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Fundamental Aspects for Psychological Evaluation in Pediatric Kidney Transplantation

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ABSTRACT

Introduction: Kidney transplantation is the treatment of choice for patients with severe Chronic Kidney Disease, as it offers better survival and quality of life compared to dialysis treatment. Children and adolescents with Chronic Kidney Disease, from a very young age, experience recurrent hospitalizations, undergo painful procedures and exams, in addition to presenting impairments in their physical, cognitive and emotional development, with implications for their self-image, psychosocial issues and adherence to treatment. The psychological assessment in the pre-transplant period makes it possible to identify risk factors through the understanding of the individual's integral dynamics. **Objective:** To analyze the fundamental aspects of psychological evaluation in pediatric kidney transplantation. **Methods:** Integrative review with scientific articles published from 2010 onwards, in Portuguese, Spanish and English, available in the SciELO, PubMed and BVS databases, with a thematic content analysis proposed by Bardin. **Results:** The results pointed to the scarcity of studies on the subject, especially recent and regionalized studies. Most of the articles did not specifically address psychological assessment in pediatric kidney transplantation, however, they pointed out fundamental aspects to be observed during the assessment, with a prevalence of themes such as: lack of autonomy, negative self-perception, emotional repercussions, in family relationships and adherence. **Conclusion:** Psychological assessment in pediatric kidney transplantation makes it possible to identify risk factors that may contraindicate treatment or create interventions that contribute to positive results. The importance of carrying out more studies in the area is highlighted, considering the sociocultural interference and the work in a multidisciplinary team.

Descriptors: Renal Insufficiency Chronic; Kidney Transplantation; Nephology; Health Psychology.

INTRODUCTION

Renal replacement therapies are considered highly complex procedures by the Brazilian National Health System and are indicated for patients with end-stage chronic kidney disease (CKD), characterized by the progressive loss of kidney function, as well as the metabolic, hormonal, and homeostatic functions for which the kidneys are responsible. The etiology of CKD is diverse and can vary with age. In children and adolescents between the ages of 5 and 15, hereditary and acquired kidney disease is prevalent.[1,2]

Kidney transplantation is the treatment of choice because it offers better survival and quality of life than dialysis (peritoneal dialysis and hemodialysis). The latter are generally seen as transitional therapeutic modalities while awaiting transplantation.[3]

To perform the transplant, it is necessary to be on the organ waiting list, in accordance with Ordinance No. 2600, of October 21, 2009, which approves the technical regulations of the National Transplant System, and with Decree No. 268, 1997. In the case of children who are kidney transplant candidates, admission to the list can occur without the need to be on dialysis, with priority given to donors under the age of 18.[4,5]

The Brazilian Transplant Registry respective to the year 2019 disclosed that 310 pediatric patients underwent kidney transplantation in Brazil. In 2020, a drop in the number of pediatric solid organ transplants was recorded due to the pandemic context caused by SARS-CoV-2, with 232 pediatric kidney transplants occurring. In 2021, even in a pandemic context, 307 pediatric kidney transplants were performed in Brazil, showing an increase of 21% in the number of procedures performed in relation to the previous year. In that same year, 480 children and adolescents joined the waiting list for pediatric kidney transplantation, corresponding to 50% more than in 2020. The estimated waiting time on a list has not been disclosed in any of the documents.[5–7]

The treatment of transplantation must occur in a coordinated and integrated manner by a multiprofessional team, starting preoperatively and extending throughout the treatment. In the case of pediatric transplants, the peculiar process of development and growth that involves biological, metabolic, immunological, social, and psychological aspects must be considered, as well as the inclusion of children and their caregivers in the care process. Such care is essential because it makes it possible to bring the patient and his family closer to his treatment, helping them to understand and adhere to it.[2]

