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Psychological needs in caregivers of patients undergoing hemodialysis treatment

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— Abstract—

The conditions of the kidney patient on hemodialysis demand the actions of a caregiver. The assumption of the role implies conflicts, lack of personal interests, frustrations, negative emotional states, overload, and dissatisfaction with needs. The objective was to describe the psychological needs of patients with kidney disease caregivers undergoing hemodialysis treatment. A multiple case study was used as the research design. The research was carried out during the first quarter of 2020 in Cuba. A qualitative instruments system was used, the sociodemographic data questionnaire, RAMDI, and in-depth interview. A non-probabilistic intentional sampling of type cases was carried out for the selection of twenty caregivers. The use of Atlas.ti for data processing and organization facilitated content analysis. Psychological needs are identified in the caregivers of hemodialysis patients associated with leisure and recreation, delayed by the lack of social, family, and institutional support. There is evidence of a high hierarchy of needs related to health, family duty, and well-being. Needs related to the well-being of their family member were also verified, combined with other needs of an individual type for the satisfaction of their own interests. It is concluded that the psychological needs of caregivers guide their role, assumed as a family duty that mobilizes their daily behavior. It is emphasized that to guarantee the quality of life of patients on hemodialysis, their goals, aspirations, and life projects are relegated.

Keywords:

Needs; caregivers; kidney disease; hemodialysis.

Hemodialysis is one way to treat advanced kidney failure, especially when a transplant is not available. In Cuba, the service is offered in provincial hospitals three times a week in sessions of three to five hours each. It intends to prolong the life of the patient, however, it may involve other conditions such as hypotension, hypertension, anemia, itching, infections, exhaustion, sleep disorders, depression, and anxiety. The invalidating nature of hemodialytic treatment demands a caregiver who offers instrumental and emotionally supportive care (Martínez *et al*, 2017; Grau *et al*, 2019).

The primary caregiver is distinguished by his or her dedication to the custody, temporary or permanent protection of a family member due to lack or loss of physical, mental or intellectual autonomy, need for assistance or help to perform ordinary tasks of daily life and, in particular, those related to personal care (Rosell, 2016). The caregiver is the person in charge of helping with the basic and instrumental needs of the patient guaranteeing the reorganization, maintenance, and cohesion of the family and, therefore, holds most of the physical and emotional overload of care (Vásquez & Vercely, 2015; Aguilera *et al*, 2016; Zenteno *et al*, 2019).

The patient's care in hemodialysis is a complex and demanding activity that threatens the emotional balance, freedom, intimacy, social activities, and leisure of the family member who assumes the task of caring (Martínez *et al*, 2019). Faced with these conditions, multiple physical, psychological, and psychosocial needs appear and fail to be fully satisfied. The assumption of the role implies conflicts, lack of personal interests, frustrations, negative emotional states, overload, as well as dissatisfaction with material or spiritual needs (Martínez *et al*, 2019).

Necessity as a psychological category is defined as the personality's stable quality, carrier of a constant emotional content, which guides the subject in a stable direction of their behavior (González-Rey, 1989). The psychological process of seeking satisfaction integrates into itself moments of dissatisfaction, which, although contradictory, in turn, represents the dynamism of human behavior (Fernández-Ruiz, 2005). Necessity is an active-passive state, active because it implies the aspiration to its satisfaction, and passive because it reveals the dependence of the individual on the object. It is a characterological property of the personality that manifests itself in states, processes, and psychic reflexes that express the subject's interaction with their environment (González-Serra, 2008).

At the international level, multiple studies are identified that explore or describe the needs of the caregiver population (Basilio, 2017; Huérfano *et al*, 2018; Rada *et al*, 2019; García, 2020). Some of these needs are oriented toward the promotion of adaptation and coping, information and education, monitoring and retraining, decision-making capacity, and narrow links with

the health team (Huérfano *et al*, 2018). In addition, other needs related to the patient and family's health are expressed, knowledge about the treatment, emotional stability, self-care actions, and economic and work support (Martínez & Grau, 2017).

The analysis of needs in caregivers allows us to understand the meaning of such experiences and the personal reality of the caregiver. Because of this, this work aims to describe the psychological needs of caregivers of patients with kidney disease under treatment for hemodialysis.

