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FACTORES QUE FAVORECEN EL ESTRÉS PARENTAL DURANTE EL INGRESO HOSPITALARIO DEL NIÑO CON PATOLOGÍA AGUDA

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RESUMEN

Objetivo: Revisar la evidencia empírica primaria acumulada en relación a los factores que influyen en el estrés parental durante la hospitalización del niño por patología aguda

Metodología: Revisión sistemática en inglés y español, sin restricción de tiempo, incluyendo artículos, libros, capítulos de libro, informes y tesis en Cinalh, Cochrane Plus, Dialnet, Google&Google Scholar, Lilacs, Proquest Health&Medical Complete, Proquest Medline, Proquest Theses&Dissertations, PsycInfo, Psycodoc, Pubmed, ScienceDirect, Scopus, TDX, Web of Science. Se obtuvieron 20443 referencias. Se eliminaron las referencias duplicadas, no relacionadas con el tema y de acceso restringido. Se revisaron 22 estudios en texto completo, clasificados en diseños transversales (11), de cohortes (5) y de caso (6). Todos presentaron elevada calidad metodológica. *Resultados:* Factores asistenciales como la información, la comunicación, los procedimientos terapéuticos y la actitud profesional se relacionan significativamente con la ansiedad y el estrés parental. Tras el alta, además, los padres pueden presentar sintomatología de estrés post-traumático, falta de cohesión familiar y salud general más empobrecida. *Conclusiones:* El impacto emocional del ingreso por patología aguda implica graves secuelas en la salud familiar. Promover el apoyo psicoemocional a los padres, mejorar la calidad asistencial y extender la investigación en este campo serían estrategias necesarias para prevenir complicaciones y reducir costes sanitarios

Palabras clave

Estrés parental, padres, niños, patología aguda, hospitalización.

ABSTRACT

Aim: To review primary studies related to the factors influencing parental stress during the child's hospitalization for acute pathology. *Methodology:* A systematic review was performed in English and Spanish including articles, books, book chapters, reports and theses, published up to now, in Cinalh, Cochrane, Dialnet, Google&Google Scholar, Lilacs, Proquest Health&Medical Complete, ProQuest Medline, Proquest Theses&Dissertations, PsycInfo, Psycodoc, PubMed, ScienceDirect, Scopus, TDX, Web of Science. Total of 20443 references were obtained. Duplicate references, those not related to the topic and the restricted access references were removed. Full text of 22 studies were reviewed and analysed, classified as cross sectional (11), cohort (5) and case designs (6). All reported good methodological quality. *Results:* Health care factors such as information, communication, therapeutic procedures and professional attitude are significantly associated to parental anxiety and stress. After discharge, in addition, parents may have symptoms of post-traumatic stress, lack of family cohesion and poorer overall health. *Conclusions:* The emotional impact of hospitalization for acute pathology involves serious consequences on family health. Promoting psychological and emotional support to parents, improving the health care quality and extending the research in this field might be necessary strategies to prevent complications and to reduce the health care costs

Keywords

Parental stress, parents, children, acute pathology, hospitalization

INTRODUCCIÓN

El estrés es un fenómeno complejo que se estudia desde diferentes perspectivas y/o modelos teóricos. Entre ellos hallamos el modelo transaccional de Lazarus y Folkman, que define estrés como un proceso complejo y dinámico que se desencadena ante un evento crítico en el que influyen diversos aspectos como son la valoración subjetiva, el ambiente o entorno, las características individuales y las estrategias de afrontamiento. Desde esta perspectiva teórica el estrés intenso o mantenido en el tiempo ocasiona alteraciones físicas, psicológicas y emocionales que pueden llegar a derivar en graves trastornos mentales y físicos (Commodari, 2010; Jones, 2001)

Un evento crítico que ocasiona elevados niveles de estrés es el ingreso hospitalario del niño, ya que es un suceso que implica disrupción en la dinámica familiar, cambio de roles parentales, falta de control, confusión y ansiedad (Commodari, 2010; Diaz-Caneja, Gledhill, Weaver, Nadel, & Garralda, 2005; Hallström, Runesson, & Elander, 2002; Kristensson-Hallström, 1999; Verwey & Jooste, 2009)

Asimismo, el estrés parental durante el ingreso hospitalario se asocia con empeoramiento de la evolución clínica del niño, especialmente en relación a sintomatología respiratoria, siendo esta asociación independiente de la lactancia materna, tipo de infección respiratoria, hábito tabáquico durante la gestación, exposición del lactante a alérgenos, peso al nacer, nivel socioeconómico y etnia (Wright, Cohen, Carey, Weiss, & Gold, 2002)

El estrés parental, por tanto, no sólo ocasiona alteraciones somáticas y psico-emocionales importantes en los padres sino que también dificulta la evolución clínica del niño siendo objeto de numerosos estudios y revisiones que se centran, principalmente, en unidades de cuidados intensivos y en situaciones clínicas relacionadas con patologías pediátricas crónicas (Cousino & Hazen, 2013; Diffin, Shields, Cruise, & Johnston, 2013; Gallegos, 2010; Gibbins, Steinhardt, & Beinart, 2012; Long & Marsland, 2011; Tong, Lowe, Sainsbury, & Craig, 2008)

Sin embargo, son pocos los estudios o revisiones que centran su atención en el estrés parental durante la hospitalización del niño con patología aguda. Así pues, el objetivo del presente estudio es revisar la evidencia empírica primaria acumulada en relación a los factores que influyen en el estrés parental durante la estancia hospitalaria del niño con patología aguda, con la finalidad última de poder diseñar intervenciones psicosociales que disminuyan el estrés parental y favorezcan la evolución clínica del niño.

METODOLOGIA

Procedimiento

Se realizó consulta inicial de las bases de datos PsycINFO y Medline para identificar descriptores referentes a la temática de interés y se seleccionaron bases de datos y otros recursos en red: Cinalh, Cochrane Plus, Dialnet, Google&GoogleScholar, Lilacs, ProquestHealth& Medical Complete, ProquestMedline, ProquestTheses and Dissertations, PsycInfo, Psicodoc, Pubmed, ScienceDirect, Scopus, TDX, Web of Science.

Se realizó búsqueda a partir de la combinación de descriptores y palabras clave que se muestra en la Tabla 1, sin restricción de tiempo, en inglés y español, incluyendo artículos, revisiones, libros, capítulos de libro y tesis, hallando un total de 20443 referencias. Tras eliminar los duplicados (1217) se realizó la primera selección de referencias por título y resumen. (Figura 1)

A continuación se descartaron referencias relacionadas con la hospitalización del niño por discapacidades físicas y/o mentales, enfermedades crónicas, congénitas, ingresos en cuidados intensivos y/o procedimientos quirúrgicos. Se seleccionaron 69 referencias en las que se realizó búsqueda secundaria, hallando 14 estudios más. Tras la revisión de las 83 referencias se descartaron los estudios empíricos no primarios (2), los no relacionados con la temática de interés (26) y los de acceso restringido (33), seleccionando finalmente un total de 22 artículos (Figura 1). No se hallaron revisiones sistemáticas previas.

La selección de descriptores y bases de datos así como la revisión y el análisis de los artículos se realizaron por la primera autora. El segundo autor aportó su valoración cuando existieron dudas sobre idoneidad de descriptores, clasificación de diseños, evaluación metodológica y exposición de resultados. El tercer autor aportó su opinión en caso de discrepancias.

Análisis

Los estudios empíricos revisados se clasificaron como diseños no experimentales con metodología cuantitativa (11 estudios transversales y 5 de cohortes) y diseños descriptivos con metodología cualitativa (6 estudios de caso).