Psychosocial evaluation in pretransplantation pediatrics

CKD and transplantation are events that have significant effects on child development. From a very young age, children are subject to frequent examinations, painful procedures, and hospitalizations, and it is paramount to know the child's understanding of their illness, including their fears, hopes, and coping resources, and the professional can provide honest and realistic information about transplantation. These issues must be addressed from pretransplant onward.[8,9]

Pretransplant corresponds to the phase that includes medical and psychosocial evaluations of the candidate and their family, as well as the waiting period for the organ. In this process, professionals from various specialties are needed, such as psychologists, social workers, nutritionists, physiotherapists, doctors, nurses, pharmacists, and dentists, so that a multiprofessional approach can be taken, considering the needs of the candidate child and its family in an integral manner.[10]

A therapeutic alliance is sought with the patient and their family, which allows the identification of emotional and cognitive aspects, knowing the history of medical/surgical problems, psychiatric histories in the family, family coping strategies, evaluating risk factors for possible nonadherence, and understanding the family's relationship with the multidisciplinary team.[10]

Multidisciplinary care from the beginning of the process can help the child and the family members regarding the appropriation of the whole process, as well as the possibility of facing highly stressful situations such as: the fear of the worsening of the disease and the child's death, the feeling of loss of control of the situation, financial difficulties, feelings of helplessness by the parents, guilt for the hope in the death of other people, competitiveness with other parents, anger, doubts about the real needs of the transplant, anxiety, depression, and the family's feeling that they forget that the child is on the waiting list.[10]

Transplant-related fantasies

Transplantation can improve the quality of life of children with CKD; however, in many cases, the recovery process can take a long time and the child may never reach the development levels that he or she would have reached if he or she had been in regular health.[10] Children and adolescents complain of feeling perceived as sick or victims of prejudice due to body image changes resulting from CKD, which slows development and body growth.[11]

In an exploratory research conducted to address the fantasies of children and young people between 11 and 20 years old regarding kidney transplantation, Carreiras[12] points out that while the research participants were in a regular hemodialysis program and longed to undergo a kidney transplant, they verbalized lines such as: "I will get well when I get a new kidney" and "Transplantation is getting well! Then there will be no problem" (p. 165). The author points out that the interviewees reported pretransplant attribution of the procedure as a cure or rebirth, but that post-transplant they will confront this idealized kidney with the real one.

There is a gap between pre- and post-transplantation, which can be translated into the difficulty of dealing with the fact that a foreign organ has been placed inside your body, and with the likely death of a donor. Concomitantly, one sees euphoria manifesting itself along with the return of the body's functionality. In interviews with children and young people, Carreiras identifies fantasies about the donor, as being an idealized being who magically transmitted their characteristics to the organ recipient. The author also points out behaviors in which the abdomen is groped and caressed, representing care and protection of the transplanted organ.[12]

Adherence

Adherence to immunosuppression is crucial in the outcome of kidney transplantation. The survival of the transplanted organ currently exceeds 90% at the end of the first year, and adherence to immunosuppression is a fundamental factor for the success of the treatment.[13]

It is fundamental that, from the pre- to the post-transplant, a multiprofessional team follow-up is carried out, aiming at an integral treatment of the child, in its physical, psychological, and social aspects.[10] It is estimated that the greater the psychological distress, the lower the adherence to treatment, suggesting that psychological well-being can directly impact the long-term outcome of a transplant.[14]

Children approaching adolescence and adolescents have the highest rates of medication nonadherence in the post kidney transplant setting, having an increase in failure rates at age 11 years and peaking between the ages of 17 and 24 years. This is an age group that needs focused care, because of the complex transformations that occur in physical development, which precedes emotional maturity.[14]

Other aspects to consider regarding nonadherence may be related to communication issues between parents and patients, between doctor and patient, and signs of depression or anxiety. Risk factors for nonadherence can be identified and worked on by contributing a combined approach of health education, child and parent involvement in care, self-monitoring, and problem solving.[14]

OBJECTIVES

The general objective of this paper is to analyze the fundamental aspects for psychological evaluation in pediatric kidney transplantation. The specific objectives are to understand the proposals to perform psychological evaluation in pediatric kidney transplantation; to identify the professionals who participate in pretransplantation; and to survey the number of publications on the subject, considering the place of publication.