METHODS

Design and Participants

The multiple case study was used as a research design to address the research problem, integrating the information collected in each case (Hernández-Sampieri *et al*, 2014). Per the criteria of convenience and accessibility, the Hemodialysis Service of the "Arnaldo Milián Castro" Hospital in Santa Clara, Cuba, was chosen as the study context. The fieldwork was carried out from January to March 2020. The following selection criteria were considered:

Inclusion criteria:
- A person who acts as the primary caregiver for the patient undergoing hemodialysis treatment.
- Assistance in the daytime treatment schedule.
- Offer their voluntary participation in the research through informed consent.

Exclusion criteria:
- Intellectual Disability.
- A person or relative who fulfills the companionship functions to the treatment.

Exit criteria:
- Abandonment of research.
- Caregiver whose relative stops hemodialysis treatment; dies, or receives a transplant during the investigation.

The sample selection was intentional of typical cases due to the richness, depth, and quality of the information it allows to obtain. The sample was confirmed with twenty primary caregivers as described in Table 1.

Table 1
Description of the sample's sociodemographic variables

Participant	Age	Gender	Background	Previous experience in care	Time as a caregiver	Kinship
C_1	72	Woman	Ranchuelo	Yes	2 years	Children
C_2	67	Woman	Santa Clara	Yes	3 years	Spouse
C_3	76	Woman	Manicaragua	No	6 years	Children
C_4	50	Man	Manicaragua	No	6 years	Spouse
C_5	60	Woman	Santa Clara	No	10 years	Spouse
C_6	71	Woman	Santa Clara	No	4 years	Other
C_7	54	Woman	Ranchuelo	Yes	6 years	Spouse
C_8	32	Woman	Ranchuelo	No	11 years	Other
C_9	17	Man	Santa Clara	No	6 years	Other
C_{10}	69	Woman	Ranchuelo	Yes	1 year	Spouse
C_{11}	54	Woman	Manicaragua	No	10 years	Children
C_{12}	38	Woman	Santa Clara	Yes	5 years	Children
C_{13}	68	Woman	Santa Clara	Yes	6 years	Spouse
C_{14}	62	Woman	Manicaragua	No	14 years	Children
C_{15}	39	Woman	Santo Domingo	No	17 years	Spouse
C_{16}	64	Woman	Santa Clara	No	1 year	Spouse
C_{17}	78	Man	Santa Clara	No	10 years	Children
C_{18}	62	Woman	Santa Clara	Yes	5 years	Spouse
C_{19}	36	Woman	Placetas	No	2 years	Other
C_{20}	48	Man	Santa Clara	No	7 years	Children

Source: Own elaboration

The sociodemographic profile of the sample reveals that 80% are women who assume the role of caregivers. The average age was 56 years. High school level predominated with 30% of the sample, while the elementary level had 15%, basic middle school 15%, technical middle school 20%, and university degree 20%. 55% are married, kinship to the family member that predominated was marital (45%) and children (35%). 75% have no working relationship, of which five caregivers left their jobs long before assuming the role, while ten caregivers were required to leave their work activity after their relative started treatment and because of the care's demands.

Instruments

An agreement was established with the hospital for access to the context and participants. The data were collected through the following instruments:

Sociodemographic variables questionnaire: An instrument that collects in an organized manner the indicators of the units of analysis involved as the object of study. It summarizes the general data of the participants to access a general characterization of the sample studied.

Registration of activity and direct and indirect method (RAMDI) (González-Serra, 2008): Technique designed for the study of diversity and hierarchy of needs through its expression in activity, desires, and imagination. It is based on a classification of needs as 1) personally significant social needs (those of society and social groups that are incorporated into the personality as their own) and 2) individuals of social character (those based on individual organic and psychological requirements). It consists of four questionnaires: the direct method, the indirect method, the activity recording, and the general data questionnaire. The direct method tells the subject to express ten wishes. The indirect method suggests creating a story about a character and writing ten wishes of that character. The activity log gives them a list of activities so they can specify how often they do them. Finally, a brief questionnaire of general data is presented, in this case, it was replaced by the sociodemographic variables questionnaire described above. (Annex 1)

In-depth interview: A technique that is distinguished by a conversation between two people with a specific purpose and certain rules. The interview brings data about character objective and subjective based fundamentally on the self-observation made by the researcher. It allows one to inquire and know about the course of the current life of the subject, its self-assessment, and its needs.

