

Instructional therapeutic toy in the culture care of the child with diabetes type 1

Brinquedo terapêutico instrucional no cuidado cultural da criança com diabetes tipo 1

Juguete terapéutico instructivo en el cuidado cultural del niño con diabetes tipo 1

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ABSTRACT

Objective: To analyze the experience of the child with diabetes type 1 in the care related to the techniques of glycemic monitoring and insulin application by use of instructional therapeutic toy, in accordance with the culture care. **Method:** Qualitative study with premise of the ethnonursing carried out in secondary public service of reference in the treatment of diabetes, in the city Fortaleza, Ceará State, between January and November of 2014, among 26 school-age children. Based on the Observation, Participation, Reflection Enabler, were developed educational activities using instructional therapeutic toy. **Results:** The children expressed doubts regarding the insulin therapy and the glycaemia checking. They also were interested in the orientations mediated by means of the therapeutic toy in the culture care. They asked about the rotation, location and administration of the insulin. Some children asked for the syringes to play and learn how to inject it in the dolls. **Conclusion:** To bring in this activity promoted approximation and effective communication with the child in the educational approach, increasing its ability in the self care.

Descriptors: Nursing Care; Culture; Games and Toys; Child; Diabetes Mellitus Type 1.

RESUMO

Objetivo: analisar a experiência da criança com diabetes tipo 1 nos cuidados relacionados às técnicas de monitoração glicêmica e aplicação de insulina mediada pelo brinquedo terapêutico instrucional, à luz do cuidado cultural. **Método:** estudo qualitativo com pressupostos da Etnoenfermagem, realizado em serviço público de referência no tratamento de diabetes, em Fortaleza, Ceará, de janeiro a novembro de 2014, com 26 crianças em idade escolar. Com base no modelo observação-participação-reflexão, desenvolveram-se atividades educativas com utilização de brinquedo terapêutico instrucional. **Resultados:** as crianças expressaram suas dúvidas relacionadas à insulino terapia e à verificação da glicemia e demonstraram interesse nas orientações mediadas pelo brinquedo terapêutico no cuidado cultural. Questionaram sobre rodízio, locais e forma de aplicação da insulina. Outras solicitaram as seringas para brincar e aprender a aplicar nos bonecos. **Conclusão:** essa atividade favoreceu a aproximação e a comunicação efetiva com a criança na abordagem educativa, ampliando suas habilidades no cuidado de si.

Descritores: Cuidados de Enfermagem; Cultura; Jogos e Brinquedos; Criança; Diabetes Mellitus Tipo 1.

RESUMEN

Objetivo: analizar la experiencia del niño con diabetes tipo 1 en los cuidados relacionados con las técnicas de monitoreo glucémico y aplicación de insulina por medio del uso de juguete terapéutico instructivo, a la luz del cuidado cultural. **Método:** el estudio cualitativo con supuestos de la etnoenfermería realizado en servicio público de referencia en el tratamiento de diabetes, en la ciudad de Fortaleza, Ceará, de enero a noviembre de 2014, con 26 niños en edad escolar. Con base en el modelo observación-participación-reflexión, se desarrollaron actividades educativas con utilización de juguete terapéutico instructivo. **Resultados:** los niños expresaron sus dudas relacionadas con la insulino terapia y la verificación de la glucemia y demostraron interés en las orientaciones mediadas por el juguete

terapéutico en el cuidado cultural. Se preguntó sobre la rotación, los lugares y la forma de aplicación de la insulina. Otros solicitaron las jeringas para jugar y aprender a aplicar en los muñecos. **Conclusión:** la inserción de esa actividad favoreció la aproximación y la comunicación efectiva con el niño en el enfoque educativo, ampliando sus habilidades en su propio cuidado.

Descriptores: Cuidados de Enfermería; Cultura; Juegos y Juguetes; Niños; Diabetes *Mellitus* Tipo 1.

