escolida Conhecimento sobre os miedos de lavagem e esterilização Conhecimento sobre como preparar o leite adaptado Conhecimento sobre como alimentar a criança por biberão Habilidade para garantir a limpeza e a esterilização adequada do material Conhecimento sobre os beneficios da eructação Conhecimento sobre como posicionar a criança para eructar to ao 3.9/4.9 mês Conhecimento sobre o temperamento da criança ao $1.9/2.2\,$ mês Conhecimento sobre a capacidade motora ao $1.9/2.2\,$ mês Conhecimento sobre a capacidade sensorial ao $1.9/2.2\,$ mês Conhecimento sobre a capacidade para comunicar ao $1.9/2.2\,$ mês Conhecimento sobre a capacidade para comunicar ao $1.9/2.2\,$ mês Conhecimento sobre os marcos de desenvolvimento ao $1.9/2.2\,$ m (biberão, tetinas) Habilidade para preparar o leite de acordo com as indicações e quantidades adequadas à criança adequadas a criança Habilidade para alimentar a criança, com técnica correta Habilidade para preparar o leite de acordo com as indicações, na quantidade adequada às necessidades nutricionais Conhecimento sobre o padrão esperado de choro e tipos de choro Conhecimento sobre as estratégias de consolo Conhecimento sobre as inais de cólica/síndrome de cólicas Conhecimento sobre os fatores de risco de cólica síndrome de cólicas Conhecimento sobre as medidas de alivio da dor abdominal Garantir a segurança e prevenir acidentes Conhecimento sobre as medidas de prevenção de queimaduras Conhecimento sobre as medidas de prevenção da astituis/sufocação Conhecimento sobre as medidas de prevenção de quebas de Conhecimento sobre as medidas de prevenção e fatores de risco de SMSL Conhecimento sobre as medidas de prevenção e fatores de risco de Conhecimento sobre as medidas segurança para transporte no automóvido Conhecimento sobre os critérios de escolha de brinquedos (recém-nascido) Promoção e vigilância da saúde da crianca Conhecimento sobre os cuidados com animais domésticos Conhecimento sobre o modo adequado de segurar / manipular a criança Habilidade para distinguir as necessidades da criança pelo tipo choro Habilidade para confortar o bebé, quando chora Conhecimento sobre os achados normais na pele da criança Conhecimento sobre as medidas de protegão contra infeção Conhecimento sobre a sepulcação para pareda fisiológica de Conhecimento sobre o padrão de alumento de pero esperad Conhecimento sobre o padrão de aluminação intestrial Conhecimento sobre o padrão de aluminação intestrial Conhecimento sobre o padrão de sobre Conhecimento sobre a coloração lotácina exterióa Conhecimento sobre a coloração lotácina o Exterióa Conhecimento sobre a coloração lotácina o Exterióa Habilidade para adotar medidas de prevenção de asfixia/sufocação Habilidade para adotar medidas de prevenção de quedas Habilidade para adotar medidas de prevenção do SMSL Habilidade para adotar medidas de prevenção do SMSL Habilidade para segurar e manipular a criança de modo adequado Habilidade para afastar a criança de animais domésticos Vestir e despir/vestuário Conhecimento sobre como ayaliar a temperatura corporal e valor da T corporal normal Conhecimento sobre con sinais que justifiquem recorrer ao profissional da saúde adequado à temperatura • Habilidade para vestir e despir a criança Lidar com problemas comuns na criança Estimular o desenvolvimento Habilidade para reconhecer sinais de cólica/síndrome de cólicas Conhecimento sobre quando o bebé está Conhecimento sobre quando surgem os primeiros dentes e os sinais que o evidenciam Conhecimento sobre as medidas de alívio do desconforto causado pela Conhecimento sobre as estratégias de Habilidade para implementar medidas de alívio da dor abdominal estimulação sensorial ao 1.9/2.º mês Conhecimento sobre as estratégias para desenvolver sentimentos de confiança da Habilidade para reconhecer sinais de eritema pela fralda Habilidade para adotar medidas de prevenção do eritema pelas fraldas erupção dos dentes Conhecimento sobre as medidas de higiene oral Conhecimento sobre os sinais que justifiquem recorrer ao profissional da Habilidade para tratar o eritema pela fralda Habilidade para adotar medidas de prevenção de regurgitação Habilidade para aconhecer a diferença entre regurgitação e vómito Conhecimento sobre os sinais de obstrução nasal Conhecimento sobre as medidas de alívio de obstrução nasal massagem Habilidade para adotar medidas de alívio do desconforto causado pela erupção dos primeiros dentes Habilidade para adotar medidas de higiene oral massagem Conhecimento sobre a escolha de brinquedos adequados à estimulação Conhecimento sobre as estratégias de estimulação da linguagem Habilidade para reconhecer presença de obstrução nasal Habilidade para implementar medidas de alívio da obstrução nasal Habilidade para reconhecer presença de obstrução nasal ilidade para implementar medidas de alívio da obstrução nasa Conhecimento sobre as medidas de tratamento da descamação fisiológica da pele Conhecimento sobre as alterações ao padrão de sono e vigília, ao Conhecimento sobre os sinais de obstipação longo do tempo Conhecimento sobre as estratégias para criar hábitos para dormir Conhecimento sobre as medidas de estimulação da eliminação intestinal Conhecimento sobre os sinais de diarreia Conhecimento sobre as medidas de prevenção da desidratação Conhecimento sobre as medidas de diminuição da temperatura corporal