Research procedure: In the first meeting, informed consent was requested individually, and the participants left a written record of their acceptance of the study. Subsequently, the sociodemographic variables questionnaire and the RAMDI were applied. We worked sequentially, giving way to in-depth interviews after coding and analyzing the data obtained in the RAMDI. To deepen the characterization of the caregivers' needs, the questions were focused on the circumstances of the beginning as a caregiver, care experience, meaning, exercise of role, fears, and concerns.

Data analysis and processing

For the organization and qualitative processing of the data, the computer program Atlas.ti was used. Content analysis was established as a methodological approach for data analysis using coding and categorization (Table 2)

Table 2
Categories classification proposed in RAMDI

Categories	Code	Meaning
Social	CL	Collectivism. Favorable wishes for us. Wishes for equality and justice.
	DH	Duty and humanitarianism. Favorable wishes to others unspecified.
	CP	Peers. Favorable wishes to co-workers or peers.
	TR	Work. Wishes for work, to fulfill the work undertaken.
	RV	Revolution. Favorable wishes for the Cuban Revolution and Cuba.
	ES	Study. Wishes to study, to pass this year; the current course.
	EF	Future studies. Wishes to study in the future (further than the current course).
	OP	Career and profession. Wishes to have or to study a career or profession.
	F1	Family duty first. Favorable wishes to parents, siblings, cousins, and uncles.
	F2	Family duty second. Favorable wishes to spouse and children, and relatives.
	DS	Rest Wishes to sleep, rest, be at peace, and be calm.
	SL	Health. Wishes for preservation and physical health, physical vigor, and healing.
	SX	Gender Wishes to be in touch with the opposite sex; a sex life.
	CM	Eating. Wishes to eat and have meals, to drink.
	OS	Other pleasure. Wishes for other pleasures not within the other categories.
	IT	Interests. Wishes to read, knowledge, to be informed, to have general knowledge.
	DI	Enjoyment. Wishes for entertainment, listening to the radio, watching TV.
	VJ	Traveling Wishes to travel within Cuba (outside the city) and abroad.
	AC	Activity. Wishes for physical or intellectual activity, sports, or arts.
	DV	Enjoyment. Wishes for holidays, beach, walking, fun, dances, and hobbies.
Individual	C1	Be in touch with family. Wishes for being in touch with parents, grandparents, siblings, uncles, cousins, and the family they were born into.
	C2	Being in touch with relatives. Wishes for being in touch with spouse, children, and spouse's family. Desire to get married, code C2-SX.
	C3	Being in touch with their girlfriend or any other affectionate, sexual relationship, outside of marriage.
	CN	Contact. Wishes to be in touch with friends, colleagues, or someone else.
	ID	Independence. Wishes to be independent, free, and not having assistance.
	AF	Affection. Wishes to be loved, for affection, understanding.
	VL	Being valued. Wishes for good self-evaluation or external evaluation.
	PR	Presence. Wishes for good physical presence, hygiene, good clothing, and beauty.
	EP	Physical balance Wishing to avoid sickness and mental issues.
	FL	Happiness. Wishes for a happy life, and current and future satisfaction.
	VV	Living. Wishes to avoid getting old and death, not die, to live, be young.
	PS	Possession. Wishes to possess money or goods.
	AG	Violence. Wishing violence against others and oneself.

Other categories	SM	Oneself. Wishing to have a certain personality. Self-image.
	RL	Realization. Wishes for success, to achieve something.
	RS	Self-reassurance. Wishing to achieve the ideal image of oneself.
	AP	Psychological assistance. Wishing for psychological treatment that helps deal with the situation.
	BF	Family well-being. Wishing for the family's well-being.
	BS	Social well-being. Wishing for a better society.
	BN	Well-being. Wishing for the well-being of the renal patient under their care.
	CM	Quality of medical service. Wishing to have the technical and professional qualifications needed to accomplish the best hemodialysis service.
	RG	Religion. Wish focused on religious beliefs.
Categories linked to care*	S2	Health 2. Wishing for good health for the renal patient and the family members.
	TP	Transplant. Wishing the renal patient receives a transplant and goes through the situation successfully.
	NC	Care. Wishing for a family member to take care of them when needed.
	AF	Family support. Wishing for family and friends' support to meet the care.
	AS	Social support. Wishing to count on society agents (social workers, coworkers, others).
	AI	Instrumental support. Wishes to have equipment that facilitates care.
	IS	Social integration. Wishes for the renal patient to join the society.
	LB	Freedom. Wishes to be free.
	AU	Self-care. Wishes to take care of their health to continue with their role.
		Care relative.