METHODS

This is an integrative review, which aims to analyze the fundamental aspects for psychological evaluation in renal transplantation in pediatrics. Articles published as of 2010 were selected, considering the importance of updated studies, in Portuguese, Spanish, and English, selected through search filters, available in SciELO, PubMed, and BVS databases.

For the search, the following descriptors were used: psicologia AND transplante AND criança AND rim, pré-transplante AND rim AND avaliação psicológica, and transplant AND kidney AND psychology AND pediatric.

Duplicate articles, articles with unavailable links, articles published before 2010, and articles that did not cover the topic were excluded. Publications that dealt exclusively with transplantation of other organs and tissues were not included, considering the specificity of each organ.

For data analysis, Bardin's content analysis was used, which is organized in three chronological poles, being: 1) preanalysis; 2) exploration of the material; 3) treatment of the results, inference, and interpretation. Preanalysis is the actual organization phase, with the objective of systematizing the initial ideas. The exploration of the material consists of coding, discounting, or enumerating, according to the systematizations already formulated. The treatment of the results obtained and interpretation proposes that the raw results be treated in such a way as to be meaningful and valid, and may include statistical operations, as well as results tables, diagrams, figures, and models, which condense and highlight the information provided by the analysis. In this way, the researcher can propose inferences and anticipate interpretations regarding the planned objectives, or with regard to other unexpected discoveries.[15]

RESULTS AND DISCUSSION

From the article inclusion and exclusion criteria, 7 publications were selected. During data collection, it was noted the scarcity of publications focused on psychological assessment in pediatric kidney transplantation, especially recent and regionalized research.

When searching for the descriptors "pré-transplante AND rim AND avaliação psicológica" in the BVS platform, 16 publications were found, with no inclusions in this research. There was an article with an unavailable link. The same descriptors were searched on the PubMed and SciELO platforms, with no results.

Regarding the search for the descriptors "psicologia AND transplante AND criança AND rim" in the VHL platform, 184 publications were found, of which 3 were selected. There was a duplicate article not included. No results were found on the PubMed and SciELO platforms.

When searching the descriptors "transplant AND kidney AND psychology AND pediatric" in the VHL platform, 135 articles were found, and 3 were included. A duplicate article was deleted. On the PubMed platform, 337 articles were found, and only 1 was included. In a search in SciELO, with the same descriptors, only 1 article was found, which approached quality of life after pediatric renal transplantation, and was not included.

A total of 681 articles were excluded. During data collection, some frequent themes were noted among those that did not cover this study, being: adherence, quality of life, parental relationships in living donor transplantation, neurocognitive development of the child with CKD, long-term effects of transplantation, post-transplant pregnancy, mental disorders and transplantation, graft rejection and post-transplant complications, survival, maternal caregivers, media and transplantation, technical issues of transplantation, and a study on the relationship of the phases of the moon with transplantation.

Table 1 provides data from the selected articles, identifying the title, authors, year, journal and place of publication, and the summary of the method used.

Table 1. Data from the selected articles.