La calidad metodológica de los diseños transversales se analizó mediante el Instrumento para la Evaluación de Calidad de Estudios Transversales de Berra, Elorza-Ricart, Estrada, & Sánchez (2008)(sus características y calidad metodológicas se detallan en Jarde, Losilla, & Vives,2012).

Los diseños de cohortes se analizaron en base al Instrumento de Evaluación de Calidad de Estudios de Cohortes, Q-Coh(Jarde, Losilla, Vives, & Rodrigo, 2013).

Los diseños de metodología cualitativa se evaluaron siguiendo recomendaciones del National Institute for Health and Care(NICE, 2012).

El análisis de contenido de los artículos, independientemente del diseño, se realizó siguiendo las recomendaciones y directrices para el análisis de la información en revisiones sistemáticas de Perestelo-Pérez (2013).

RESULTADOS

Calidad metodológica de los estudios seleccionados

Los diseños transversales y de cohortes presentan, en general, una elevada validez interna. Se controlan las potenciales variables de confusión y se emplean cuestionarios de acreditada validez y fiabilidad para la medición de las variables de respuesta. Cuando se realiza adaptación de cuestionarios, o se elaboran *ad hoc*, se describe el proceso de validación y se aportan índices de consistencia interna, excepto en Lee, Chai, & Ismail (2012) y Rotegård (2007) (Tabla 2)

Cabe destacar, sin embargo, que la mayoría de los estudios presentan una validez externa moderada debido, principalmente, a características de la muestra, pues son pequeñas o con criterios de inclusión muy exigentes, o también a la pérdida de sujetos, como en el caso de Wray, Lee, Dearmun, & Franck (2011). En ocasiones no se reportan pérdidas pero sí cuestionarios incompletos que dificultan el análisis y pueden sesgar los resultados (Bragadóttir, 1999) (Tabla 2).

En relación a los diseños de metodología cualitativa todos los estudios presentan una elevada calidad metodológica. Los resultados se exponen de forma estructurada y coherente, se refuerzan con aportaciones de los participantes y se pueden considerar consistentes y creíbles. Destacar, sin embargo, que gran parte de los estudios no especifican bien las características de los participantes (Tabla 3).

Resultados

Las Tablas 4 a 6 detallan el contenido de los artículos según el tipo de diseño, transversal, de cohortes o de caso, respectivamente.

Cabe señalar que gran parte de los estudios ofrecen muestras de participantes con situaciones clínicas diversas o bien comparan pacientes agudos leves con críticos en cuidados intensivos. Son escasos los estudios que especifican criterios de patología aguda sin otras complicaciones. Asimismo, los enfoques de investigación también son diferentes, ya que se estudian necesidades parentales, estresores específicos o percepciones y vivencias subjetivas de los padres frente a percepciones de los profesionales. La revisión nos permite, sin embargo, establecer ciertos aspectos comunes, así como controversias, que detallamos a continuación.

En relación a las necesidades hallamos que, en general, padres y profesionales consideran que todas son importantes, pero difieren en cuanto al grado de satisfacción o su relevancia (Graves & Ware, 1990; Shields, Hunter, & Hall, 2004; Shields, Kristensson-Hallström, & O'Callaghan, 2003; Shields, Young, & McCann, 2008; Shields & Kristensson-Hallström, 2004). Así, los padres refieren obtener información médica suficiente sobre el diagnóstico de ingreso o funcionamiento de la unidad, pero necesitan información más específica sobre la evolución de la patología y procedimientos terapéuticos, recomendaciones escritas sobre el cuidado del niño tras el alta y otros aspectos administrativos (cobertura seguro, parking, etc.) También refieren comunicación deficiente con el equipo profesional y falta de clarificación de rol parental (Bragadóttir, 1999; Fernández-Castillo, Vílchez-Lara, & López-Naranjo, 2013; Graves & Ware, 1990; Hallström, Runesson, & Elander, 2002; Rotegård, 2007; Teare & Smith, 2004; Wray et al., 2011).

Como estresores específicos relevantes se identifican la percepción de severidad clínica, el llanto del niño, ya sea en general o en procedimientos terapéuticos, y su apariencia física. La falta de descanso de los padres potencia aún más el grado de estrés y ansiedad (Fernández-Castillo et al., 2013; Graves & Ware, 1990; Johnson, 1999; Lee et al., 2012; Leidy et al., 2005; Tiedeman, 1997; Tseng, 2009; Wray et al., 2011; Yael, Predeger, & Kelley, 2013).

También se identifica como estresor común la alteración del rol parental por falta de clarificación de responsabilidades y separación, ocasionando pérdida de control y ansiedad. La implicación de los padres en los cuidados se percibe como actividad positiva, independientemente de la patología y edad del niño, ya que fomenta la sensación parental de protección y seguridad (Commodari, 2010; Fernández-Castillo et al., 2013; Hallström et al., 2002; Leidy et al., 2005; Rotegård, 2007; Tiedeman, 1997)

La buena predisposición profesional para la información, comunicación y resolución efectiva de problemas disminuye el estrés parental (Fernández-Castillo et al., 2013; Gasquoine, 2005; Graves & Ware, 1990; Hallström et al., 2002), mientras que cuando se percibe una actitud distante y falta de información sobre procedimientos terapéuticos o sobre la evolución clínica, el estrés percibido aumenta (Fernández-Castillo et al., 2013; Hasan, Haghghi, & Bazmamoun, 2012; Teare & Smith, 2004; Rotegård, 2007) En este contexto, el rol de la enfermera se considera relevante, pues se identifica como persona de referencia para obtener información sobre la evolución del niño y como figura relevante en la promoción de la salud (Gasquoine, 2005; Rotegård, 2007; Tiedeman, 1997; Yael et al., 2013).

Las vivencias subjetivas hacen referencia a sentimientos identificados, principalmente, como miedo, confusión, ansiedad, enfado y preocupación en relación a procedimientos terapéuticos, incapacidad para aliviar el malestar del niño o separación (Commodari, 2010; Lee et al., 2012; Mast, DeMuro-Mercon, Kelly, Floyd, & Walter, 2009; Tiedeman, 1997; Wray et al., 2011; Yael et al. 2013).

Como variables sociodemográficas y clínicas que pueden incrementar el nivel de estrés parental se identifican el género paterno, siendo casi siempre las madres las que reportan mayor grado de estrés, el tiempo de estancia, tipo de admisión y el hecho de tener otros hijos (Bragadóttir, 1999; Commodari, 2010; Graves & Ware, 1990; Hasan et al., 2012; Lee et al., 2012; Shields et al., 2004; Shields & Kristensson-Hallström, 2004; Tseng, 2009).

En algunos casos se detectan niveles de estrés elevados tras el alta, además de depresión y sintomatología de estrés postraumático, sobreprotección e hipervigilancia del niño, falta de cohesión familiar y estado de salud general más empobrecido (Diaz-Caneja, Gledhill, Weaver, Nadel, & Garralda, 2005; Johnson, 1999; Leidy et al., 2005; Tiedeman, 1997; Wray et al., 2011).

Además, hay ciertas patologías que parecen percibirse como más graves o favorecedoras del estrés, como la gastroenteritis por rotavirus y la bronquiolitis por virus sincitial (Lee et al., 2012; Leidy et al., 2005; Mast et al. 2009; Rotegård, 2007; Yael et al., 2013). Sin embargo, no se halla evidencia de otras patologías prevalentes, como la neumonía, la infección del tracto urinario o la pielonefritis.