Figure 1. Parenting competencies and respective indicators.

The designed instrument aimed at guiding the assessment of parenting competencies, from pregnancy to the child's sixth month of age. However, the organisation of indicators in the instrument was based on their relevance and clinical usefulness. Thus, each indicator in the knowledge or skill fields was defined to be assessed only if appropriate to the actual situation (Table 1). For example, the knowledge of pet

care management would only be assessed if the couple had pets. Similarly, skills in dealing with nappy rash would only be assessed if the child had nappy rash. In terms of organisation, it was also established that some indicators would not be assessed in the fathers (e.g. breastfeeding skills). Thus, generically speaking, the maternal version includes 193 indicators, whereas the paternal version includes 176 indicators.

Table 1 *Indicators of parenting competencies to be assessed if appropriate*

	Mother	Father		Total
Moment of assessment	To assess if appropriate N indicators [Parental competence (specification of condition)]	If appropriate N indicators [Parental competence (specification of condition)]	Do not assess N indicators [Parental competence]	
Pregnancy	4 [PC: Bottle-feeding (if she decides to breastfeed)] 3 [PC: Preparing for the integration of the new family member (if she already has other children)] 3 [PC: Breastfeeding (if she smokes, drinks coffee or alcoholic beverages)]	4 [PC: Bottle-feeding (if he decides to breastfeed)] 3 [PC: Preparing for the integration of the new family member (if he already has other children)] 3 [PC: Breastfeeding (if she smokes, drinks coffee or alcoholic beverages)]		76
1st/2nd week	1 [PC: Treating nappy rash (if the baby has nappy rash)] 3 [PC: Treating the umbilical cord (if the baby has an umbilical cord)] 6 [PC: Dealing with breastfeeding problems (in case of sore nipples/breast engorgement)] 7 [PC: Bottle-feeding (if the baby is bottle-fed)] 2 [PC: Dealing with common issues (in case of regurgitation)] 1 [PC: Ensuring safety and preventing accidents (in case of pets)]	1 [PC: Treating nappy rash (if the baby has nappy rash)] 3 [PC: Treating the umbilical cord (if the baby has an umbilical cord)] 7 [PC: Bottle-feeding (if the baby is bottle-fed)] 2 [PC: Dealing with common issues (in case of regurgitation)] 1 [PC: Ensuring safety and preventing accidents (in case of pets)]	7 [PC: Breastfeeding] 6 [PC: Dealing with breastfeeding problems]	67
1st/2nd month	1 [PC: Bottle-feeding (if the baby is bottle-fed)] 4 [PC: Breastfeeding (if she wants to maintain lactation)] 2 [PC: Dealing with common issues (in case of nasal obstruction)]		4 [PC: Breastfeeding]	30
3rd/4th month	1 [PC: Breastfeeding (if she decides to start weaning)]			15
5th/6th month	·			5

The analysis of the content validity is an essential step in the development of new instruments, allowing for the association of abstract concepts with measurable indicators, and should be part of the assessment of instruments used in clinical practice. An instrument may be considered valid when it effectively meets its purpose.

The development of the instrument is, *per se*, a guarantee of its content validity, as its construct and dimensions result from representatives of the population of interest and the literature review (Alexandre & Coluci, 2011).