	Title and authors	Year	Journal and place of publication	Summary of the method used
1	Experiences of Korean adolescent renal transplant recipients Authors: Kim S, Choi H.	2016	Journal for Specialists in Pediatric Nursing South Korea	Qualitative descriptive study with nine adolescent renal recipients aged 12 to 18 years. Content analysis was used to analyze data from individual interviews.
2	Children's experiences and expectations of kidney transplantation: A qualitative interview study Authors: Walker RC, Naicker D, Kara T, Palmer SC.	2018	Nephrology New Zealand	Semistructured interviews with 13 children and adolescents (aged 7 to 17 years) who received kidney transplantation in New Zealand. The findings were conceptualized using thematic analysis with inductive coding.
3	Psychological functioning and psychosocial issues in pediatric kidney transplant recipients Authors: Amatya K, Monnin K, Steinberg Christofferson E.	2020	Pediatric Transplantation United States	A review study examining psychological and psychosocial factors related to medical outcomes and overall post-transplant well-being, using the Pediatric Psychosocial Preventative Health Model (PPPHM) instrument and referencing existing literature on risk and resilience.
4	Waiting for transplant: Physical, psychosocial, and nutritional status considerations for pediatric candidates and implications for care Authors: Anthony SJ, Annunziato RA, Fairey E, Kelly VL, So S, Wray J.	2014	Pediatric Transplantation Canada	Review aimed at discussing the physical, nutritional, and psychosocial aspects of the transplant waiting period for children and adolescent transplant candidates and the impact on their parents and siblings.
5	Psychosocial Assessment Tool 2.0_General: Validity of a psychosocial risk screener in a pediatric kidney transplant sample. Authors: Pai ALH, Tackett A, Ittenbach RF, Goebel J.	2011	Pediatric Transplantation United States	To present the preliminary psychometric properties of the Psychosocial Assessment Tool 2.0 (PAT2.0GEN), a brief screening was conducted with 45 caregivers of children and adolescents who received kidney transplantation. PAT 2.0GEN and the Pediatric Quality of Life Inventory (PedsQL) were applied.
6	Exploring the information needs of adolescents and their parents throughout the kidney transplant continuum Authors: Korus M, Stinson JN, Pool R, Williams A, Kagan S.	2011	Progress in Transplantation Canada	Qualitative descriptive study. Focus groups (n = 2) using a semistructured interview guide. The transcribed data was organized into categories that reflected the emerging themes using simple content analysis. A convenience sample of 8 adolescents (50% female) who varied in age, donor type, and time since transplantation was recruited from a large Canadian tertiary pediatric center.
7	Exploration of the Stanford Integrated Psychosocial Assessment for Transplantation With Psychosocial and Medical Outcomes in Kidney and Kidney-Pancreas Transplant Recipients Authors: Chen G, Bell CS, Loughhead P, Ibeche B, Bynon JS, Hall DR, et al.	2019	Progress in Transplantation United States	The Stanford Integrated Psychosocial Assessment for Transplant (SIPAT) was administered to all pretransplant candidates. A retrospective review of transplant patients who had at least 6 months of follow-up was completed.

The 7 publications included do not specifically address psychological assessment in pediatric kidney transplantation, but portray the fundamental aspects to be considered during the evaluation from the pretransplantation period, which, when understood, enable the targeting of interventions during treatment, as well as the identification of risk factors that may contraindicate transplantation or even impair adherence to treatment.

The selected studies were conducted in different countries: 3 publications in the United States, 2 in Canada, 1 in South Korea, and 1 in New Zealand. No Brazilian publications were found that fit the inclusion criteria of this research. This aspect presented itself as a limitation, since it is not possible to generalize the results reliably due to sociocultural differences. In this sense, the importance of studies for the development of psychological evaluation instruments for kidney transplantation in pediatrics is highlighted, as well as regionalized studies that consider the sociocultural differences that influence social behavior, forms of adaptation, and coping. It is also noteworthy that the regional adaptation of psychological assessment instruments enables the comparison between groups from various cultures and languages, allowing the achievement of assessment equity.[16]

As for the professionals involved in pretransplantation, the articles do not establish criteria for the minimum team to perform a comprehensive evaluation of the child or adolescent candidate for transplantation and his family. However, the authors point out interventions performed by nutritionists, nurses, physicians, and psychologists, highlighting the importance of care involving these professionals. It is noteworthy that multiprofessional care, performed by a wide range of health professionals, allows interventions aimed at the integral care of the child from the preoperative period to the course of treatment. Most studies have been done or developed after transplantation, but investigating about the whole process prior to transplantation through interviews with recipients and their parents or caregivers.

