FUNCTIONAL HEALTH PATTERNS: NURSING DIAGNOSES IN PUBLIC SCHOOL-AGED CHILDREN AND ADOLESCENTS

Camila Dannyelle Fernandes Dutra Pereira¹, Francis Solange Vieira Tourinho², Joyce Laiça da Silva Ribeiro³, Stephanie Barbosa de Medeiros⁴, Viviane Euzébia Pereira Santos⁵

¹ Master’s student. Graduate Nursing Program. Federal University of Rio Grande do Norte (UFRN). UFRN Nursing Department. Grant from Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (CAPES). Rio Grande do Norte, Brazil. E-mail: camilafernandes_enf@hotmail.com
² Ph.D. in Child and Adolescent Health. Adjunct Professor at UFRN Graduate Nursing Program. UFRN Nursing Department. Rio Grande do Norte, Brazil. E-mail: francistourinho@gmail.com
³ Resident at the Multiprofessional Residency in Health, with concentration area in Neonatal Intensive Care, UFRN. Rio Grande do Norte, Brazil. E-mail: joyce_laiça@hotmail.com
⁴ Master’s student, Graduate Nursing Program, Federal University of Rio Grande do Norte (UFRN). UFRN Nursing Department. Grant from Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq). Rio Grande do Norte, Brazil. E-mail: stephanie_natal@yahoo.com.br
⁵ Ph.D. in Nursing. Adjunct Professor at UFRN Nursing Graduation Program, UFRN and UFRN Nursing Department. Rio Grande do Norte, Brazil. E-mail: vivianeepsantos@gmail.com

ABSTRACT: The study aimed to identify changes in the role-relationship, coping-stress tolerance and belief-value patterns in school-aged children and adolescents at a public school in Natal-RN; and to identify the frequency of nursing diagnoses found in these three patterns. It was a descriptive, cross-sectional and quantitative study, with 5th-9th grade students, constituting a sample of 276, performed from February to March of 2011. An instrument based on the Functional Health Patterns was used to collect data, which were analyzed using descriptive statistics with distribution in absolute or relative frequencies, and discussed based on the literature. The most common nursing diagnoses were: dysfunctional family processes; risk for other-directed violence; and risk for impaired religiosity. Connection between health and education is essential, allowing nurses working at the school setting to promote students’ health, identifying problems and formulating diagnoses, in order to provide appropriate care.


PADRÕES FUNCIONAIS DE SAÚDE: DIAGNÓSTICOS DE ENFERMAGEM EM ESCOLARES DA REDE PÚBLICA

RESUMO: O estudo objetivou identificar, nos escolares de uma escola da rede pública de Natal-RN, alterações dos padrões de papel e relacionamento, de resposta e tolerância ao estresse e de crença e valor, além de identificar a frequência dos rótulos de diagnósticos de enfermagem encontrados nesses três padrões. Trata-se de um estudo descritivo-transversal quantitativo, com estudantes do 5º ao 9º ano, constituindo uma amostra de 276 sujeitos, realizados entre fevereiro e março de 2011. Um instrumento baseado nos Padrões Funcionais de Saúde foi utilizado para a coleta de dados, os quais foram analisados através da estatística descritiva com distribuição em frequências absolutas e relativas, e discutidos com base na literatura. Os rótulos diagnósticos de enfermagem mais comuns foram: processos familiares disfuncionais; risco de violência dirigida a outros e risco de religiosidade prejudicada. A união entre saúde e educação é essencial, permitindo ao enfermeiro que atua no ambiente escolar promover a saúde dos estudantes, identificando problemas e formulando diagnósticos, para realizar a assistência adequada.


PATRONES FUNCIONALES DE SALUD: DIAGNÓSTICOS DE ENFERMERÍA EN ESCOLARES DE LA RED PÚBLICA

RESUMEN: El estudio identificó en los escolares de una escuela pública de Natal-RN alteraciones en los patrones de papel/relación, respuesta de tolerancia al estrés y creencia/valor, y determinó la frecuencia de las etiquetas diagnósticas de enfermería que se encuentra en estos tres patrones. Estudio descritivo, transversal y cuantitativo, con estudiantes de quinto al noveno año, constituyendo una muestra de 276, que tuvo lugar entre febrero y marzo de 2011. Un instrumento basado en los Patrones Funcionales de Salud se utilizó para recoger los datos, que se analizaron mediante estadística descriptiva con la distribución de frecuencias absolutas/relativas, y discutió sobre la base de la literatura. Las etiquetas diagnósticas de enfermería más comunes fueron: procesos familiares disfuncionales; riesgo de violencia dirigida a los demás; y riesgo de deterioro de la religiosidad. El vínculo entre salud y educación es esencial, permite a la enfermera que trabaja en el ámbito escolar promover la salud de los estudiantes, la identificación de problemas y la formulación de diagnósticos, para que realicen la asistencia adecuada.