The assessment of the instrument by experts is a step in the analysis of the content validity. For this

purpose, the experts in this study were selected based on the fact that they were professionals holding the highest level of disciplinary and professional knowledge in the area and population under study. The group was composed of 12 nurses with experience either in clinical practice or teaching and specialised in maternal health and obstetric Nursing (nine) and child health and paediatric Nursing (three). The purpose of the experts group was to make a qualitative judgement of the items regarding their relevance and sorting, as well as the adequacy of the moment recommended for their assessment. The assessment was initially made on an individual basis, independently from the judges, and then followed by a group discussion. The Content Validity Index (CVI) was calculated based on a 4-point Likert scale ranging from 1 = irrelevant to 4 = extremelyrelevant. All indicators received scores of 3 or 4 and an index of 0.96 was obtained, which was considered adequate to confirm the validity of new instruments (Alexandre & Coluci, 2011). In the discussion, the experts confirmed the structure and content of the instrument, by agreeing with the identified content and moments for assessment.

In order to check the applicability of the instrument, we also sought to analyse the duration of the participants' interaction in the different moments as well as the parents' acceptance. To test these conditions, we sought to apply the instrument to 25 mothers as a guide for the assessment of parenting competencies; in three of those cases, the father was also present. We aimed to assess the parenting competencies at all moments, thus a total of 15 interviews were performed during pregnancy, four during the 1st/2nd week, two during the 1st/2nd month, two during the 3rd/4th month and only one during the 5th/6th month. It was evident that the assessment of parenting competencies during pregnancy and the 1st/2nd week were the most time-consuming interviews. In fact, the observation of parental tasks, such as bathing or breastfeeding, required more time and availability from the nurse/ researcher, and the assessment to be carried out at home.

Stage II

At this stage, we sought to analyse the clinical usefulness and metric properties of the parenting competencies assessment instrument (Instrumento de Avaliação das Competências Parentais - I ACP). A non-probability convenience sample was used. The criteria for inclusion were being users of the Local Health Unit, going through one of the moments scheduled for the assessment of parenting competencies and agreeing to participate in the study. Data were collected at the health care institution (health care centres or outpatient consultations) or at home, upon the mother's and/or father's consent, between January and July, 2008 (cross-sectional study). A total of 630 mothers and 214 fathers participated in the study and different N of participants were observed in the different moments (Table 2).

Table 2 Distribution of participants in the different moments of the assessment of parenting competencies

Moment	Mother (N)	Father (N)
Pregnancy	570	87
1st/2nd week	205	58
1st/2nd month	160	22
3rd/4th month	135	22
5th/6th month	136	14

The mothers' mean age was 29.5 years and the fathers' mean age was 32.1 years. As to the mothers' level of education, 42.0% had completed higher education, 32.7% had completed secondary education and 25.3% had completed basic education. As regards the fathers' level of education, 37.6% had completed basic education, 35.5% had completed secondary education

and 26.9% had completed higher education. It was the first child for 71.8% of the parents.

Collected data were statistically analysed using the SPSS software, version 19. Internal consistency was analysed using the Kuder-Richardson coefficient, which is suitable for instruments with dichotomous statements as is the case with the I ACP (Marôco & Garcia-Marques, 2006). Internal consistency of both subscales of the I_ACP – the knowledge and skills subscales – was also calculated. Thus, four subscales were created: mothers' knowledge (mean final scores of the mothers' knowledge of parenting competencies); fathers' knowledge (mean final scores of the fathers' knowledge of parenting competencies); mothers' skills (mean final scores of the mothers' skills in parenting competencies); and fathers' skills (mean final scores of the fathers' skills in parenting competencies).

Based on internal consistency values, the I_ACP was assumed to be a reliable tool for measuring parenting competencies. The KR20 coefficient was 0.94 in mothers and 0.87 in fathers. Significant values were also obtained in the analysis of the internal consistency of the subscales (Marôco & Garcia-Marques, 2006). Cronbach's alpha values of 0.86 and 0.66 were found in the mothers' knowledge and skills subscales, respectively. On the contrary, Cronbach's alpha values of 0.89 and 0.76 were found in the fathers' knowledge and skills subscales, respectively.

Results

The results of the study involved aspects related to the *Instrumento de Avaliação das Competências Parentais* (I_ACP), in particular its content, clinical usefulness, properties to measure the construct and accuracy of measurement.