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INTRODUCTION

According to the International Diabetes Federation (IDF), the diabetes *mellitus* type 1 (DM1) increase about 3% per year among children in preschool age. It is added to this index the improper and late diagnostics, causing major consequences to the child. For two consecutive years, the IDF pointed out as a focus of the campaign the diabetic children and teenagers, aiming to raise awareness of the parents, caretakers, teachers, health care professionals, government, politicians and society in general of a concerning global phenomenon, since diabetes is considered the most prevalent chronic disease during the childhood⁽¹⁻²⁾.

The child with diabetes *mellitus* type 1 faces adversities because of the disease and the treatment that threaten the acceptance of and the adaptation to daily care. Among these unfavorable conditions is insulin therapy, which is considered the cause of suffering, fear and pain. Studies demonstrate that educational strategies using therapeutic toy (TT) help to face the painful life, with participation of the children in the daily care⁽³⁻⁴⁾.

The TT is considered to be a care technology by means of an organized play. It has been used with children in different environments, and been capable to minimize the anxiety arising from unpleasant situations because it encourages the expression of feelings and the involvement of the participant in the therapy and in daily procedures⁽⁴⁻⁵⁾. The BT is classified as: Dramatic Therapeutic Toy, because it aims the expression of feelings, wishes and children experiences; Therapeutic toy Enabler of Physiological Functions Enabler Therapeutic Toy, because it is suitable in the stage of physical rehabilitation of physiological functions, as the new living condition of the child; and Instructional Therapeutic Toy (ITT), because it is used as a facilitating instrument in the child preparation and participation during the therapeutic procedures⁽⁶⁻⁷⁾.

It is observed that the children express emotions and psychosocial factors that may interfere with their ability to control diabetes. Conflicting desires, insecurity, fear, pain, inadequate knowledge, concern about long-term effects, prejudice, rejection and shame arise. It is highlighted the need for a broader professional approach, capable of involving the physical aspects of the disease (glycemic monitoring, insulin administration, diet and exercise); and yet, the emotional aspects and the strategies that led the children who live with the hardships of growing up with diabetes to face it positively⁽⁸⁾.

The understanding of the cultural background of the children and their family, during the nursing interventions, exceeds the instrumental purposes of care. Therefore, the premises of the Theory of Culture Care Diversity and Universality offer major grounds for this experiences investigation, giving support to the nursing care for children with diabetes⁽⁹⁾.

Children with diabetes need to receive social support and specific care from the health care professionals. This will be facilitated from the understanding of their experiences during the illness and therapy. In the face of this reality, the nurse, by encouraging the act of playing in the child care, will develop strategies that will enhance the children's capability, benefiting their creativity and development⁽¹⁰⁾. In that way, the nurse will take care of the children according to their reality, promoting their creativity and motivation of self-esteem to face the life with DM1.

The literature proves that the main resources used in the educational approach of the child with DM1 are puppets, marionettes, guidebook and games. Studies shows that these strategies encourage a considerable approximation with the child, promoting the child's communication and free expression in face of the fears of falling ill and treatment. These resources appear as proposals of support to professionals, children and family to clear up doubts and overcome difficulties, encouraging a positive way of acting in health-disease process⁽¹¹⁻¹³⁾. However, there was a shortage of studies with use of the ITT in the care context of children with diabetes type 1.

Thus, it was chosen the use of instructional therapeutic toy (ITT) due to this resource be recognized as a benefit to communication and simulation of the main care on glycemic control, being possible to raise awareness, empower and re-structure the child's experience in confronting the unpleasant situations of everyday life with DM1.

It is noted that these interactions give a new meaning to child care and maintain the nurse's procedures to implement the use of ITT in child care. The promotion of it as nursing intervention tool brings a new way of taking care of the children and their family, rehabilitating them⁽⁴⁾.

From these considerations, the review had as a question: How the instructional therapeutic toy (ITT) used as mediator of the culture care add to the learning of techniques of glycemic monitoring and insulin application in the view of the child with DM1?

OBJECTIVE

To analyze the experience of the child with diabetes type 1 on the care related to techniques of glycemic monitoring and insulin application by means of using instructional therapeutic toy, in accordance with the culture care.