Based on the content analysis, the frequency of common themes in the research related to: lack of autonomy, negative self-perception: *not being normal*, emotional repercussions, implications for family relationships, and adherence.

To better portray the themes, they will be addressed in subsections.

Lack of autonomy

Articles 1, 2, 3, 4 and 6 (Table 1) addressed the lack of autonomy, portraying the non-inclusion of children and adolescents in decision-making related to transplant treatment. During the interviews with adolescents between the ages of 12 and 18, the participants stressed that they had not received enough information about the treatment, such as how to perform the surgery and the care needed before and after the procedure. Thus, they had no space to express their opinions and emotions about the subject, as well as to clarify doubts. The interviewees emphasized that they had been placed in a passive position, so the lack of information and exclusion from decision making influenced their health management and quality of life. The authors of the survey highlight this finding as critical, due to the adolescents needing to take care of themselves actively and willingly after transplantation.[17]

Lack of communication with the child or adolescent can trigger stress and anxiety. Investing in effective communication allows the patient to take ownership of their care and feel more welcomed and emotionally prepared to receive the transplant. The failure of the communication process is configured as one of the main stressors during the transplantation process.[17]

In a survey of children and adolescents between the ages of 7 and 17, the adolescents openly discussed during the survey interview about the lack of support and information from pre- to post-transplant, being more difficult to be able to deal with their emotions and fears. They highlighted intense fear and anxiety, focused on the worry about the possibility of death or transplant failure. One of the participants in this research reported frustration after transplantation at the discovery of the risk of developing cancer, because his expectations about the treatment had not been addressed from the beginning of the process.[18]

Regarding the need for information during the transplantation process, it was noticed in one of the studies the difference between adolescents and children. The children showed a preference for reassurance, while the adolescents wanted to receive more information about the process and treatment. In the children's report, the authors highlighted a quest to feel less anxious by letting their parents make more decisions for them. Adolescents, on the other hand, reported that the lack of information left them *not knowing what to expect*, and they felt unprepared. Children and adolescents described the use of technology and animation as an important way to aid learning as it supported understanding, adherence and self-management. Many used age-appropriate websites and their own cell phones with alarms and reminders as they better understood the treatment.[18]

One study pointed out that ignorance about the transplant process becomes a risk factor that increases vulnerability to non-adherence and influences quality of life when using a tool to assess psychosocial risk factors in pretransplantation. Performing a psychosocial assessment and knowing emotional aspects, understanding and motivation for transplantation, as well as expectations, allows one to identify and endorse factors that promote resilience and interventions to support positive outcomes.[19]

When it comes to the waiting time for transplantation, patients were more comfortable and likely to disclose confidential information about themselves when they had enough information about the transplant process and felt more trust in the team, not focusing their concern on being selected for the listing.[20]

Negative self-perception: Not being normal

The negative self-perception was guided by articles 1, 2, 4, 6 (Table 1), in such a way that children and adolescents reported not feeling normal, due to the alterations suffered in their physical appearance, as well as the impairment in their development, the difficulty in frequenting places that their peers usually go, as well as other psychosocial impairments.

Adolescents reported feeling different from their friends, as if their bodies resembled *a robot*, because the need for medication and the installation of dialysis devices brought limitations in performing activities and changes in their appearance. One of the reports dealt with the period of dialysis treatment, in which an adolescent presented *difficulties in making friends because he was paunchy*. Some adolescents pointed out that they became a *laughingstock*, being isolated from their peers because of their appearance (e.g., being small and having a lot of body hair), often being bullied, and being called a *monkey* by their peers (referring to their increased hair due to treatment).[17]

Changes in appearance and physical functioning can influence the psychosocial presentation of patients and their families, as decreases in exercise tolerance can exacerbate feelings of isolation and boredom. The *desire to be normal* and changes in body image are one of the main stressors, along with pain and failure of communication processes.[18,20,21]