The content of the I ACP resulted from the analysis of both the parents' interviews and the literature review with the purpose of identifying the parents' learning needs. The research resulted in an instrument that encompasses a total of 17 parenting competencies, which aggregate a total of 193 indicators representing parental knowledge (139) and skills (54). However, the maternal version is different from the paternal version: the first includes 193 indicators, whereas the latter includes 176 indicators. Content validity was ensured by both the development of the instrument and the experts' analysis (Alexandre & Coluci, 2011). The parenting competencies identified were: infant feeding; breastfeeding; bottle-feeding; burping the baby; ensuring hygiene; treating the umbilical cord; dressing and undressing; dealing with the baby's cry; ensuring safety and preventing accidents; dealing with common issues; health promotion and surveillance; creating sleeping habits; developmental stimulation; recognising the normal growth and development pattern; preparing for the integration of the new family member; preparing the home to receive the newborn; and preparing the layette.

The indicators were organised in different moments, which guided their clinical assessment: from pregnancy to the child's sixth month of age. The I_ACP assesses parenting competencies in five moments: pregnancy; 1st/2nd week; 1st/2nd month; 3rd/4th month; and 5th/6th month.

Discussion

The diagnosis of Nursing care needs is the first step of any nurse's action (ICN, 2011; Moorhead et al., 2008). The assessment of the parenting competencies is a relevant dimension for nurses to, on the one hand, substantiate their decisions about the care plan to prepare parents for the exercise of parenthood and, on the other hand, monitor the evolution and follow the parents' process of taking on child care after the birth of their baby. This was the purpose for developing the I_ACP.

Furthermore, it was not possible to identify in the literature available an instrument built for such purpose and which assessed the parents' knowledge and skills. Most studies focused only on assessing mothers' knowledge, thus excluding fathers from the study, through self-administered questionnaires (self-assessment). Moreover, their questions targeted a specific topic and not an organised set of parenting competencies (Reich, 2005; Bowman, 2005; Ribas & Bornstein, 2005; Svensson et al., 2006; Ribas et al., 2007; Baker et al., 2007; Senarath et al., 2007; Nolan, 2009; Sink, 2009).

The learning of parenting competencies is an ongoing process that takes place over time. Despite the fact that the preparation for parenthood begins in a more effective way during pregnancy, parents still need to assimilate new knowledge and skills to provide care to their children as they grow up and develop. In fact, the parents' learning needs are not clearly concentrated within a certain period; rather, they are distributed over time. For this reason, the assessment of parenting competencies should also occur over time, ensuring the continuity of care and the provision of anticipatory care.

According to the model described for the assessment of parenting competencies, pregnancy seems to be a time of intensive learning. It involves contents related to 13 parenting competencies, in a total of 76 knowledge indicators. During pregnancy, parents prepare themselves for the exercise of the parental role, more specifically, for ensuring the provision of care to the child after birth. The first weeks of assuming the parental role seem to be the most critical ones, given, on the one hand, the amount and quality of information to be assimilated and transformed into behaviour and, on the other hand, the novelty inherent in the performance of the role, particularly for first-time parents (Reich, 2005; Sink, 2009; Svensson et al., 2006).

Conclusion

Parenting competencies correspond to the set of knowledge and skills that allow parents to effectively perform their parental role and ensure the maximum potential for their child's growth and development. The concept of parenting competencies, presented in this study, assumes that the contextualised mobilisation of knowledge and skills gives content to and shapes those competencies. The study aimed at developing an instrument to guide the assessment of parenting competencies, from pregnancy to the child's sixth month of age, and analysed its clinical usefulness and psychometric properties. The research allowed developing the I ACP, which proved to be clinically useful for the assessment of parenting competencies, considering the actual lack of knowledge and skills identified. It also proved to be reliable by measuring the construct with acceptable accuracy.

Based on the parents' reports and the literature review, the instrument for the assessment of parenting competencies (I_ACP) proved to be effective to assess the parents' learning needs. In fact, although the instrument was not assessed for its absolute merit, it was still possible to determine its relative merit and conclude that: (1) the instrument assessed what it intended to assess, revealing good Cronbach's alpha values; (2) whenever they were assessed, the learning needs were real; (3) the instrument allowed us to characterise the parenting competencies whenever they were assessed; and (4) the instrument allowed us to introduce content and systematise the nurses' assessment of parenting competencies.

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