Se detecta controversia en aspectos como la necesidad de comunicación con otros padres y los profesionales, la percepción de los profesionales al respecto y también en relación a las variables sociodemográficas que influyen en el estrés. Las divergencias se pueden atribuir al estudio de muestras pequeñas o de conveniencia, mayoritariamente con madres, con pacientes de patología diversa así como a la devolución de cuestionarios incompletos y pérdida de participantes, como se detalla en el apartado correspondiente.

CONCLUSIONES

La revisión realizada aporta diferentes perspectivas culturales del impacto emocional que implica el ingreso. Los padres de niños ingresados por patología aguda presentan niveles de estrés superiores a la población general que pueden deteriorar el estado de salud general del niño y de la familia.

Frecuentemente las necesidades parentales y los estresores específicos durante la hospitalización aguda del niño aparecen relacionados con factores asistenciales y profesionales.

Existen divergencias entre las percepciones parentales y las profesionales en relación con los factores que favorecen el estrés y la ansiedad durante el ingreso.

Promover el apoyo psico-emocional a las familias, incorporar a los padres en el cuidado de los niños, aportar información de calidad y favorecer la comunicación con el equipo fomenta un ambiente más seguro y confortable y puede minimizar el impacto emocional del ingreso.

Por otra parte, aportar información escrita al alta, promover el seguimiento familiar o potenciar la disponibilidad del servicio y de los profesionales si los padres así lo requieren, puede prevenir secuelas a corto-medio plazo.

Fomentar todas estas estrategias podría prevenir recaídas y reingresos, nuevas consultas basadas en angustia o falta de información o, inclusive, minimizar a medio plazo el deterioro de la salud familiar que afectaría a otros ámbitos de la vida diaria, como son el laboral o el escolar, con los consecuentes costes sanitarios, económicos y sociales que ello implica.

En nuestra opinión es relevante extender la investigación sobre el estrés parental durante la hospitalización del niño por patología aguda, hasta ahora muy diversa y poco sistematizada, para avanzar en la prevención de complicaciones y secuelas posteriores al ingreso.

Sería adecuado diseñar estudios con criterios de inclusión más ajustados, centrados en padres con niños ingresados por patología aguda, especificando diagnósticos, sintomatología y complicaciones. Las muestras deberían equiparar madres con padres, y la edad pediátrica de los participantes debería acotarse por rangos para poder garantizar la comparabilidad intra e inter-grupos. Los diseños deberían incluir medidas repetidas durante la hospitalización pero también con seguimiento tras el alta, evaluando grado de estrés parental posterior, estrategias de afrontamiento, calidad de recuperación del niño y vivencias de los padres.

Por último, como limitaciones de esta revisión, cabe señalar que sólo incluye artículos publicados en español o inglés y que un buen número de artículos no se han podido analizar por ser de acceso restringido, sin que en la mayoría de ellos haya sido posible ni siquiera consultar el resumen, aunque en los casos en que éste estaba disponible los resultados y conclusiones eran similares a los de los trabajos revisados (véase Anexo A.1).

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Tabla 1. Descriptors and Key words

CINALH; LILACS ¹ ; PROQUEST HEALTH AND MEDICAL COMPLETE; PROQUEST MEDLINE; PROQUEST THESES AND DISSERTATIONS; PSYCINFO; PUBMED; SCIENCE DIRECT; SCOPUS; WEB OF SCIENCE (CORE)
(Stress OR “emotional stress” OR “psychological endurance” OR “psychological adjustment” OR “psychological stress” OR anxiety) AND(Paren* OR father* OR mother* OR famil* child* ORinfan* OR neonatal OR newborn* OR pediatric* OR paediatric*) AND (hospital* OR admission) NOT Animal* OR mouse* OR adren* OR GABA OR serotonin* OR endocrin* OR genetic* OR interleukin* OR oxidative* OR sex* OR neglect* OR drug* OR alcohol* OR abuse* OR smoking OR pregna* OR partum OR “breast cancer” OR breastfeed* OR “disruptive behaviour” OR separation* OR divorce* OR disorder* OR anorex* OR bulim* OR autis* OR achievement OR performance OR teaching OR student* OR welfare OR trauma* OR occupational OR work* OR lab* OR dentist* OR maltreatment* OR orphan* OR adopt* OR AIDS OR HIV OR adolescen* OR teenager* OR homonal OR abandon* OR posttraumatic OR post traumatic OR post-traumatic OR accident* OR dementia* OR aphasic* OR stroke* OR ginecolog* OR trauma* OR intoxication* OR congenit* OR surg* OR laparoscop* OR operat* OR aneste* OR sedation* OR geriatric* OR obstetric* OR alzheimer OR puerper* OR palliative* OR prenat* OR depression OR Parkinson OR metabolic* OR postpartum OR fertility OR dental OR allerg* OR radiation OR radiotherap* OR hypnosis OR “in vitro” OR development OR exercise OR resilience OR hypertension OR pharmacolog* OR arrhythmia OR epilepsy OR cortisol OR job OR bipolar OR hyppocampal OR brain OR fibromyalgia
GOOGLE & GOOGLE SCHOLAR ²
All the words: stress parent * child * infant * hospital * With at least one word: anxiety admission NOT Animal* mouse* adren* GABA serotonin* endocrin* genetic* interleukin* oxidative* sex* neglect* drug* alcohol* abuse* smoking pregna* partum depression breastfeed* “disruptive behaviour” separation divorce
PSICODOC
(Estrés O ajusteeemocional O ajustepsicológico O ansiedad) Y (Padre* O madre* O famil* O niño* O lactante O neonatal* O pediátrico* O infan* O parent*) Y (hospital* O admisión O ingreso)
COCHRANE
Parental stress
DIALNET
Estrés padres
TDX
Estrés padres niños

¹En Lilacs la búsqueda se realiza sustituyendo el truncamiento (*) por (\$)

²La búsqueda se realiza por intervalos de tiempo (desde 1900 hasta la actualidad)