Source: González-Serra (2008)

Ethical considerations

At each stage of the investigation, ethical principles were respected. We began with the request and signature of informed consent at the institutional and personal levels. We guaranteed respect for the individuality and privacy of patients and their families. Permission was obtained by signing the informed consent for recording the interviews.

RESULTS

Analysis of needs expressed in the direct method (RAMDI)

The direct method revealed a predominance of individual needs associated with the role. The participants hierarchized the care of their family members with responsibility and satisfaction for the assumption of the role.

The first wish describes family care and well-being as motivation. In this regard, they express: C_2 "*for my husband to be well*", C_4 "*all I want in this world is for my son to get well*", C_5*"for my husband to recover"*, C_7 *"for my*

husband's wellbeing", C_{10} "*for my husband to remain stable*", C_{11} "*for the day goe well*", C_{13} "*for him to get well*", C_{14} "*for my children to get well*", C_{15} "*for my husband to feel good*", C_{16} "*for him to get well*", C_{17} "*for my son to be well*", C_{18} "*for my husband to urinate well*", C_{19} "*or him to improve"* and C_{20} "*for my son to get well*".

Family care and well-being were combined with s*econd family duty* and *first family duty*. The emergence of one category or another is expressed in correspondence with the type of relationship existing between the caregiver and his family member. A favorable relationship was required between the needs focused on the welfare of the sick family member and the duty they feel for the person under their care.

Participant C_1 manifested social need, *work*, have a good *psychic balance* (individual need) by expressing "*continuing to get along with the elders of the nursing home where I work*". This statement evidenced how C_1 gives great meaning to the performance of his professional work. C_3 expressed the need for possession in hierarchical order, he proposed "*to build my house that is in poor condition*". Other individual needs were described as *future studies* (C_9: "*to be in the military*") and *happiness* (C_{12}: "*to be happy*"). These individual needs reflect the presence of needs in this population, not only focused on their relative under care but on their interests.

In wish 2, the motivation for *well-being* and *relative under* care was highlighted. *Self-care* was revealed as a new need, associated with the need to preserve health and strength to continue with the family member's care. In this regard, C_{10} expressed "*wishing to be well to assist him*" and C_{13} "*for me to get well*". In these cases, the concern was related to being elder and the fear that it generates not being in the optimal conditions to provide care to dependent relatives.

Family's well-being (C_7 "*for the family to be together*") and *need for care* (C_1 "*for a nephew or someone to be able to take care of me when I need it*") showed the interest of the caregivers in the well-being of the patient and the whole family, as well as concern in the absence of a person who cares for them back.

The need for *fulfillment* was expressed, C_{17} "*that my daughter triumphs in the mission in Africa*". *Affection, living, revolution*, and *work* occupied the second position of hierarchy among the participants.

Wish two results indicated favorable wishes towards the patient, while maintaining other motivations, both personal and focused on other family members, mainly from the role of parents.

When analyzing wish three, more individual than social needs were identified. From this hierarchical level, the variability was more noticeable. As individual needs *happiness*, *health*, *being in touch with family, being in touch with second degree relatives, psychic balance, presence*, and *possession* were

identified. While socials were *family duty first, family duty second, studies* and *work*. In the same way, other categories were expressed like *self-fulfillment* and *fulfillment*.

New needs were revealed such as *social support* (C_5 expressed "*having more support*") and i*nstrumental support* (C_{19} referred to "*having the probe removed because it gives me a lot of work*"). In addition, in C_4 the need for *health two* was evidenced by *stating* "*I do not ask for anything more than health for my child, with that I will be happy*". It differed from the health category because it alludes to wishes favorable to the *health* of another person.

Wish four showed individual *health needs, family contact first, affection, being valued, psychic balance, other satisfactions, happiness*, and *possession*. The need for *affection* arose repeatedly in the expression of desires. An example of this was found in C_9 when referring to "*for my mother to be proud of who I am*". In this case, it coincides with the new category *recognition*, understood as the prevailing need to be loved, cared for, and cared for reciprocally.