INTRODUCTION

Health has experienced a process of change over time, trying to find a new meaning, no longer limited to the concept of absence of disease. It starts by defining a new focus of attention, in which the actions consider health to be dynamic, multifaceted and social.¹

In this context, the use of health promotion as an element to redirect policies of the Ministry of Health (MS), aligned to the Unified Health System (SUS), requires cross-sector proposals that enable the development of actions with the most diverse sectors. Because of its scope, education is an important ally in the implementation of these actions, which target the construction of a new culture of health.²

In order to further advance SUS consolidation and to achieve health promotion, the need for union between health and education is unquestionable, modifying the idea that education is exclusively associated with school, whereas health is exclusively associated with health services. These sectors have a duty to overcome these isolated practices, seeking an integrated work that allows the construction of an active subject. Education and health programs must extrapolate the information by integrating values, customs and symbols that design social behaviors and practices.²³

The MS understands that the school-aged period is crucial for health promotion because human beings, in the process of physical and psychological growth and development, at this stage, require heightened attention. The need to increase health care coverage and to improve the quality of services offered to this population is noteworthy.²⁴⁻⁵

Educational activities during school are more productive, since school-aged children and adolescents are more receptive, facilitating planning of strategies that enable identification of health problems and learning about the disease-health process. These actions should value the knowledge of students in the construction of a care proposal centered on the individual.⁶⁻⁷

In order to address this part of the population, the development of studies involving a multidisciplinary team are necessary, enabling interaction and exchange of knowledge to accomplish care together. Because nurses are professionals directly linked to health promotion actions also in schools, they are inserted into this setting, developing not only care practices, but also research in the area, focusing on this specific group.⁸⁻⁹ To do so, nurses can use the Systematization of Nursing Care, which consists of a direction to guide nurses in the identification of health problems during nursing consultations.¹⁰ In order to support this practice, professionals can use the Nursing Process (NP) as a tool, which consists of nursing’s own body of knowledge to organize care, making it more legitimate, autonomous and scientific.¹¹

The NP is a care technology to meet the needs of individuals, regulated in Brazil by the Professional Practice Law (Law n. 7.498/86), which makes it a working tool that can be used by all nurses.¹¹⁻¹² The NP consists of five interrelated steps, among which are nursing diagnoses, which allow the description of patient responses to health problems or vital processes.¹³

NANDA International, Inc. (NANDA-I) defines nursing diagnosis as “a clinical judgment about actual or potential individual, family, or community responses to health problems/life processes, which provides the basis for selection of nursing interventions”.¹⁴:⁶⁵ Through this clinical judgment, planning of care is possible, by identifying existing problems, as well as their risks of occurrence, and the performance of health promotion.¹⁰

In 1982, in an attempt to draw basic areas of collection of fundamental data for nursing, a series of 11 nominal categories called Functional Health Patterns was proposed that assist in the development of nursing diagnoses. These patterns represent traditional and contemporary ideas of nursing, and can be determined by the data collected in the history and physical examination.¹⁵ Such patterns can be described from these data, divided into: health perception and management, nutritional-metabolic, elimination, cognitive-perceptual, self-perception/self-concept, role-relationship, sexuality-reproductive, coping-stress tolerance, value-belief, activity-exercise, and sleep-rest. This proposal classifies nursing diagnoses determined by NANDA-I in the same structure that guides data collection.¹⁴⁻¹⁵ This study is, thereby, justified, because it contributes to the promotion of health in school-aged children and adolescents, as it allows early identification of situations of health/disease, thus preventing risks in adulthood. Moreover,
it is expected that professional nursing education directly relates with the reality of people’s health, in order to encourage critical reflection to build competent and creative solutions to the problems identified.