Figura 1. Databases and criteria selection

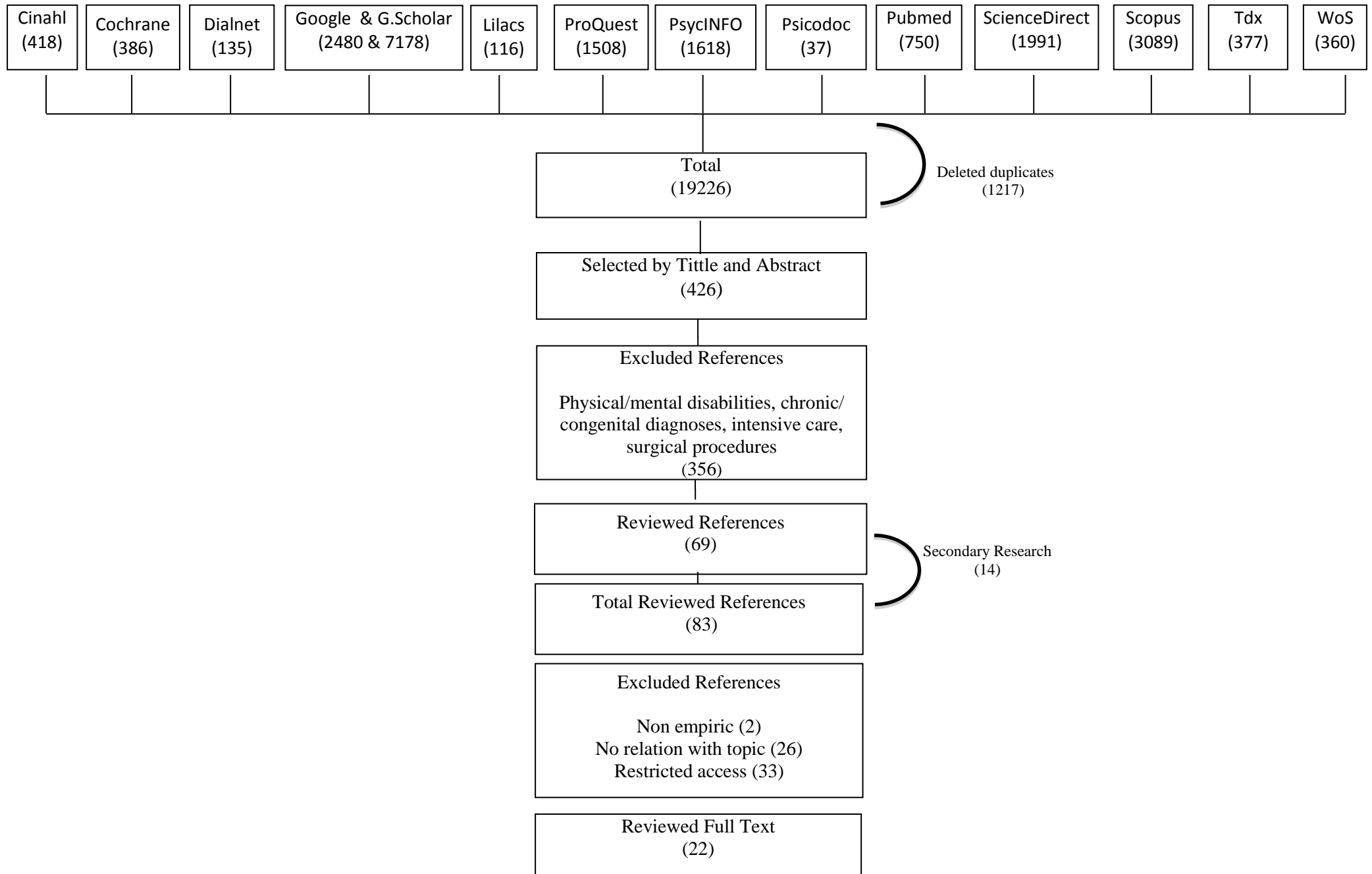


Table 2. Quantitative designs methodological analysis

Study	Design	Sample	Method			Instruments		Analysis	Internal Validity		Results		External Validity		Ethics	Quality	
			Inc/Exc Criteria	Control Confusion	Comp. Groups				Rel /Val		Adjusted	p	CI95%	Bias		High	Mod
					Yes	Not Reported	No	High	Mod	High					Mod		
Bragadóttir, 1999	CS	<50	×	×		×	×		×	×		×	×		×	×	
Commodari, 2010	CS	>50	×	×	×		×		×				×	×	×		
Fernández-Castillo, Vilchez-Lara, & López-Naranjo, 2013	CS	>1000	×	×	×		×		×			×		×	×		
Graves & Ware, 1990	CS	<50	×			×	×			×	×	×	×	×		×	
Hasan, Haghighi, & Bazmamoun, 2012	CS	>50	×	×		×		×	×				×	×	×		
Lee et al., 2012	CS	>50	×			×				×	×		×	×		×	
Rotegård, 2007	CS	<50	×		×					×	×	×	×	×		×	
Shields, Hunter, & Hall, 2004	CS	>50	×	×		×	×		×	×		×	×	×	×		
Shields & Kristensson-Hallström, 2004	CS	>100	×	×		×	×		×	×		×	×	×	×		
Shields, Kristensson-Hallström, & O'Callaghan, 2003	CS	>100	×	×		×	×		×	×		×	×	×	×		
Shields, Young, & McCann 2008	CS	>100	×	×		×	×		×	×		×	×	×	×		

Table 2. Quantitative designs methodological analysis. Continue

Study	Design	Sample	Method			Instruments		Analysis	Internal Validity		Results		External Validity		Ethics	Quality		
			Inc/Exc Criteria	Control Confusion	Comp. Groups		Rel /Val		Adjusted	p	CI95%	Bias	High	Mod	High	Mod	High	Mod
					Yes	No Reported	No	High										
Johnson, 1999	Coh	>50		×	×			×	×	×	×	×		×	×	×		
			×															
Leidy et al., 2005	Coh	>50	×	×	×			×	×	×				×	×	×		
Tiedeman, 1997	Coh	>50	×	×	×			×	×	×		×		×	×	×		
Tseng, 2009	Coh	>50	×	×	×			×	×	×		×		×	×	×		
Wray, Lee, Dearnun, & Franck, 2011	Coh	<50	×	×								×	×	×	×		×	

Note: Design; Coh= Cohort design; CS= Cross-Sectional design; Sample= Sample size in subjects; Method= Inc/Exc Criteria= Inclusion and Exclusion Criteria properly reported; Control Confusion= Controlled variables are well defined and properly measured; Comp. Groups= Comparable Groups; Yes= Correctly reported; Not Reported= Not reported by the author or no enough data to determine; No= No comparable, due to the specific characteristics of the study (e.g. parents vs. health professionals, or only one group included); Instruments= Instruments psychometric properties; Rel=Reliability, reported with alpha value; Val=Validity; High= High; Mod= Moderate; Analysis= Analysis with adjusted data to control bias; Results= Statistics; p = p value < 0.05; CI95%= Confidence Interval 95%; Ethics= Ethical Committee approval; Bias= Bias due to the dropout rates related to subjects and/or questionnaires as well as incomplete data.; Quality: Global Methodological Quality of the study

Table 3. Qualitative designs methodological analysis

Study	Design	Sample		Method		Collection Data		Analysis		Results		Ethics	Quality	
		Well Reported	Poorly Reported	Inc/Exc Criteria	Description	Well Reported	Poorly Reported	Well Reported	Poorly Reported	Well Reported	Poorly Reported		High	Mod
Diaz-Caneja et al., 2005	CSt	×		×	×	×		×		×			×	
Gasquoine, 2005	CSt		×		×	×		×		×		×	×	
Hallström et al., 2002	CSt		×	×	×	×		×		×		×	×	
Teare & Smith, 2004	CSt		×	×	×	×		×		×		×	×	
Mast, DeMuro-Mercon, Kelly, Floyd, & Walter, 2009	CSt	×		×	×	×		×		×		×	×	
Yael, Predeger, & Kelley, 2013	CSt		×	×	×	×		×		×		×	×	

Note: Design; CSt= Case Study; Sample= Sample characteristics; Method; Inc/Exc Criteria= Inclusion and Exclusion Criteria are defined; Description= Process is properly described; Collection data=Technique/s to collect data; Analysis= Analysis process; Ethics=Ethical Committee approval;Quality= Global Methodological Quality of the study