Duty and humanitarianism, first family duty, and *second family duty* were expressed as social needs. The *relative under care* category was reiterated as a sign of its high significance. The *medical service quality* came up when C_{14} revealed "*for this place to always be in good condition*". In addition, *peace* and *social well-being* were identified (C_{13} "*unity in the community*"), from which the existence of needs with a social scope is inferred.

Participants expressed in wish five individual needs for *possession* and *family support* as a sign of the need to receive family care assistance from other family members. *Family well-being, medical services quality, social support, welfare, health 2*, and *family care* continued to manifest, which gives them relevance in the study. Individual needs also predominated such as *second family contact, happiness,* and *health*. While, among the social ones, *family duty first, family duty second, work, and duty*, and *humanitarianism* were identified.

In wish six, the need for individual *possession* predominated. Social needs were expressed: *duty and humanitarianism, family duty first, family duty second*, and *work*. The needs for *psychic balance, other satisfactions, health, travel, happiness*, and *living*, manifested as individual categories; *quality of medical services, relative under care, health 2, family well-being, transplant*, and *well-being*, were revealed as new emerging categories in the study.

The need for *possession* was reiterated in wish seven, in this regard, C_1 wishes to "*have a washing machine that I have not been able to get*", C_8 "*improving the economy*" and C_{17} "*having a motorcycle*". There is evidence of the need to hold material goods that facilitate their daily work and complement well-being and their quality of life. The need for *quality medical services* is reiterated, manifested with a high constancy inmost desires. An example of this is what C_3 stated "*for my daughter to be well cared for*" and C_5 "*for always having the*

resources" which indicate the caregivers needs regarding the conditions of the services as a support to maintain the life of their relatives. In addition, *psychological attention* need was revealed, this was verified in C_2 when expressing "*to not have any more insomnia*", a circumstance triggered by the situation that lives daily.

In wish eight, the needs for *psychological care* emerged (C_2 "to not have any more stress and anxiety"), well-being (C_5 "for him to remain stable"), and quality of medical services (C_3 "for the doctors' care to be good"). Individual needs were identified with less incidence: to be present, health, travel, family contact, enjoyment, and other satisfactions. As social needs, family duty first and family duty second were present. The rising needs in the study were relative under care, health 2, family well-being, and transplant.

In wish nine, the need to travel is shown more frequently. Other needs such as career and profession, revolution, peace, health, enjoyment, optimism, transplant, realization, health, family duty first, family duty second, and well-being can be seen.

Finally, wish ten of the direct method showed the need to live, relative under care, religion, and well-being as the most expressed among the participants. C_3 states "hoping to live many years until I reach 100", C_5 "for him to remain with us for many more years", C_6 "may we be like our Lord Jesus" and C_7 "for me to feel good enough to be able to take care of him". While in touch with relatives, health, revolution, health 2, self-realization, work, well-being, and possession got a medium frequency, and family duty second was expressed by the minority of caregivers.

The direct method revealed a wide range of individual and social needs. There is widespread recognition among the participants of the hierarchy of favorable wishes to their relatives around a good health state. It is observed that, as desires progress, motivations towards other spheres of life-related to their personal satisfaction are revealed among caregivers.

Analysis of needs expressed in the indirect method (RAMDI)

The indirect method revealed needs coincident with the direct method, which corroborated the presence of these needs in the study subjects.

Desire 1 corresponded to the actual executing activity. The need for well-being was expressed in statements such as C_6 "*to be well treated*", C_{13} "*for my child to be well*" and C_{15} "*to be well*". This is explained by the importance and meaning that caregivers attribute to their personal well-being, the well-being of the person they care for, and their loved ones. Other individual needs were identified such as gender, living, being valued, possession, being in touch with relatives, *being in touch with third-degree relatives*, and *health*. Social needs emerged like *family duty second, duty and humanitarianism,*

work, career, and *profession*. *Realization* was identified as belonging to the group of other categories.

The categories of *social integration, freedom*, and *relative under care* were revealed; the latter with a high frequency of appearance in the direct method, which gives it validity as the subjects' central axis for motivation. The need for *social integration* was noted in C_{16} "*for him to be in touch with the society*". The need for *freedom* manifested itself in C_8 justified by the choice of a female prisoner as a character. It is inferred that the need for social integration occupies a high level of hierarchy for this subject: "*to get out of prison", "to not be convicted again", "to go out*", and "*for time to go by faster*."