Considering the relevance of this topic, this study aimed to identify changes in the role-relationship, coping-stress tolerance and belief-value patterns in school-age children and adolescents at a public school in Natal-RN, in addition to identifying the frequency of nursing diagnosis found in these three patterns. It is hoped that its publication contributes to the discussion, the development of scientific knowledge, and actions of those who work and/or live with this group.

METHODS

This was a descriptive, cross-sectional, quantitative study performed in a public school in Natal-RN, chosen as the research site due to its proximity to the Federal University of Rio Grande do Norte (UFRN), and because it is a training site in the undergraduate nursing program, thereby facilitating the development of research. This educational setting does not have a school nurse.

The population was composed of students in the fifth through the ninth grades, in 2011, morning and afternoon periods, totaling 276 school-aged children and adolescents. The available students enrolled in that school year, whose parents signed the Consent Form (for those under 18 years old), were included. Those who refused to participate in the research were excluded, as well as students from the night period, since these were not included in the age group proposal.

After approval by the Ethics and Research Committee of the Federal University of Rio Grande do Norte, registered under CAAE n. 0136.0.051.000-10, data were collected in an auditorium of this school, through individual interviews and physical examinations. The physical space was organized to welcome the children into groups of five, allowing individuality and no interference at the time of instrument application. Completion of the instrument was done by the researchers, previously trained, making it clear that if the student did not want to continue in the study, he could leave the study at any time, respecting Resolution n.196/96 by the MS.

The instrument specifically developed for this purpose consisted of open-ended questions, addressing the 11 Functional Health Patterns, and a guide to physical examination. In this study, three patterns were focused on: role-relationship, coping-stress tolerance, and value-belief.

Data were analyzed using Microsoft Excel 2010 and descriptive statistics, with distribution in absolute and relative frequencies. Out of the diagnoses identified by the study, those with consensus among researchers were included. Moreover, there was participation of nursing experts selected according to criteria adapted from Fehring’s scoring (five as the highest score), which culminated in the development of diagnoses following the NANDA-I classification.

Data were interpreted through dialogue with authors who discussed the topic, concomitantly with the literature, reinforcing or contradicting the data found.

RESULTS

Out of the school-aged children and adolescents surveyed, 52.5% were male and 47.5% were female. Ages ranged from nine to 18 years, categorized in the following age groups: 22.5% between 9-11 years, 66.5% between 12-15 years, and 11% between 16-18 years, with most being 12 years old (20.5%). Regarding marital status, the vast majority were single (99.3%), with only 0.7% married.

With regard to education, the study was performed with 12 classes: 5th grade (14.2%), 6th grade (16.3%), 7th grade (35.8%), 8th grade (15.2%) and 9th grade (18.5%). Out of these students, 60% studied in the morning period and 40% studied in the afternoon period.

Of the participants, 99% only studied, and 1% studied and worked. In terms of place of birth, 77% were from Natal, 10% from other municipalities in Rio Grande do Norte, 11% from other states, and only 2% were from other countries.

In the role-relationship pattern (responsibility and satisfaction with the roles assumed) students were asked about who they were related to / lived with. From this information, it was possible to identify that 51.8% had parents who lived together, 45.3% had divorced parents, and 2.9% had a deceased father and/or mother. Among
separated parents, nearly half did not maintain emotional contact with their children.  
Regarding the coping-stress tolerance pattern, research participants were asked about: what made them irritated day-to-day, and also what they did in such stressful situations. By categorizing what irritated the students, the following categories could be discriminated: 42.5% were arguments/complaints, 28.5% student and/or family defamation, 6.2% prohibitions, 5.0% when someone moved their personal belongings, 10.2% other causes, and 7.6% said that they were not irritated.  
Regarding the second question within this pattern, the students predominantly avoid and/or remain silent in the face of a stressful situation. The other categories identified are presented in table 1.