Table 4. Cross Sectional methodological analysis

Study	Sample	Purpose	Method	Analysis	Results	Limitations
Bragadóttir, 1999 Iceland	32 parents Most of parents were mothers, married and had college or university education. Children age range 2-12 years	To identify needs of parents of 2-6 years children vs. parents of 7-12 years children, variables that influence the parent's perceptions and whether parents needed help to meet their needs	Parents of children aged 2-12 years hospitalized at least 48hr. Comparison between two groups of parents Controlled variables: child's age, gender, length of stay, admission, severity, parental age, gender, marital status, education, number of children, distance home-hospital, prior hospitalizations experiences Needs of Parents Questionnaire(NPQ)	Spearman's correlation (Rho)	No significant relation between child's age and parents' perceived importance of needs Most of parents felt that all the needs were <i>important</i> or <i>very important</i> . They needed help to meet needs Most needs were met, as "Trust" "Information" "Resources", but not related to "Financial Assistance" "Written information" "Follow-up discharge" Significant variables were parent's age, distance home-hospital, length of stay, severity child's illness.	Small, convenience sample First instrument use with school age children. Missing data in questionnaires. The child gender, admission and prior hospitalizations not explored
Commodari, 2010 Italy	219 caregivers Most were mothers, mean age 32 years (SD 8.71) primary or high school. Few caregivers were fathers or others relatives Children aged <14 years, mean age 4 (SD 3.55)	To evaluate subjective perception of stress in parents of children hospitalized for acute pathologies, and to know the influence of recreational/ school activities	Caregivers of children hospitalized with middle and acute pathologies Controlled variables: caregivers education, length of stay, children age, relationship between caregiver and child Psychological Stress Measure (PSM) State Trait Anxiety Inventory (STAI)	Analysis of Variance T test	Perception of stress and anxiety was significantly higher in caregivers compared to the normative sample Parents related more stress, loss of control, confusion and physical disturbances than other relatives Longer stays significantly increased the stress and school services decreased the stress Non-significant variables were child's age, caregiver's age, education, recreational activities	Higher percentage of mothers Wide range of children ages Time and type of recreational and scholar activities not defined
Fernández-Castillo, Vílchez-Lara, & López-Naranjo, 2013 Spain	1347 parents 50% autochthonous, 50% immigrants. Men 42,6%, women 57,4%. Parents age range 17-62 years, mean age 33,03(SD 7,49)	To know the association between parental stress and the satisfaction, differences as a function of gender and of origin, and to know the specific stressors that best predict the degree of general satisfaction	Parents of children hospitalized at least one night, without disabilities or isolation Controlled variables: parents education, geographical origin and gender Parental Stressor Scale (PSS) Satisfaction Hospitalization Scale	Pearson's correlation Multiple linear regression	First type of stressors concern to "Child's physical conditions" "Parental roles" Second type of stressors concern to "Staff", as parental perceptions of lack of competence and dedication The immigrant population showed higher levels of satisfaction vs. the autochthonous Men showed higher satisfaction vs. women	Higher percentage of mothers Length of stay and social desirability not controlled Similar items for stress / satisfaction scales

Graves & Ware, 1990	50 parents, 27 nurses and 23 physicians	To examine similarities and differences in the perceptions of mothers, fathers, nurses and physicians concerning parental stress during child's hospitalization	Parents of children ≤ 10 years with acute illness, no psychiatric	Analysis of Variance	Significant differences among groups, but in "Changes"	Convenience samples
USA	Most parents were mothers, college graduates. Nurses were all women, ≥ 5 years of experience. Physicians were paediatric specialists		Controlled variables: parents gender and education. Inventory by the author, 5 scales; Uncertainty, Annoyance, Child discomfort, Negative emotional states, Changes	Multiple comparison test	Mothers rated more stressed than others in all of scales Fathers rated less in "Child discomfort" and "Negative emotional states" than mothers, nurses and physicians Physicians and nurses can not accurately predict mother's and father's ratings in stress	Moderate instrument validity / reliability Length of stay, parental age, marital status and clinical conditions not controlled Moderate returned rates questionnaires
Hasan et al., 2012	225 mothers	To identify the stressors in mothers, their impact on the treatment and how these factors may be affected by cultural differences, ethnicity and region	Mothers of children hospitalized at least 24h, randomly selected	Analysis of Variance	Most influential stressors were "Fear of child death" "Involvement of siblings" "Unpleasant odors" and "Inadequate explanation about procedures" Lowest stressors were "Distance home-hospital" "Ward equipment's" "Responsibility of monitoring serum"	Only mothers Clinical conditions not described
Iran	Most were housewives, age range 25-35 years, with elementary/guidance education and married More than half children aged < 2 years		Controlled variables: maternal age, education, marital status, number of children, employment status, years of marriage, child age, gender, length of stay, prior hospitalization, admission insurance Inventory by the author, 4 scales; Children, Environment, Socio-economic, Staff	T test	Significant variables were maternal age and occupation, child's age, length of stay, type of admission, insurance	
Lee, Chai, & Ismail, 2012	85 parents	To assess the emotional impact on parents of children hospitalized for Acute Diarrhoea (AD), the daily disruption, the pocket cost for parents	Parents of children < 24 months, for AD	T test	Parents reported "Being upset" "Physically, Mentally exhausted" "Lost of Sleep" and "Disruption of Daily Routines", <i>a lot or extremely</i>	Severity AD not controlled.
Malaysia	Sample mean age 30 (SD 5,2) Most were women, had university education or secondary school, were employed. More than half children were boys, mean age 13 months (SD 5)		Controlled variables: parents education and socioeconomic status, physical symptoms and behaviour of the child, children age, length of stay, pocket cost Inventory modified by the authors based in previous and validated questionnaires	Wilcoxon rank sum test	Parents related missed workdays and median cost of hospitalization was 16% of the monthly income Vomits and diarrhoea were the most influent stressors	Validity/ reliability of the instrument not reported No follow up after discharge

Rotegård, 2007 Norway	35 parents Mothers mean age 33,2 (SD 4,4) fathers mean age 34,5(SD 3,5).Most parents had college or university level, were married, and employed	To examine what information parents needed and received and what is the relationship between information needed an received	Parents of children 0-3 years in an isolation unit for gastroenteritis or Respiratory Syncytial Virus (RSV) Controlled variables: parents' age and education, employment status children age and diagnoses Inventory by the authors, 4 scales; General, Medical, Partnership, Discharge Information	Fisher's exact test	Parents received information related to "Medical" issues, but they needed to ask for "Clarification of roles" "Child's routines" "Participation in child caring" "Nursing interventions" Needed written information about how to prevent spread of infection, caring at home, financial rights Open questions showed additional needs related to psychological reactions, time and shifts rounds, breast pumps, car park, illness course and severity	Small sample Length of stay not controlled Validity/reliability of the instrument not reported Moderate returned rates questionnaires
Shields, Hunter, & Hall, 2004 UK	85 parents, 73 staff Most parents were mothers, married, age range 20-40 years, school or college education. Staff were nurses 64%, doctors 12%, and others. Majority age range 26-45 years	To compare parent's and staff's perception of the needs of parents of hospitalized children	Parents of children hospitalized<16 years Controlled variables; Relationship, gender, age, marital status, education, number of children, length of stay, distance home- hospital, prior hospitalizations. Children; age and admission(route, status) Staff; age, professional career, paediatric qualification, children of their own Needs of Parents Questionnaire (NPQ)	Chi-square Fisher's exact test	The staff thought that all needs were important, but parents thought one-third were not Less important needs for parents included "Meeting with other parents" and "Communication with staff" Parents of children for acute illness reported different needs met in contrast with parents of children with chronic conditions Family significant variables were gender, education, children age, admission, number of children. Staff variables were non significant	Convenience samples Different returned rates parents'/staff questionnaires Small numbers in some items affected analysis and results.
Shields & Kristensson-Hallström, 2004 Sweden	132 parents, 113 staff Most parents were mothers, married, age range 20-40, high school or technical college. Most children aged <5 years. Staff were nurses 39%, doctors 48%, others. Most aged>25	To compare parent's and staff's perception of the needs of parents of hospitalized children.	Parents of children hospitalized<16 years Controlled variables; Relationship, gender, age, marital status, education, number of children, length of stay, distance home- hospital, prior hospitalizations. Children; age and admission(route, status) Staff; age, professional career, paediatric qualification, children of their own Needs of Parents Questionnaire (NPQ)	Chi square Fisher's exact test	Staff and parents agreed completely about importance of needs as "Communication" "Information" "Trust" "Participation in caring" More mothers than fathers thought that "Not feel blamed for child's illness" was important Family significant variables were gender and level of education and staff variable was paediatric qualification	Convenience samples Different returned rates parents'/staff questionnaires Small numbers in some items affected analysis and results