METHOD

Ethical aspects

The study was conducted following the requirements of the Resolution 466/2012 from the National Health Council about the protection of the research participants. There was

formal approval of the participants, with informed consent form signed by children and mothers. The ethical procedures preserved the anonymity, autonomy and reduction of risks, as well as other precepts on the above-mentioned Resolution. The study is linked to the project called "Children and youth diabetes and educational-therapeutic technology: subsidies for clinical nursing care", approved by the Research Ethics Committee of the Universidade Estadual do Ceará (UECE) on 18 December, 2012 and formally approved by the institution where the study was carried out.

In order to improve understanding and interpretation of the sociocultural background experienced by children with DM1, the meetings were recorded and photographed. Perceptions of the researchers and body expression of the children were registered on a field diary. In this stage, a scholarship holder helped the researchers to record information. To preserve anonymity, there were used codes according to the interview order, from C1 (Child 1) to C26 (Child 26).

Theoretical-methodological framework and study type

Qualitative study with premise of the ethnonursing, method that suggests description and unveiling of the experiences, lifestyle and care practices on the sociocultural background, guided by observation-participation-reflection model of the Transcultural Theory of Leininger. One of the principal concept of this theory highlights that to take care is a verb which refers to actions and decisions of assisting, helping and benefiting the other individual or group with evident needs or that may be anticipated, aiming to improve or perfect a human condition or a lifestyle⁽⁹⁾. This theory suggests the nurse approximation and involvement with the cultural background of the children and their family to unveil their needs and the support practice for the habilitation or standardization of daily care on DM1 control.

Scenario and study period

The information was collected in the secondary care service, reference in the treatment of diabetes of the Unified Health System (SUS), in the city of Fortaleza, Ceará State, from January to November of 2014. The outpatient care of children with DM1 has quarterly frequency and counts on the support of a skilled multidisciplinary team.

Data source

The participants of the research were 26 school-age children with diabetes *mellitus* type 1 diagnosed at least six months prior, which were intentionally chosen. Children clinically unstable at the time of the collection, with hyperglycemia, hypoglycemia or other more acute problem were not included in the study. The number of participants was defined by theoretical-empiric saturation, which means the inclusion of new observations and/or participants that do not express considerable information to the investigation of the current phenomenon.

The participants were between 7 and 11 years of age, being 11 male and 15 female. All of them were enrolled in elementary school, however, some children presented substantial discrepancy between age and grade. It is possibly related to the chronic illness and the need of frequent

hospitalization when there is glycemic decompensation. Nineteen came from the Ceará State's countryside. The average income of the families was two minimum wage. In terms of clinical features, it was identified that some children (30,7%) were not keeping the glycemic control recommended by the Brazilian Society of Diabetes, <8% for HbA1C on children between 6 and 12 years old⁽²⁾.

Collection and organization of data

Information was collected at four meetings with the children, by participant observation, semi-structured interview and educational sessions mediated by instructional therapeutic toy. These meetings took place at private rooms on the days of appointments. The researches began at the observation stage, went gradually to the participation stage and, finally, to the reflection and confirmation of data collected from the children.

Therefore, the first contact with the children was made at the ambulatory corridor, from Monday to Friday, during the morning. The children and their guardian were invited to know the proposal of the study. The following meetings correspond to continuous observation and participation stage, in which the children were individually addressed for the semi-structured interview, with the guiding question: Tell us how you check your "glucose" and how you administer insulin. From the needs expressed by the children about the Glycemic monitoring and insulin therapy, there were organized groups of four to five children for activity with the therapeutic toy. The meeting lasted at least 20 minutes and at most 50 minutes due to the dynamic of the appointments, with multidisciplinary team (nurse, doctor and nutritionist), on the same day.

At the last meetings, the children took part in the educational activities with emphasis on glycemic monitoring and insulin therapy. In these activities were used: dolls made of EVA (Ethylene-vinyl acetate) and cloth dolls pointing out the areas of insulin application, simulation possible complications, such as lipodystrophy and bruises; cardboard refrigerator to show the storage of materials and insulin, all developed by the researchers; syringe with needle; pens for insulin application; bottles of insulin; cotton; isopropyl alcohol 70%; and resistant plastic bottles for disposal. To evaluate the educational activity, the children answered to the question: Tell us about the activity you participated in today. The children received replicas of dolls for training insulin therapy at home.