Table 1 - Distribution of absolute and relative frequencies of the categories of “Coping-stress tolerance - what they do when confronting stressful situations,” according to school-aged children and adolescents. Natal-RN, 2011

<table>
<thead>
<tr>
<th>Coping-stress tolerance</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoids/remains silent</td>
<td>114</td>
<td>41.3</td>
</tr>
<tr>
<td>Argues/complains</td>
<td>61</td>
<td>22.2</td>
</tr>
<tr>
<td>Talks/respects the other</td>
<td>35</td>
<td>12.7</td>
</tr>
<tr>
<td>Performs other activities: “plays ball, runs, listens to music…”</td>
<td>14</td>
<td>5.0</td>
</tr>
<tr>
<td>Gets angry and cries</td>
<td>08</td>
<td>2.9</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>5.8</td>
</tr>
<tr>
<td>Did not know how to answer</td>
<td>28</td>
<td>10.1</td>
</tr>
<tr>
<td>Total</td>
<td>276</td>
<td>100</td>
</tr>
</tbody>
</table>

Regarding the value-belief pattern (practices and conflicts), adolescents were asked about whether they had a religion, what they believed in, and what influence it had on their day-to-day lives. Faced with these questions, 44.6% reported being Catholic, 27.2% Evangelical, 24.2% other religions (spiritualist and agnostic), and 4.0% had no religion. About the second question, 95% believed in God / Jesus Christ, 3.3% in religion, 1% in nothing, and only 0.7% could not answer. The influence on their day-to-day lives was categorized and discriminated in table 2.

Table 2 - Distribution of absolute and relative frequencies of the categories of “value-belief - what influence it has on day-to-day life,” according to the school-age children and adolescents. Natal-RN, 2011

<table>
<thead>
<tr>
<th>Value-belief</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influences everything/many things</td>
<td>80</td>
<td>29.0</td>
</tr>
<tr>
<td>Help</td>
<td>65</td>
<td>23.5</td>
</tr>
<tr>
<td>Protection</td>
<td>53</td>
<td>19.2</td>
</tr>
<tr>
<td>Do not know</td>
<td>13</td>
<td>4.7</td>
</tr>
<tr>
<td>Nothing</td>
<td>27</td>
<td>9.8</td>
</tr>
<tr>
<td>Did not answer</td>
<td>38</td>
<td>13.8</td>
</tr>
<tr>
<td>Total</td>
<td>276</td>
<td>100</td>
</tr>
</tbody>
</table>
Given the health patterns analyzed and the problems presented, it was possible to identify nursing diagnoses among the school-aged children and adolescents and how often they affected them, discriminated as follows: dysfunctional family processes (27.9%); risk for impaired parent/infant/child attachment (14.9%); impaired parenting (5.4%); risk of other-directed violence (13.7%); stress overload (9.8%); risk-prone health behavior (3.6%); risk for impaired religiosity (7.6%); readiness for enhanced spiritual well-being (7.2%), and Impaired religiosity (2.2%).

DISCUSSION

The phase of adolescence is marked by several physical and hormonal changes. However, psycho-affective changes also occur, which characterize school-aged children and adolescents as one of the most vulnerable groups to the serious problems of today, such as malnutrition, prostitution, violence, family disintegration, drug abuse, HIV/AIDS, unwanted pregnancies, among others.17-18

Given this reality, the school is considered a crucial space for health promotion, as a result of its key role in the formation of citizens, encouraging autonomy, the exercise of rights and duties, health control and quality of life, thus encouraging healthier behaviors.19

In this context, the role of the Family Health Teams (FHT) is noteworthy, because they have, as one of their duties, regular assessment of the health of children, adolescents and young people in schools in their coverage territory, with the education teams. These multidisciplinary assessments, which should be performed by FHT professionals with a higher degree, such as nurses, contribute to the identification of risk factors, acting in a preventive manner, and promote adherence to healthy lifestyle habits in this population.19

The role-relationship pattern referred to commitments and relationships, encompassing the satisfactions or disorders in family or social relationships. The family is the reference in which the life history of the individual is involved, and the family environment should be protective, respectful, affective and with relationships of equality. Faced with broken homes, this group becomes more likely to experience situations of suffering and problems.18

From the questions, it was found that almost half of the school-aged children and adolescents (45.3%) had a disruption related to separated parents, proving the current reality in which young people go through family transitions, such as divorce of their parents. This situation apparently creates the idea of inefficiency in the development of adaptive process, implying separation, loss and impact on the whole family, including the children who share the emotions and enter a process of reorganization of the psychological balance.20

Still within this pattern, approximately 50% of separated parents had no affective interaction with their children. The adaptations in relation to the establishment of this attachment depends on the adjustment capacity of care by the person responsible for custody, and the level of conflict between parents after divorce, the level of socio-economic difficulties, and the number of additional stressors that permeate family life.21 Nevertheless, for the participating children, the family still represents support for life, even when this coexistence is not a positive experience.

