Background: Primary care settings are responsible for conducting periodic developmental screening. The average age when children are identified as having a developmental delay is 5.9 years, which is too late and is cited as a missed opportunity. Children entering school with unidentified developmental delays are at greater risk for morbidities, poor health choices, delinquency, and criminal activity. Many studies have been conducted to explore the developmental screening behaviors of providers in primary care, but only 5 studies have included nurses.

Purpose: The purpose of this research was to explore and describe the developmental screening behaviors, skills, and environmental facilitators/constraints of primary care family nurse practitioners (FNPs) who care for children from birth to five years of age. Fishbein’s Integrative Model of Behavioral Prediction guided the development of this study.

Methods: A qualitative descriptive design allowed for an in-depth exploration of the developmental screening behaviors, skills, environmental facilitators/constraints of FNPs. Demographic and semi-structured questions were developed and reviewed by nurse experts. An online demographic questionnaire was completed by participants. A secure digital conference room was used to conduct individual interviews. Elo & Kyngas’ inductive approach of content analysis was used to interpret the data.

Findings: Twenty-four interviews were completed. Five main themes emerged during data analysis: developmental screening behaviors during well-child visits, developmental screening behaviors when a concern was raised, need for additional developmental screening skill, factors that support developmental screening, and factors that limit developmental screening. Sixteen sub-themes supported the main themes. This study identified that the developmental screening behaviors of FNPs mainly consist of actions that are informal. Most FNPs are not using standardized methods of developmental screening. There is a need for additional education on pediatric development and practice with validated developmental screening tools. The study also revealed EHR templates and staff collaboration supported the completion of developmental screening. Variation in practice, lack of time, parent resistance, referral challenges, and the design of validated developmental screening tools were identified as constraints to the completion of developmental screening.

Clinical Implications: This study serves as a foundation to devising developmental screening recommendations for FNPs in primary care. The findings will inform FNPs and nurse educators of the areas in clinical practice and nursing education that require further research to improve the identification of children with developmental issues.

Patricia Gellasch, MS, APN-C, Doctoral (PhD) Candidate, Villanova University, Villanova, PA

Study IRB provided by: Villanova University

NAPNAP Research Agenda Priority: Health Promotion and Disease Prevention
The Developmental Screening Behaviors, Skills, Facilitators and Constraints of Family Nurse Practitioners in Primary Care: A Preliminary Look

Patricia Gellasch, MS, APN-C, PhD Candidate, Villanova University

Background

American Academy of Pediatrics Developmental Screening Algorithm:
- Validated developmental screening instrument at well-child visits: 9, 12, 18, and 24 or 30 months of age; or whenever a developmental concern is raised by parent/provider

Developmental Screening in the United States 2007 and 2008 (n = 13,485) 2

Early identification is key to long-term outcomes 93
- Perry Preschool, Abecedarian, and the Chicago Longitudinal Studies

Return on investment: $4 to $7 saved for every dollar spent on child development 90
- 80% of funds received by general public

Age appropriate development: 54% to 62% able to leave early intervention demonstrating age appropriate behaviors and developmental milestones

22 quantitative & 6 qualitative mixed-methods studies

Purpose of Study

To explore and describe the developmental screening behaviors, developmental screening skills, and environmental facilitators and constraints of primary care family nurse practitioners (FNPs) who care for children from birth to five years of age

Conceptual Framework

Fischbein’s Integrative Model of Behavioral Prediction54,34
Skill and environmental constraints and facilitators lead to or impede performance of a behavior

Research Questions

- What are the developmental screening BEHAVIORS of primary care FNPs who care for children from birth to five years of age?
- What are the developmental screening SKILLS of primary care FNPs who care for children from birth to five years of age?
- What are the environmental CONSTRAINTS and FACILITATORS identified by primary care FNPs to performing developmental screening in children from birth to five years of age?

Method & Design

Qualitative descriptive design

Sample: Purposive sample of board certified FNPs. Minimum one-year, full-time, primary care experience; caring for pediatric patients from birth to five years of age in primary care settings

Recruitment: Electronic post on Facebook FNP Networking Forum; snowball effect; $25 gift card incentive after data was verified

Setting & Data Collection: HIPAA protected online environment; Virtual Care Works; individual semi-structured interviews and demographic data form via Survey Monkey®

Data Management: HIPAA compliant server for online interviews; all data/recordings downloaded to non-identifying, encrypted file on password protected computer, transcription service with a confidentiality agreement; ATLAS.ti® 7 for coding; data available to Villanova University IRB and one doctorally-prepared researcher for audit trail

Data Analysis: Elo & Kyngas’ Inductive Content Analysis48 open coding, coding sheets, grouping, categorization, abstraction

Findings

- Sample: 24 FNPs (Table)
- Inductive content analysis led to 5 themes and 16 supportive sub-themes (Figure)

Figure. Themes and Sub-themes

Developmental screening behaviors during well-child visits
Developmental screening behaviors during sick-child visits
Need for additional developmental screening
Factors that support developmental screening
Factors that limit developmental screening

<table>
<thead>
<tr>
<th>Theme</th>
<th>Sub-themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early identification</td>
<td>Key to long-term outcomes</td>
</tr>
<tr>
<td>Screening tools</td>
<td>22 quantitative &amp; 6 qualitative mixed-methods studies</td>
</tr>
<tr>
<td>Constraints</td>
<td>79% HO screening</td>
</tr>
<tr>
<td>Developmental Screening in the United States 2007 and 2008 (n = 13,485) 2</td>
<td></td>
</tr>
<tr>
<td>Purpose of Study</td>
<td>To explore and describe the developmental screening behaviors, developmental screening skills, and environmental facilitators and constraints of primary care family nurse practitioners (FNPs) who care for children from birth to five years of age</td>
</tr>
<tr>
<td>Conceptual Framework</td>
<td>Fischbein’s Integrative Model of Behavioral Prediction54,34</td>
</tr>
<tr>
<td>Research Questions</td>
<td>What are the developmental screening BEHAVIORS of primary care FNPs who care for children from birth to five years of age? What are the developmental screening SKILLS of primary care FNPs who care for children from birth to five years of age? What are the environmental CONSTRAINTS and FACILITATORS identified by primary care FNPs to performing developmental screening in children from birth to five years of age?</td>
</tr>
<tr>
<td>Method &amp; Design</td>
<td>Qualitative descriptive design</td>
</tr>
<tr>
<td>Sample</td>
<td>Purposive sample of board certified FNPs. Minimum one-year, full-time, primary care experience; caring for pediatric patients from birth to five years of age in primary care settings</td>
</tr>
<tr>
<td>Recruitment</td>
<td>Electronic post on Facebook FNP Networking Forum; snowball effect; $25 gift card incentive after data was verified</td>
</tr>
<tr>
<td>Setting &amp; Data Collection</td>
<td>HIPAA protected online environment; Virtual Care Works; individual semi-structured interviews and demographic data form via Survey Monkey®</td>
</tr>
<tr>
<td>Data Management</td>
<td>HIPAA compliant server for online interviews; all data/recordings downloaded to non-identifying, encrypted file on password protected computer, transcription service with a confidentiality agreement; ATLAS.ti® 7 for coding; data available to Villanova University IRB and one doctorally-prepared researcher for audit trail</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>Elo &amp; Kyngas’ Inductive Content Analysis48 open coding, coding sheets, grouping, categorization, abstraction</td>
</tr>
<tr>
<td>Findings</td>
<td>Sample: 24 FNPs (Table) Inductive content analysis led to 5 themes and 16 supportive sub-themes (Figure)</td>
</tr>
</tbody>
</table>