Data analysis

The analysis followed the stages of the ethnonursing guide: transcription; documentation of information; identification; categorization; theme identification; and description of actions and decisions taken by nursing for the culture care (support, negotiation or standardization of care)⁽⁹⁾. From the understanding of cultural background of the child with DM1, the analysis created two categories: Child experience in the glycemic monitoring and insulin therapy and Culture care of child with diabetes *mellitus* type 1 in the insulin therapy and glycemic monitoring mediated by the instructional therapeutic toy.

RESULTS

Child experience in the glycemic monitoring and insulin therapy

This category addressed the experience of the child with DM1 in the glycemic checking and insulin therapy, making it possible to elucidate feelings, habits and beliefs in the daily care for glycemic control. The children also reported the main doubts and complications related to therapy.

They understood the care is required for the glycemic control, however, they considered the daily insulin injections and the capillary blood glucose monitoring to be unusual procedures in childhood and sometimes painful, stated in the following reports:

This is a terrible disease; I wish I was not diabetic. Everyday we must do the DX [blood glucose monitoring], even at school, and the insulin application, no children like it. (Child 1 - 11 years old)

I think the most difficult is the insulin application, we must take it everyday. Sometimes it hurts, so I don't let my mom to do this, I cry. (Child 7 - 11 years old)

During the participant-observation it was identified sadness expressed on the face of some children and on the behavior such as isolation, shyness and fear, what was also unveiled on the participant's statements:

I wish I was not diabetic. Sometimes I cry in my room so my mom can't see it. It makes her sad. I hope one day all this will end. I wish it was a medicine to stamp out this disease, because it may even kill. (Child 23 - 11 years old)

The children highlighted the presence of body marks and scars due to invasive therapy. For example, bruises, lipodystrophy, bleeding and wounds in the digital pulp, possibly related to several punctures in the glycemic monitoring and to inadequate rotation. During the conversations, the children mentioned these complications:

When I will take insulin, it already bruised and bled. (Child 18 - 07 years old)

This bump in this arm, the nurse told me it was because I applied insulin in the wrong place. (Child 23 - 11 years old)

At the touch of the hands of one child (C7 – 11 years old), it was possible to feel how dry and extremely rough the skin was. The child referred to incidents, during activities and plays at school, of hand numbness and bleeding in the puncture areas:

I had gone to the physical education, to play soccer, then my hand was like dead, with no strength. There was another day that my finger bled. I was at the play court with my friends. I was because I pierced my finger and went to play. (Child 7 - 11 years old)

Some children mentioned they used wrong sized lancets and needles and also made use of these material three or four

times, due to scarce distribution of material recommend for insulin application and glycemic monitoring at the health center:

I only use the syringe with needle, I don't have that pen. I just won once here, the doctor gave me. Sometimes my dad need to buy it because in the health center they give few needles and syringes. There are some needles to pierce the finger [lancets] that I don't like because hurt a lot. When they give that tiny needle, I feel nothing. I keep this tiny needle, then I use it three or four times. (Child 7 - 11 years old)

My mom injects it with the syringe and then put it on the refrigerator to use later. At my health center, they give 30 syringes. (Child 19 - 11 years old)

It was observed, in the application kit, the child (C7) was using needles of 0.45x13mm to inject insulin and to puncture in the digital pulps for the capillary blood glucose test. It was noted the needle in use was already with the bevel deformed, according to records of the field diary. The children were exposed to risks of insulin administration via the intramuscular route (IM), due to needle length.

Another child had a bruise on the right thigh and told that had frequent bleeding on the insulin application area:

It already bled many times, on the arm, leg and belly. Sometimes it hurts a lot, the needle takes time to pierce. This is how it looks [showed the bruise], even when my grandmother administers it. (Child 5 - 09 years old)

A child had difficulty to accept the application on the abdominal area, believing that this procedure may pierce an organ:

I don't want my mom give the injection on my belly, because it may pierce something inside. I think it is the intestine. (Child 21 - 10 years old)

Another participant pointed out the increase of painful sensibility on the thigh and the bleeding as motives not accept the rotation on this area:

Sometimes I administer it and sometimes my mom does. Only on the arm and the belly, I don't like on the thigh because it hurts a lot and bleeds. (Child 20 - 09 years old)

Some children self-administered insulin injections, but were exposed to risk situations, what leads to the need of continuous orientation and supervision by a guardian, to prevent health damage. It is considered that application of inadequate doses of insulin may trigger acute complications, such as hypoglycemia, what possibly happened to the children 6 and 19:

I once administrated insulin in a wrong way. I didn't understand right, I put too much insulin. I even got sick because the blood glucose level was low. (Child 19 - 11 years old)

I already administrated insulin in a wrong way, because my mom had gone out. I got confused with the number of the syringes. I was about to faint and sweating a lot so my brother gave me soda. (Child 6 – 11 years old)

Another risk situation noted was the lack of hand hygiene of the children and inadequate practices of storage and manipulation of materials before invasive procedures.

Usually, the children who practice self-administration of insulin did not give importance to hand hygiene, insulin bottle disinfection, application area antiseptics and medication storage, even aware of the orientation given by the health care:

First I take the insulin in the fridge, put it into the syringe and inject. Then I put the insulin and the syringe on a plate and put it back into the fridge. (Child 25 - 10 years old)

I know how to prepare the insulin, it is just to take it off the container and inject. I sometimes forget to wash my hands [laugh], the nurse X told me I must wash it or use alcohol. (Child 7 - 11 years old)

One day my mom forgot the insulin on the table, it was the NPH, that white one. She just realizes it the following day and injected the insulin, I had no other, but I didn't get sick. When I came to the appointment, my mom told the nurse and she said it must stay in the fridge. (Child 3 - 11 years old)

Other moments of knowledge exchange were appropriate on contact with the children, for example, to identify risk situations related to contamination caused by the environment and their own family. At the meetings, during educational activities, it was observed some children/families used to discard inadequately the material they used in the insulin application and glycemic monitoring.

When I finish the application, I throw it away. (Child 25 - 10 years old)

My grandma burns the syringes in the yard. (Child 15 - 08 years old)

These habits and traditions of some children and families were discussed and settled with the guardian in order to answer and encourage them to discard properly the material used in invasive procedures.

Culture care of the child with diabetes *mellitus* type 1 in insulin therapy and glycemic monitoring mediated by instructional therapeutic toy

In face of the demand identified in the previous category, the researches opted for the following actions for culture care negotiation with children: orientation to hands hygiene before the procedures; orientation to rotation in the capillary puncture for glycemic monitoring; discussion about the care of storage, conservation, preparation, insulin application and material discard; demonstration of injection areas, as well as rotation, skinfold, injections angle and the possible complications, such as lipodystrophy and bruises pointed out in cloth dolls; encouragement to self-administration by children, with simulation of this procedure on cloth dolls and use of educational kit.

These orientations were carried out by means of instructional therapeutic toy. At the first educational activities, the researches used a doll made EVA to show the areas of insulin

application. The child in the Figure 1 was interested and paying attention to the insulin application areas. She used a pen to mark the point of application and rotation.

Afterward, the researchers chose to use cloth dolls, what was better for the simulation of invasive procedures carried out by the children. It is observed in the Figure 2 the use of manufactured dolls made it possible to identify insulin application areas, as well as lipodystrophy related to inadequate or lack of rotation.

The Figure 3 shows another educational moment with a child, carried out at the waiting room of the health center, emphasizing the care of prevention to possible complications related to insulin therapy. In this illustration, the child touches an area that simulate lipodystrophy, becoming alert to the need of rotation of application areas.