The expressions of the participants in wish two were categorized as *duty and humanitarianism, family duty first, family duty second, and work* and *future studies*, belonging to the group of social categories. As individual categories prevailed: *health, sex, happiness, possession, being in touch with third-degree relatives, other satisfactions* and *fulfillment*, group member other categories.

The needs of *offspring* and *discipline* were revealed in expressions such as C_{10} "*to have children*" and C_{12} "*for their students to be disciplined*". Other categories were reiterated, such as *family welfare, quality of medical services, religion*, and the *well-being* of the relative under care.

Individual needs, gender, happiness, work, being in touch with family, being in touch with second-degree relatives, being in touch with third-degree relatives, other satisfactions, health, and living, were shown in wish three. Social needs like o*ccupation and profession, future studies, family duty first, and family duty second were identified*. The combination of categories focused on the family caregiver and those related to the personal satisfaction of their needs was corroborated.

The motivation to fulfill the tasks that correspond to them socially, as is the case of duty for work was present. In addition, other needs such as well-being social well-being, family *well-being affection, and social support* are reiterated.

Through the analysis of wish four it was found that the needs of *possession, happiness, and living*, presented a greater prevalence. From this desire, the expression of needs in the imagination does not necessarily correspond to the actual execution activity. *Affection, being in touch with third-degree relatives, occupation and profession, health, future studies, family duty first, family duty second, social support, duty, being in touch with family, enjoyment, work, family well-being, fulfillment,* and *well-being* were classified less frequently. The existence of a conflict between individual and social needs was inferred, and in its solution lies the need to successfully fulfill the caregiver role.

The need for happiness was present in wish five, C_{14} "*for him to enjoy life*", C_9 "*to be happy*", C_{11} "*for him to be happy*", and C_6 "*to be happy and live in peace with my family*". Other needs were expressed, such as *independence, self-care, psychic balance, career and profession, possession, travel, study, duty,*

being in touch with family, enjoyment, living, duty and humanitarianism, family duty second, *work, family's well-being health*, and *family duty first*. Individual and social categories were combined, the former having a higher incidence. As the hierarchical level decreases, the needs around personal satisfaction increase.

In wish six, the participants expressed the following individual needs: *living, health, being in touch with family, being in touch with third-degree relatives, psychic balance, possession,* and *happiness*. New categories came up, like *family support, presence, and well-being*. The only social category shown was the need for *duty and humanitarianism*. The statement about the increase in the expression of individual needs as desires increase is corroborated, even the new categories focus on the satisfaction of their own needs.

Travel and *enjoyment* needs predominated in wish seven, both of an individual nature and recognized by the subjects as the most limited activities in their daily lives for the time required by the work they perform.

The social need *study* corresponds to the need for *self-reassurance*, focused on desires for self-improvement and study, both for themselves and for a loved one (children); as described by the eighth place on the wish list. Social needs like *duty and humanitarianism, family duty first, and family duty second* were present. Individual needs such as being in touch with family, being in touch with second-degree relatives, living, and health were identified. *Family's well-being, quality of medical services, and well-being* were shown as the new categories.

In wish nine, other needs prevailed, *sex, being in touch with friends, being in touch with second-degree relatives, being in touch with third-degree relatives, travel*, and *enjoyment* as individual needs. S*tudy, revolution, and second family duty* are among the social categories. *Well-being, freedom, and religion* weren't as mentioned.

Finally, in *wish ten, happiness and duty and humanitarianism were more frequent needs. Family duty first, freedom, peace, self-fulfillment, possession, and well-being* were shown less frequently. The existence of a few categories in this last desire is inferred from the low expectations of satisfaction of their needs due to the assumption of the role, several cases did not complete wish ten.

As part of the indirect method, the analysis of the created character's particularities was relevant. Most of the participants did not refer to professions associated with them. The ages varied without being related to the actual age of the caregiver. In some cases, the gender corresponded to the actual gender of the subject. In the case of C_1 and C_{10}, they reported being doctors, although their wishes did not have points of agreement between both subjects. C_1 stated the well-being of his patients, his family, and the quality of services he provides as a professional. Meanwhile, C_{10} wished for enjoyment, possession, and offspring.