The pattern of coping-stress tolerance was about the ability to endure challenges to personal integrity, ways of stress management, family or other auxiliary systems, and the perceived ability to control and manage situations. The term stress denotes a physical and/or psychological reaction of the body that occurs when a person is confronted with a situation that annoys, frightens, excites, confuses or even that makes her happy.22

Through the study, it was possible to notice that almost all of the school-aged children reported stress, the vast majority due to arguments or complaints (42.5%) and defamation of the student and/or family (28.5%). These data corroborate the fact that many school-aged children adolescents are subject to stress due to major adaptations that may occur during their development.22

The second question of this pattern was about what the student did when confronted with a stressful situation. As a result, it was found that a large portion referred to: avoid or remain silent (41.3%), and argue or complain (22.1%). Other studies show that the skills of the subject to give appropriate responses to each stressor depend on previous learning of the relevant conduct, the basic ones being: avoidance (escape), coping (attack), and passivity (collapse), corroborating the data obtained in this study.23
The value-belief pattern described the existence or lack of beliefs, and what influence guides the day-to-day choices and decisions. Religiosity collaborates with the formation of moral values of respect and preservation of life, in addition to being an important factor in family structure, responsible for the humanization of the individual, assisting him in building his personality.24

Of the students interviewed, only 4% reported not having a religion. This fact is favorable, since religiosity is considered important in preventing many problems, such as initial drug consumption, and is associated with health and well-being.25

In terms of what they believed in, almost all students said they believed in God, and the vast majority reported that this influenced them in everything/many things, supporting the literature, which shows that religion and spirituality have a positive influence on health in school phase.25

In the patterns role-relationship and coping-stress tolerance, respectively, the nursing diagnoses highlighted were: “Dysfunctional family processes” and “Risk for other-directed violence”, noting that, according to the literature, those are directly related patterns. Family dynamics experienced by the child are of crucial importance in understanding behavior-related problems. Over time, the family routine undergoes changes, experiencing periods marked by stressful circumstances, which play a detrimental impact on family functioning, such as separation, divorce, marital dissatisfaction, among others.26

This family period is known as nonnormative family transitions and, along with parenting practices, biological and social factors, has an influence on behavior problems, including those that are externalized (physical and verbal aggression, stealing, lying, defiance, delinquency, physical cruelty and criminal acts).26 Therefore, families that are able to maintain consistent affective bonding, and in which parents play their roles in a positive way, are essential for preventing antisocial behaviors.27

Regarding the value-belief pattern, the most frequent diagnosis was “Risk for impaired religiosity”25. Religiosity is considered an important element in preventing many problems in the studied population, as in the case of initial use of drugs, and is associated with health and well-being.25

CONCLUSION

Among the school-aged children and adolescents surveyed, male gender predominated, aged 12-15 years, single, and those in the seventh grade during the morning period. Almost all only studied, and were born in Natal-RN.

In the role-relationship pattern, about half the students had separated parents and among those, almost half did not maintain emotional contact with their children. In the coping-stress tolerance pattern, about half the students avoided or remained quiet when confronted with a stressful situation. Regarding the value-belief pattern, half were Catholic and almost all believed in God/Jesus Christ. The predominant nursing diagnoses were: Dysfunctional family processes; Risk for other-directed violence, and Risk for impaired religiosity.

It could be observed, from this study, that school-aged children and adolescents may present changes in several functional health patterns, which require development of an inter-sector practice, which constitutes a daily challenge. Thereby, connection between health and education is essential, allowing nurses working in the school setting to promote students’ health, identifying problems and formulating diagnoses in order to provide appropriate care. By knowing this life phase and its risks, it is possible to reduce health problems.

Importantly, for this study, the limitations are due to the target group of the research. Because they were school-aged children and adolescents, they were often inattentive during nursing consultation. In an attempt to reverse this situation, the researchers used simple and clear language, seeking to use the shortest possible time of the students. Regarding the data found, this study had no limitations for identification and development of nursing diagnoses related to the data of the three functional health patterns studied.

REFERENCES