Figure 1 – Doll made of EVA used to orientation about rotation and application areas among children with diabetes *mellitus* type 1, in the city of Fortaleza, Ceará State, Brazil, 2015



Figure 2 – Cloth dolls used to guide insulin therapy among children with diabetes *mellitus* type1, in Fortaleza, Ceará State, Brazil, 2015



Figure 3 – Educational activity with the child to prevent lipodystrophy and bruises, performed on cloth dolls, in the city of Fortaleza, Ceará State, Brazil, 2015

The child describes its impression at the touch of an area with possibly lipodystrophy and reported to be surprised by the location of this complication:

It looks like a bump [lump], she had said it happens when we inject in a wrong way, but I didn't know that was the same on the leg. I knew it happened on the belly. (Child 19 - 11 years old)

It is observed in the next picture the children participating in the simulation of insulin preparation and application, yet with low ability, since the child who is injecting insulin cannot do the skinfold. However, the child is willing to learn and have more autonomy in the care of glycemic control. The child reported that to use dolls helped to develop technical skills to use the syringe:

I am learning on this dolls, it is easier than do it on me. I was shaking, but now it stopped a little, because I am still afraid of needles. When I hold it right, the needle entered good. (Child 3 - 11 years old)

According to the information of the field diary, the children was interested in the orientations for the care related to insulin therapy. Some of them questioned about the application rotation, areas and methods; others, asked for the syringes to simulate the application in the dolls. In addition, it was noted relaxation moments, laughs and children being identified with the toy and learning pleasantly.

This use strategy of the instructional therapeutic toy in the teaching/care was highlighted by the children as a moment of recreation, interaction and, at the same time, as possibility to learn about their treatment:

I liked the doll, it is beautiful, I loved you gave it to me. I will do the injection on her, to keep training, right? (Child 7 - 11 years old)



Figure 4 – Children simulating the insulin preparation and application in the doll, in the city of Fortaleza, Ceará State, Brazil, 2015

Today was nice, I liked more the doll with those little dots to inject insulin. When I pierced its arm, it looked like a real arm. (Child 13 - 09 years old)

I was good to learn, because it was fun with these toys. To me, it was better than the things they give on paper, because we forget. But the doll I will take home and keep remembering what was explained. (Child 23 - 11 years old)

I wish it was always like this, it was very fun, because at some days we come and the time goes slow. The best thing was to play with the dolls and with the other kids that also have diabetes. (Child 06 - 11 years old)

DISCUSSION

Life style, behavior and habits are part of echo one's culture and affect health and nursing practices⁽⁹⁾. Therefore, in the context addressed in the studied categories, to observe the world perspective of children with DM1 revealed the painful life of "being a child with a complex chronic disease", that depends on technology and painful procedures. Although the experience of each child/family be unique and meaningful, their life style is similar, since they have in common many life difficulties, expectations and doubts.

From the comprehension of these children's everyday life in daily practices of glycemic monitoring and insulin application, it was identified their traditions, doubts, fears and complications related to the therapy. According to this, the nurse needs to talk with the children about the losses caused to health regarding inadequate practices of insulin therapy and, gradually, the nurse also needs to standardize or deal with the care aiming to improve their skills, by means of the consolidation of new information about safe practice of these procedures at home environment.

Living with the participants, it was observed many situations of suffering and pain that are present in the life of these

children and families. This reality promoted several reflection and inconvenience, since many situations overpass the care-taker status, because they are considered inattention to public health, specially of children with chronic diseases, which depend on care technology. Thus, the difficult accessibility interferes with life quality and child development.

Among these situations, reutilization of needles was a common practice among the children with DM1 that participated in the study, as an alternative to the lack of materials provided by the Unified Health System for treatment continuity. The reutilization of syringes with attached needles is seen as controversial practice and discouraged in some studies, however, the Health Ministry, in the Report 36 of Primary Care, considers that this practice may be orientated by health professionals and highlights that, following the standard of packaging and hygiene to handle it, not all the patients will present infection and wounds on skin or subcutaneous tissue⁽¹⁴⁾.

The main changes resulting from reutilization of insulin syringes and needles are: loss of the syringe measurement scale, needle lubrication and sharpness; risk of needle breaking or fragments of metal jamming on the application spot; crystallization of the insulin that remains in the cannula, blocking the flow in the following application. These changes predispose the children to discomfort and pain during the application of the medication, to error of dose registration, to waste of insulin, to lipohypertrophy and, consequently, to change of glycemic control and to difficult of follow therapy recommendations⁽¹⁵⁾.

It is considered important the nurse to know about these children's sociocultural context for the understanding of which reasons led to the reutilization of these materials, in order to seek for alternatives to minimize health risks. If there is a need for the reutilization of these materials, it is important to orientate how they must be packaged and manipulated.