C_6 built the character of a 53-year-old kidney patient with a desire to live, health, and well-being. He infers empathy with the relative under care and commitment to their role over their individual needs. Another significant case was C_9 because his character was a 19-year-old girl dependent on a store. *His wishes alluded to* being in touch with third-degree relatives, *sex, fulfillment, social support, happiness, independence, enjoyment, travel*, and *living*. This subject is a 17-year-old who takes care of his mother, all his motivations are relegated and expressed in the indirect method.

Although we carefully explained to them that they should respond from the character point of view, imagining that they were in the position described, the answers were expressed in the third person, without assuming them as their own. The method showed categories of a personal nature such as *happiness, living, work, possession, travel,* and *enjoyment*. Assuming the character's position allowed them to project their true needs and depersonalize from the role they assume, except in the case of C_6.

Hierarchical differentiation of needs according to gender

In the frequency analysis of the expressed needs (Table 3), the individual categories in both genders predominated. It was found that regardless of gender, caregivers prioritized attention to their family member's demands, to positively influence the health of the person under care. The motivation in both focused on the caregiver role to promote a better quality of life for their loved ones.

Table 3
Individual and social categories per gender description

	Individual Categories		Social categories		Categories linked to care		Other categories	
	Absolute	Row Relative	Absolute	Row Relative	Absolute	Row Relative	Absolute	Row Relative
Men	24	48.98%	10	20.41%	10	20.41%	5	10.20%
Women	155	41.89%	108	29.19%	92	24.86%	15	4.05%

Source: Own elaboration

Analysis of correspondence between needs and their behavioral expression in the activity

The RAMDI activity record showed that 55% of the participants slept less than eight hours at night. This situation can negatively influence the quality of life

and is fundamentally given by the time needed by the relative under their care. 60% do not work, and most caregivers quit their job after treating their family members. These figures frame the complex situation experienced by the caregiver in their daily work.

The set of activities they carry out daily focused on helping their family members, both the caregiver and the rest of the family members with whom they live. It was evident how the person who assumes the role of caregiver has other responsibilities associated with the performance of domestic activities: 55% help and care for their parents, 70% for their siblings and spouse, 30% for their grandparents and uncles, and 75% for their children. Activities related to leisure, fun, and recreation were not a priority anymore.

It was confirmed that the subjects' actions are aimed at care as their greatest responsibility, making it impossible to meet other needs. There was adequate correspondence between the desires of the direct method and the assumed duties, mainly in the first desires. The direct method showed no correspondence with the actual behavior, although wishes of well-being and health for the relative under care prevailed, other unmet needs prevailed in the activity. There was the dissatisfaction of individual needs to prioritize the proper fulfillment of the role. It was shown that, although they feel the duty to perform the task they assumed, they have other needs delayed by the unavailability of time and support, both social, familiar, and institutional, to fulfill them. From the discrepancy between the responses to the direct and indirect methods, it can be inferred that these indicate areas of conflict of motives, deprivation, or frustration of needs.

DISCUSSION

The sociodemographic profile of the caregiver agrees with that described by several authors in the predominance of the female sex, regardless of the culture or type of care provided is the woman who assumes the role (Martínez, Grau, & Rodríguez, 2017; Martínez, *et al*, 2018). Unlike Minzana and Arementa-Restrepo (2017), the mean age was represented by caregivers in the fifth decade of life (León, Ávila & González, 2020; Beers, *et al*, 2021).

The caregiver is forced to interrupt or modify their usual rhythms of life to accompany the activities of the renal patient, such as feeding, mobilizations, and cleaning, which may be of greater or lesser complexity according to the degree of disability or invalidity that the patient presents (Abate, 2017). Support needs are not met (Rosado *et al*, 2021), these are related to health status and medical care. The attribution of personal meaning to the role from the social, family, and personal commitment, is established as a means to compensate for and satisfy the needs of recognition, affection, acceptance, and self-assessment (Martínez & Grau, 2017). It was found that

the caregiver is the main source of emotional and social support for the patient. The creation of services to provide emotional and economic support for care and caregivers is relevant (Kehr *et al*, 2020).

The assumption of multiple roles in the home and the care, not only of the renal patient but of several family members, corresponds to an imminent sense of duty as a mobilizing element of the motivational sphere (Torres *et al*, 2021). Caregivers prioritize compliance with care to ensure the family member's quality of life in hemodialysis and stop prioritizing their goals, aspirations, and life project.