<p>Shields, Kristensson-Hallström, & O'Callaghan, 2003</p> <p>Sweden</p>	<p>113 parents, 132 staff</p> <p>Most parents were mothers, married, age range 20-40 years, technical or high school education. The children median age was 1 year. Staff; nurses 39%, doctors 47%, others. Most aged >26 years</p>	<p>To compare parent's and staff's perception of the needs of parents of hospitalized children</p>	<p>Parents of children hospitalized <16 years</p> <p>Controlled variables; Relationship, gender, age, marital status, education, number of children, length of stay, distance home-hospital, prior hospitalizations. Children; age and admission(route, status) Staff; age, professional career, paediatric qualification, children of their own</p> <p>Needs of Parents Questionnaire (NPQ)</p>	<p>Chi square</p> <p>Fisher's exact test</p>	<p>Parents and staff agreed that all needs were important</p> <p>Parents reported that "Encouragement from the staff to stay with the child" and "Not feel blamed for child's illness" were the most important needs</p> <p>Staff thought that almost all parental needs were fulfilled and that parents would need help in meeting their needs</p> <p>Parents are more independent than is expected</p>	<p>Convenience samples</p> <p>Different returned rates parents'/staff questionnaires</p> <p>Small numbers in some items affected analysis and results</p>
<p>Shields, Young, & McCann, 2008</p> <p>Australia</p>	<p>130 parents, 79 staff</p> <p>Most parents were mothers, married, age range 20-40, school or technical college. Most children aged <5 years. Staff; nurses 69%, doctors 14%, others Most aged >26</p>	<p>To compare parent's and staff's perception of the needs of parents of hospitalized children</p>	<p>Parents of children hospitalized <18 years</p> <p>Controlled variables; Relationship, gender, age, marital status, education, number of children, length of stay, distance home-hospital, prior hospitalizations. Children; age and admission(route, status) Staff; age, professional career, paediatric qualification, children of their own</p> <p>Needs of Parents Questionnaire (NPQ)</p>	<p>Chi square</p> <p>Fisher's exact test</p>	<p>Parents and staff agreed that all needs were important</p> <p>Staff reported that "Reducing anxiety" "Social assistance" "To have a reference professional" "Communication with staff" and "Child education" were the most important needs</p> <p>Staff thought that almost all parental needs were fulfilled and that parents would need help in meeting their needs</p> <p>Parents are more independent than is expected</p>	<p>Convenience samples</p> <p>Different returned rates parents'/staff questionnaires,</p> <p>Small numbers in some items affected analysis and results</p>

Table 5. Cohorts methodological analysis

Study	Sample	Purpose	Method	Analysis	Results	Limitations
Johnson, 1999 USA	44 parents acute children 43 parents chronic ones Most were men, caucasian, native, married. Children age range 3-13 years	To examine whether the parents perceived stress and coping processes are different in function of children conditions. To test the Resiliency Model after discharge	Parents of children aged 3-13 years with chronic or acute diagnoses Measures at hospitalization, at 1 and at 3 months post-discharge Controlled variables; parents and children age, gender and race, socioeconomic and marital status, number of children, admission (route and status), length of stay Parent Perception of Uncertainty in Illness Scale (PPUS) Parental Stressor Scale (PSS) Family Inventory of Life Events (FILE) Social Support Index (SSI) Family Adaptability and Cohesion Scales II, Hollingshead Index of Social Position, Family Crisis Oriented Scales (FCOPES)	T test Correlation equation analysis Simple and Multiple linear regression	Parents of PICU felt more stressful and rated higher in "Ambiguity" "Lack of clarity" "Unpredictability" and "Parenting role changes" Parents in PICU used more Reframing appraisal Both groups reported high levels of adaptability, cohesion, and social support at hospitalization. Both groups reported similar stress, social support, coping, cohesion and adaptability after discharge. The variables of Resiliency Model may predict the family functioning in short time post discharge	Small sample Prospective measures with different number of subjects due to dropout rates
Leidy et al., 2005 USA	46parents hospitalized 45 parents control Most were caucasian, mothers mean age 29 years (SD 8.0), gestational weeks 33 (SD 3.0), married, high school, employed. Children mean age 10 months (SD 9)	To quantify the level of patient, parental and family distress during the hospitalization for Respiratory Syncytial Virus (RSV) and to determine what extent to which stress extends after discharge	Parents of children aged 12 to 30 months, for RSV, non prophylaxis, chronic illness either disabilities Measures after 48hr of admission, and at days 4, 14, 21 and 60 after discharge Controlled variables; relationship, employment, marital status, education level, incomes, gestational age, race, length of stay, prior hospitalization, number of ill children. Children age and gender. Children: Severity Index, Functional Status IIR, Global Rating of Stress, Health State. Parents: Parental Stress Scale (PSS), Parental Concerns Scale, State Trait Anxiety Inventory (STAI), Global Rating of Stress and Health, Family Adaptability and Cohesion Evaluation Scale II	Chi square T test Multiple linear regression	Families with RSV showed poorer functioning and health and lower cohesion and adaptability Parents with RSV reported more stress related to "Parenting role changes" "Procedures" "Seeing child crying" "Restrictions to see child" "Child's experiences" Mothers with RSV infants showed higher levels of anxiety, stress and poorer overall health Infants with RSV showed higher stress, poorer overall functional status and health Stress levels declined in both groups similarly after discharge, but RSV children kept poorer functional and health status and family poorer cohesion Significant variable was the level of education	Small sample Sample involved children in PICU and children in ward No data about complications after discharge

Tiedeman, 1997	52 parents Normative	To know the parental level anxiety, what extent to which anxiety extends after discharge and the relationship between the parental anxiety and the children anxiety, age, gender, length of stay or previous experiences. To know changes between feelings at admission and discharge	Parents of children aged 5 -11 years, acute pathology or surgical diagnoses, without disabilities Measures at 24hr after admission, 24hr before discharge, 7-14 days after discharge Controlled variables; parental age and gender, marital status, education level, length of stay, previous admission, children age and gender, diagnoses Children: Child Drawing Hospital (CDH) Child Rating of Anxiety (CRA), State Anxiety Inventory for Children (SAIC) Parents: State Anxiety Inventory (SAI), Parental Rating of Own Anxiety (PROA)	Pearson correlation Analysis of variance	Parent's anxiety was higher at admission than normative sample SAI and CRA associated higher levels of children anxiety with higher parental anxiety Parents related to feel anxious, frightened, angry Longer stay increased the parental stress Significant decrease in anxiety from admission to discharge, but no significant from discharge to post- hospitalization No significant relation between parental anxiety and child's age, gender and prior hospitalization	Small, convenience samples Higher percentage mothers Self-reported questionnaires Low power of analyses due to the sample size
Tseng, 2009 Taiwan	62 father 62 mother	To compare situational anxiety levels between Taiwanese fathers and mothers, differences between admission and discharge, and chronic vs. acute conditions. To identify factors related to distress and coping	Parents of children aged 6 months to 10 years admitted at least for 3 days ,no prior hospitalization Controlled variables: admission, parents age and education, socioeconomic and general health status, occupation, working hours. Children age, gender, diagnoses Measures at 24-36hr after admission and 24hr before discharge or the 30 th day of stay in chronic hospitalizations Mandarin Visual Analog Scale (VAS-M), State Trait Anxiety Inventory (STAI-M), Index of Parent Participation/Hospitalized Children (IPP/HC-M)	T test Linear mixed models	High levels of anxiety at admission and at discharge and no significant differences between fathers and mothers No significant differences in anxiety between parents with chronic children and acute children Significant variable affected anxiety was "Parent's perception of child's illness severity"	Wide range of children ages No data about pathologies