It is clear that the invasive procedures jeopardized the children's health when performed inadequately or with inadequate materials. Regarding the insulin therapy, the children had difficulty to performed this procedure and had a few information during the many stages of insulin therapy: storage, preparation, application and rotation. The damage to the children's health were intensified by the reutilization of syringes and needles.

In this view, the nurse need to talk with the children about the losses caused to health regarding inadequate practices of insulin therapy, and gradually, to standardize or deal with the care, as proposed by Leininger⁽⁹⁾, in order to improve their skills by means of the consolidation of new information about safe practice of these procedures at home environment.

It is highlighted, yet, the nurse activity during the processes of teaching, promoting and encouraging the care takers of the family to understand how important is the use of technological devices and proper handling. Therefore, the children who depend on the technology will be able to have a healthier development and growth, becoming the major player of the self-care⁽⁴⁾.

Regarding the therapy procedures, when the children have the opportunity to play with hospital materials, performing the same procedures that are performed on them, they are able to

clear up their doubts and curiosities, allaying their fear and comprehending the need to perform them⁽⁵⁾.

Undoubtedly, for the proper handling of child diabetes, education and continuous interdisciplinary behavior are crucial, as well as encouragement of children and family to participate actively, so they can understand basic aspects of the treatment and disease control, by means of sharing the responsibility among health team, child and family, and so provide a better life⁽¹⁶⁾.

According to that, it is considered that the fun stimulation in child care is a benefit for greater interaction with their partners and family members, what is seen as strength and vitalization source. To ensure the right of play, the nurse need to involve the family. Together, they must encourage the children, so they feel safe to face the disease and treatment, minimizing trauma and losses⁽¹⁷⁾.

The use of toys brought moments of recreation and greater interaction between the researchers and children in the sharing of knowledge and acquirement of skills in a pleasure way, with active participation of the children.

Other authors support this when they state the therapeutic toy is not just an instrument of distraction and access to the child's world. This toy also has become important, as long as it may help the child to face the disease's reality, making it possible to them to understand and recover self control before adversities, being essential in their daily life⁽¹⁸⁾. It was observed that to add the therapeutic toy in the culture care of the child with DM1 promoted a unique intervention, considerably more humanized, creative and interactive.

Therefore, the "Culturally Congruent Care", understood as nursing care to children with DM1 in their culture context, involved educational activities, mediated by the sharing of knowledge between the socio-family and professional systems, in the normalization of practices considered as harmful to the children's health or in the negotiation of actions that make easier the co-structuring of care for the healthy life control. It is comprehended that the approach provided by the instructional therapeutic toy improved the children's capacitation to perform techniques of glycemic monitoring and insulin application.

Study limitations

It is identified as study limitation the time, relatively short, to develop educational activities, since the meeting happened before or right after the appointments with the multidisciplinary team, being necessary to interrupt the activities sometimes, so the the child could be evaluated by the team.

Contributions to Nursing

It is reasserted the nurse, during the outpatient or hospital care to the child with DM1, consider the act of playing in the assistance, including the use of ITT as strategy of teaching and orientation. Thus, it will provide a kind of care compatible with the child reality, with their needs, capable of promote moments of leisure and fun. The use of mechanisms more efficient and fulfilling to face the diabetes will lead to the empowerment of child's self-esteem and creative potencial, making it possible to them to be a child.

FINAL CONSIDERATIONS

From the understanding of the way of life the child with DM1, it was possible to promote the educational care using instructional therapeutic toy in the negotiation of culture care. It is understood that, in face of the diabetes *mellitus* type 1 impact in the life of the child and family, the educational approaches must be promoted and practiced aiming to talk about the practices of care for the child and family members in the know-how qualification from the glycemic controlling to the comorbidities prevention.

It is observed that to add the instructional therapeutic toy in the negotiation of nursing culture care among children with diabetes *mellitus* type 1 led to unique intervention, considerably more humanized. It is concluded that the educational

approaches with the instructional therapeutic toy improved the child's living with the procedures of insulin therapy and glycemic monitoring.

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