Children who were able to share experiences with peers who also went through dialysis and/or transplantation felt encouraged. Interpersonal relationships are important tools for a better quality of life, and the contact with peers who have also gone through similar experiences, besides allowing the development of social skills, builds a sense of belonging and a space to share experiences and develop coping resources.[18,20]

Emotional repercussions

Chronic illness leads to changes in development, recurrent hospitalizations, painful procedures, loss in school attendance, among other biopsychosocial damages, which bring important emotional repercussions to be evaluated and identified, in order to develop interventions that enable a better quality of life and adherence. This theme was addressed in all the selected articles.

Little is known about kidney transplantation from the perspective of children and adolescents, as existing studies address the perspectives of parents.[18,21] Knowing the perspective of children and adolescents on their treatment allows access to their emotional repercussions, such as fear, anxiety, hope, sadness, and joy, and to build coping strategies that contribute to the development of autonomy and protagonism in self-care.

Children and adolescents between 5 and 19 years old pointed out in the interviews the difficulty in dealing with negative emotions, such as sadness, anxiety, and anguish. They openly expressed about how CKD and transplantation impacted their emotions and coping. Feelings of anxiety and depression were reported. For some, the anxiety was related to not being able to find a donor, the apprehension that the transplant could fail at any time, or even the fear of experiencing side effects from the transplant.[18]

Psychological factors are important for positive transplant results. There is still little literature that synthesizes these factors into a more comprehensive model and in a targeted manner for pediatric kidney transplant candidate patients. Pediatric kidney transplant recipients are more susceptible to mental health problems such as depression, anxiety, ADHD, and delays in body and neurocognitive development compared to healthy peers, and it is important to carefully monitor patient functioning with empirically validated tools and intervene in a multidisciplinary manner, minimizing risks.[19,22]

The psychologist is a key member of the multidisciplinary team. While much focus is given to risk factors related to the mental health of the pediatric transplant recipient, it is important to identify and endorse protective factors, which promote resiliency and positive treatment outcomes.[19]

Before transplantation, children and adolescents are often isolated from their peers due to deteriorating health and frequent hospitalizations, and there are still restrictions on some activities as a result of increasing physical limitations, as well as parental anxiety and overprotective behavior. Contact with peers in childhood and adolescence allows the sharing of knowledge, the building of interpersonal and group relationships, the development of language and symbolism, among other skills and abilities. Limitations in social activities impact the development of speech and social skills.[21]

Developing self-care strategies and social support assists in better treatment management. Knowledge about transplantation and social support stood out as coping strategies in face of the stressors present in the transplantation process. Psychological evaluation is essential for identifying risk factors and directing care.[20,23]

Implications for family relationships

During the transplant process, families experience a series of adaptations that can incite feelings of anguish, fear, nervousness, anger, and anxiety, leading to implications for family relationships. The theme was addressed in a more or less specific way in all the selected publications.

Adolescents reported mixed feelings related to their mothers, regardless of whether they were their kidney donors. One of the highlights was the overprotectiveness on their part, who were anxious even after the transplantation had been performed. Many mothers proposed plans to their children such as: not getting married, on the grounds that their child is not in a healthy condition; wearing a mask to appear sick or weak and be able to get more help when they need it; not going to the water (beaches, pools) so that the kidney does not *get detached*.[17]

Although they were not comfortable with their mothers' reaction, the adolescents expressed gratitude for the care. In particular, adolescents who received their kidney from their mothers regarded them as their savior, having *given them life twice*.[17]

There were reports of guilt over the relationship with siblings, who began to receive less attention from parents or caregivers, due to the frequent hospitalizations and care needs of transplant recipients, affecting relationships. Also punctuated was the loss of trust and familiarity with siblings due to being quite a long time apart.[18]