Wray, Lee, Dearnun, & Franck, 2011 UK	29 parents Most were mothers, Caucasian, employed, with secondary level education. Children mean age 6.6 years (SD 5.2), half were boys	To assess parental stress, anxiety and coping during and after admission	Parents with children aged <16 years, admitted for at least 3 days, acute or chronic conditions Controlled variables: parental age and ethnicity, employment status, distance home-hospital, family members, child age, gender, admission and prior hospitalization Measures at admission, before discharge and 3 months after discharge Hospital Anxiety and Depression Scale (HAD), Brief COPE, Duke Functional Social Support Questionnaire, Life Orientation Test-Revised (LOT-R), Parent Stressor Scale, Parent Perception of Uncertainty in Illness (PPUS), Impact of Events Scale-Revised (IES-R), Open Items	Analysis of variance Chi Square Wilcoxon rank tests Thematic analysis	High levels of anxiety, stress and depression both admission and discharge. Third of parents showed still high levels after 3 months The “Behaviour and the Appearance of child” were the most influent factors in anxiety Higher anxiety at baseline and after discharge were associated to emotion-focused coping strategies, lower optimism and higher uncertainty Anxiety was associated with symptoms of post traumatic stress 3 months after discharge Open items showed additional themes; “Staff care and flexibility” and “Participating in child care” as positive things; “Unable to relieve the child pain” and “Being away from other children” as negative	Small sample Wide range of children ages Validity / reliability of instruments are not reported Important dropout rates
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Table 6. Case Study methodological analysis

Study	Sample	Purpose	Method	Analysis	Results	Limitations
Diaz-Caneja et al., 2005	11 parents at PICU 9 parents at Ward	Better understanding of the subjective experiences of parents and children during admission, stay and post- discharge, PICU vs. Ward	Purposive criteria sampling. Parents with children scholar age and similar diagnoses. Not terminal illness, neurological disorders or meningococcal disease Controlled variables: child's gender and age, diagnoses (acute or chronic) Retrospective measures within 6-12 months after admission at hospital Semi- structured, depth interview, recorded	Deductive Inductive thematic analysis	At onset, parents at PICU felt more anxiety, confusion and helplessness, disbelieved the situation. Parents at Ward felt less confusion/stress At impatient, parents at PICU referred anxiety and lack of information. "The child appearance" was the worst stressor. Ward was described as good place At discharge, if the follow up is not properly arranged this led to greater anxiety, in both groups Participation in caring was a positive experience Parents referred changes in relationship; more overprotective, vigilant , tolerant with the child	Parents who did not speak English were excluded Most were mothers Tertiary hospital. Cases might be more complex Retrospective long time
Gasquoine, 2005	7 mothers No characteristics	Better understanding of mothering a hospitalized child and explaining in a reflective manner	Purposive snowball sampling. Mothers with children hospitalized, acute illness or injury No controlled variables Retrospective measures within 12 months after admission at hospital Unstructured in-depth interviews, recorded	Manen's thematic analysis	Nurses attitudes and their capacity for caring seems to be the most relevant aspects that could relieve mothers anxiety during the stay Sometimes, little things are more important for mothers, as the Baby's bath Nurses need to be aware of mothers needs because not are always pharmaceutical or technical needs	Mothers/ children characteristics were not described All were mothers Retrospective long time
Hallström et al., 2002	35 parents 25 children	To study parental needs during the stay	Purposive criteria sampling. Parents of children aged 5 months to 18 years, with acute pathologies No controlled variables Non-participant observations, systematic field notes from the first hour of the arrival.	Content analysis	The most important parental needs were "Security" and "Mediating security for the child" as assuring safety and comfort Other needs were "Professional competency", "Specific information" "Participation in caring" "Communication" " Control"	Parents/ children characteristics not described No data of clinical complications Some stays too short

Teare & Smith, 2004	<p>15 parents</p> <p>13 mothers, 2 fathers. 11 of whom were Caucasian and 4 South Asian parents. Children in medical wards</p>	To explore views of parents on experience at hospital, facilities and relationship with the staff	<p>Purposive criteria sampling. Parents culturally diverse with children hospitalized at general ward, non critical conditions</p> <p>Not controlled variables</p> <p>Measure during the hospitalization</p> <p>Focus group. Discussions were recorded</p>	Inductive thematic analysis	<p>Parents reported lack of information and poor communication with staff. Problems when professionals did not communicate well with others.</p> <p>Parents need to feel safe related to child caring as well as also need other parents as a social support</p> <p>Waiting for some facilities, treatments, information or diagnosis is <i>psychologically frustrating</i></p> <p>All parents wanted to be involved in child caring</p>	<p>Parents/ children characteristics not described</p> <p>No data of children diagnoses, length of stay or treatments.</p>
<p>Mast, DeMuro-Mercon, Kelly, Floyd, & Walter, 2009</p> <p>USA</p>	<p>17 parents</p> <p>Most were women, married mean age 29.8 years, range 16.8-44.7, culturally diverse, with college education. Children mean age 15.3 months, range 3-32.3</p>	To assess the impact of rotavirus in families, to compare clinical severity of positive rotavirus vs. negative in gastroenteritis, to rank importance of some factors associate with rotavirus	<p>Purposive criteria sampling Parents of children age range 2-36 months with acute gastroenteritis</p> <p>Controlled variables: parental age, gender, ethnicity, education, marital status, incomes. Children age, gender.</p> <p>Measure during the hospitalization</p> <p>3 Focus group discussions, 4 individual semi-structured in-depth interviews</p>	<p>T test</p> <p>Deductive Inductive thematic analysis</p>	<p>Most felt this illness was worse than others, felt frightened of dehydration, stressed, fatigue and unable to relieve the child suffering</p> <p>Most reported missed workdays, important routine disruption and lost of sleep</p> <p>Reported uncertain knowledge related transmission mechanisms and mixed opinions about the vaccines</p> <p>Most important factors concerned the child appearance as “Sleepy” or “Little energy”</p>	
<p>Yael, Predeger, & Kelley, 2013</p> <p>Alaska</p>	<p>6 mothers</p> <p>3 lived in remote areas No more characteristics</p>	To learn from the experiences of Alaskan parents with children admitted for Respiratory Syncytial Virus (RSV)	<p>Purposive criteria sampling Mothers of school children with RSV</p> <p>No controlled variables</p> <p>Measure during the hospitalization</p> <p>Interviews and field notes</p>	Categorical analysis	<p>Most felt feared related to the RSV contagiousness, the delay of adequate treatment and found difficult to identify key symptoms on time</p> <p>Most felt anxious, stressed, fatigue and referred lost of sleep, missed workdays, routine disruption</p> <p>Remote areas and difficult transport create barriers to healthcare access</p> <p>Nurses are central in the care of families, health promotion and prevention of illness.</p>	<p>Parents/ children characteristics not described</p> <p>No data of children diagnoses, length of stay or treatments</p>