Receiving the organ from a family member can provide feelings such as gratitude, a sense of obligation, guilt, and anxiety. Complex emotions and strong anxiety have been described by children due to having one of their parents as a kidney donor. Feelings of frustration were reported due to parents not receiving the same care, having to stay in an adult inpatient unit, which they reported as being less comfortable than the pediatric ward. There were concerns about not knowing if the parents were being well cared for.[18]

Adherence

There was a consensus in the selected publications that the evaluation of the candidates and their families for transplantation from the beginning of the process enables the identification of risk factors, making it possible to contraindicate the procedure or even enable interventions that improve adherence.

The presence of psychiatric factors and psychosocial concerns, such as anxiety, depression, low self-esteem, difficulties in relationships, emotional and behavioral problems, were related to nonadherence. The complexity of care also hinders good compliance, since forgetfulness, a relative attitude toward the disease, and difficulty with time management are often present.[19]

There are many mentoring groups for transplanted adults, and such an intervention can be delivered with the pediatric audience effectively. Such programs can help with feelings of isolation, provide space to share feelings, and mobilize coping techniques.[21]

Resilience, defined as a process of adaptation through the development of strength and skills to overcome the negative impact of adversity, risks, and vulnerabilities caused by compromised health, is pointed out as significant for positive long-term outcomes in transplantation, improving emotional, behavioral, and health development, impacting adherence. However, little research has addressed resilience in pediatric kidney transplantation.[19]

FINAL CONSIDERATIONS

The articles pointed out that the fundamental aspects to be observed in the psychological evaluation are: lack of autonomy, negative self-perception, emotional repercussions, implications for family relationships, and adherence. Addressing such aspects in the psychological evaluation in pediatric kidney transplantation allows the identification of risk factors that may interfere with the treatment in the short, medium, or long term, enabling the development of coping strategies that contribute to positive results, leading to better quality of life, adherence, or even to the contraindication of this treatment modality.

The scarcity of studies, especially recent and regionalized ones, has been noted. Other topics, such as adherence and quality of life, are more frequently addressed in research related to pediatric kidney transplantation. Due to the scarcity of studies, especially in different regions and countries, it is not possible for the results to be reliably generalized due to the possibility of sociocultural interference. It highlights the importance of developing instruments for psychological assessment in pediatric kidney transplantation and regionalized studies, considering the need for sociocultural adaptations.

The publications found do not suggest a minimum team to perform the pretransplant evaluation, however, they show the contribution of psychologists, physicians, nutritionists, and nurses in the construction of care from pretransplantation on. They highlight that multiprofessional care, performed by a wide range of health professionals, allows interventions aimed at the integral care of the child from the preoperative period to the course of treatment. Studies that can articulate the multidisciplinary work can help in the comprehensive health care of children and adolescents candidates for kidney transplantation and their families.

The psychological and multidisciplinary monitoring contributes to the minimization of emotional stress, since, by identifying the demands and doubts of children and adolescents who are candidates for transplantation and/or transplanted and their families, it is possible to develop interventions based on health education, minimizing the suffering related to the lack of knowledge and fear of the transplantation process.

Bringing children and adolescents into contact with their peers through therapeutic groups and mentoring enables the expression of feelings, the sharing and clarification of doubts, and the development of self-care strategies. Resilience was also pointed out as an adaptive coping strategy, which, when developed, allows better skills to deal with the challenges of the transplantation process, but it was still little addressed in the studies.

AUTHORS’ CONTRIBUTION

Substantive scientific and intellectual contributions to the study: Silva ALF and Ariente LC; **Conception and design:** Silva ALF; **Data collection, analysis and interpretation:** Silva ALF; **Article writing:** Silva ALF; **Critical review:** Silva ALF and Ariente LC; **Final approval:** Silva ALF and Ariente LC.

AVAILABILITY OF RESEARCH DATA

All data sets were generated or analyzed in the current study.

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