AnnexA.1 Restricted access references

Author	Title and Abstract ¹
Beeton, 1991	A role for parents with hospitalised children
Berenbaum & Hatcher, 1992	Emotional distress of mothers of hospitalized children Compared 20 mothers of children hospitalized on a paediatric intensive care unit (PICU), 20 mothers of children hospitalized on a general paediatric medical surgical unit, and 20 mothers of no hospitalized ill children on standardized measures of anxiety and negative moods. The mothers of children admitted to the PICU experienced greater state anxiety, depression, confusion, and anger than the other mothers. There were no differences between the mothers of children admitted to the general paediatric floor and mothers of no hospitalized ill children. Maternal age, family stress, number of prior hospitalizations of the ill child, and the mother's rating of the severity of her child's illness were predictive of emotional distress. Results indicate that hospitalization of a mildly or moderately ill child per se may not necessarily increase maternal emotional distress.
Burke, 1992	Parent's responses to a child's hospitalizations
Burns, 1984	The hospitalization experience and single-parent families. A time of special vulnerability "Hospitalization of a child is always stressful to families. For families without two parents to share the responsibilities and support one another, the stress is not easily borne. Furthermore, such families are likely to already have additional stresses related to the reason for the family breakup (divorce or death) and have the limited resources of single-parenthood: financial, social, time, and energy. If nurses and other health care personnel will evaluate the strengths and weaknesses of these vulnerable families and offer support and workable solutions to relieve specific pressures, these families may cope with the stresses more competently and, indeed, may discover new resources within themselves, with their families, and with their nonfamily support systems that can be used again in times of crisis. Ultimately the competent family will be able to nurture the child optimally, no matter what the specific health problems. Therefore paediatric nurses supporting the family also support the hospitalized child"
Fernández & López, 2006	Parental stress during the hospitalization
Fernández-Castillo, Vílchez-Lara & Sada-Lázaro, 2008	Anxiety in immigrant parents during hospitalization of their children
Fernández-Castillo, Vílchez-Lara & Sada-Lázaro, 2008	Differences between immigrant and non immigrant origin families in paternal stress during the hospitalization of a son.
Fernández, Amigo & Fonseca, 2009	Estrés parental y ansiedad en los padres
Freiberg, 1972	How parents react when their child is hospitalized
Gibb, 1980	Stress in children's wards
Glenn, 1982	Hospital admission through the parents' eyes
Gohsman, 1977	Differences in attitude toward hospitalization between paediatric staff and parents of hospitalized children
Green, 1979	The hospitalisation of children
Knafl, 1985	How families manage a paediatric hospitalization
Koss & Teter, 1980	Welcoming a family when a child is hospitalized
Kristjansdottir, 1991	A study of needs of parents of hospitalized 2- to 6-year-old children. "The present study uses a qualitative approach to explore and identify areas of needs among parents of 2- to 6-year-old children who are hospitalized. An extensive literature review and informal in-depth interviews with five parents and six paediatric health care professionals were analysed by content to develop a representative list of statements about needs. Six groups of needs were recognized: (a) the need to be able to trust doctors and nurses, (b) the need for information, (c) needs related to other family members, (d) a need to feel that they are trusted, (e) needs related to human and physical resources, and (e) the need for support and guidance. A congruency is found between statements about needs of parents of hospitalized 2- to 6-year-olds in the literature on the one hand and the needs of parents expressed by parents themselves and paediatric health care professionals on the other hand."

¹When abstract is available

- Kristjansdottir, 1995 Perceived importance of needs expressed by parents of hospitalized two- to six-year-olds.
- “The study describes the needs of 34 parents, 12 fathers and 22 mothers, of hospitalized 2-6 year-olds in a Paediatric Hospital in Iceland. Subjects responded to 43 statements of possible needs during a child's hospitalization on a Likert-type scale based on their perception of the importance of items. The reliability coefficient was over 0.91 for all three parts of the instrument. Parents' perception of importance was significantly and positively correlated with their perception of how their needs were being met and with their request for help from the hospital to fulfil them. None of the statements were perceived to be unimportant. Items related to parents' need to trust nurses and doctors were consistently rated as very important. Items related to the need for information and needs related to other family members were consistently rated as lying between important and very important. Needs related to human and physical resources, and the need for support and guidance were in general rated lowest. Items related to the need to be trusted had a mean importance significantly ($p < 0.01$) lower for fathers. Although not exhaustive, the statements presented were found to be representative of the needs and concerns of parents during the hospitalization of their children.”
- Liu & Park, 2012 Verification of Model on Family Adaptation in Families of Hospitalized Children: Focused on Parents of Hospitalized Children in China
- Lynn, 1986 Mothers' reactions to their children's hospitalizations
- Meshkani&Meshkni, 2004 Parents hospitalization stress during children hospitalization
- Metha, 1963 Emotional stress on patients due to hospitalization
- Mishel, 1983 Parents perceptions of uncertainty concerning their hospitalized child.
- “The Parent Perception of Uncertainty Scale (PPUS) was developed to measure a perceptual variable believed to influence parents' response to their child's illness and hospitalization. This 31-item Likert-format scale was modified from the original form of the uncertainty scale. The PPUS was composed of four factors measuring the four dimensions of uncertainty consistent with theoretical predictions. Initial testing for reliability found the coefficient alphas and thetas to be adequate for a new scale. Validity testing with theoretically relevant external variables was partially supportive of predictions. Questions remain concerning the adequacy of Factor II. Further testing of the scale is indicated.”
- Ochoa &Polaino-Lorente, 1999 Stress experienced by parents of children admitted to the University Clinic Hospital of Navarra
- “This paper presents a study on the degree of stress experienced by parents of children who have been admitted to the University Clinic Hospital of Navarra. The results obtained from this study show that the degree of stress suffered by the 242 parents interviewed was medium to high as a result of the illness and hospitalization of their children in the UCH. Steps still need to be taken to plan the actions to be taken in an attempt to reduce those factors which may provoke unnecessary stress in parents of children admitted to the UCH”
- Pillay&Pillay, 1988 Emotional aspects of paediatric hospitalization: guidelines for management
- Prugh, Staub, Sands et al.,1953 A study of the emotional reactions of children and families to hospitalization and illness
- Quantrill & Riordan, 2014 Parents' and carers' perceptions of acute paediatric admissions
- Rodeño, 1998 Convulsión febril : una situación estresante para los padres
- Schum, 1989 Effects of hospitalization derived from a family diary: Review of the literature.
- “Management of psychosocial issues associated with hospitalization are essential to the practice of paediatrics. The personal experience of our son's prolonged hospitalization due to osteomyelitis (23 days) was detailed by an ongoing diary. The impact of this hospitalization on our family is presented, including: 1) normal but bothersome behavioural changes in the patient and his sibling; 2) the effects of excessive parental stress; 3) the development of parental coping strategies; and 4) stresses and coping strategies specific to a physician-father. Specific recommendations are presented to assist health professionals in addressing psychosocial issues”
- Wyckoff, 1984 Mediating factors of stress on mothers of hospitalized children(Dissertation)
- Wyckoff, 1985 Mediating factors of stress on mothers of hospitalized children(Article)
- “The present study examined 10 variables for their importance in mediating maternal adjustment to the stress of a child's hospitalization as measured by the State scale of the State-Trait Anxiety inventory and the Hopkins Symptom Checklist. The results showed significant mediating effects for the Trait scale of the State-Trait Anxiety Inventory, a self-report of coping, and socioeconomic status. Level of trait anxiety was the single best predictor of stress for both criterion measures.”
- Jour Pediat 2014 Hospitalised febrile infants and parental stress