The results obtained using RAMDI allow the expression of needs to be contrasted by direct and indirect methods. In most cases, the desire referred to the welfare and health of the care relative was mentioned equally in both methods. This need is oriented to both reality and imagination, as well as actively and passively on a subjective plane. There is a possibility of satisfaying the need in the middle (González-Serra, 2008). Corresponding to the activity record, the daily behavior of subjects focuses on the full-time care of the relative in hemodialysis.

Needs related to enjoyment, pleasure, and joy of life showed a greater incidence in the indirect method than in the direct one. These needs are oriented more toward the imagination than toward reality, that is, they are oriented more passively than actively. They have possibilities of satisfaction in the middle (González-Serra, 2008). However, they conflict with other key needs such as family care and support needs. That is why they are deferred to a passive plane.

Regarding the discrepancy between the responses to the direct and indirect methods, it can be inferred that they indicate areas of conflict of motives, deprivation, or frustration of needs (González-Serra, 2008). In correspondence, the study exhibits guidance for the care of the relative with a notable dissatisfaction with individual and social needs. The studies of González-Serra (2008) on psychological needs in different populations constitute an important reference for the present research, therefore, the relevance in the comparison of results.

In addition, another Cuban research shows dissatisfaction related to the breakdown of future projects, given the uncertainty of the duration of the disease, and care demands (Oria-Saavedra, Mastrapa & Aguirre-Raya, 2021; Labarca & Pérez, 2019). These aspects generate anxiety and loss of hope to meet their needs (Rodríguez, *et al*, 2021; Oria-Saavedra, Mastrapa & Aguirre-Raya, 2021; Martínez-Debs, Lorenzo & Llantá, 2021).

The above criteria confirm that caregivers present motivational guidance for the care of the family member with a notable dissatisfaction with individual and social needs. The study exhibits the act of caring for a sick relative as a condition that limits the enjoyment of life.

CONCLUSIONS

The caregivers of patients in hemodialysis direct their needs towards the proper fulfillment of the role assumed as family duty and in correspondence mobilize their daily behavior. They express both social and individual needs, giving greater hierarchy to those referred to the role of caregivers and relegating the needs focused on individual satisfaction. There is a link between both genders since the motivation in both is focused on the caregiver's role to promote a better quality of life for their loved ones. It is pertinent to conceive care as the central axis of social protection systems, which should be aimed at achieving intersectionality, approaching it from a gender perspective, and addressing individual needs.

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ANNEX 1

Activity record and direct and indirect method (RAMDI) questionnaire.

Direct Method

Read these instructions carefully:

Write below ten wishes of yours. Both what you want and what you don't want. You must be completely sincere. You don't need to think much to answer, write down the first thing that comes to mind after reading the sentences.

1. I wish for _____
2. I wish for _____
3. I wish for _____
4. I wish for _____
5. I wish for _____
6. I wish for _____
7. I wish for _____
8. I wish for _____
9. I wish for _____
10. I wish for _____

Indirect method

Please read these instructions carefully:

We ask you to invent a story about a person as if it were a character from a movie. Creat a character.

How old is the person or character in your story? _____ years old.
What is their gender? Male_____ Female_____
What's their current situation? What do they do? _____
_____.
What does this person wish for? Write down ten wishes for this character. Both what they want and what they don't want.

1. He or she wishes for _____
2. He or she wishes for _____
3. He or she wishes for _____
4. He or she wishes for _____

5. He or she wishes for _____
6. He or she wishes for _____
7. He or she wishes for _____
8. He or she wishes for _____
9. He or she wishes for _____
10. He or she wishes for _____

Activity Log

How often do you carry out your activities in your daily life?

Below is a list of different activities. Indicate with the numbers 5 or 4 or 2 or 1 or 0, in the right margin of the sheet what activities you carry out in your current daily life (think about the last month) and how often you carry them out:

5 If you do this activity all or almost every day.
4 If you carry it out more than 15 days a month, but not almost every day.
3 If you do it between 15 days and 5, days at least.
2 If you do it 1, 2, 3, or 4 times a month.
1 If you never or rarely do it.
0 If in your current life there are no conditions or causes to carry out this activity

The most important thing is to be sincere. If, in addition to the activities indicated in the list, you carry out another that does not appear, write it at the end of the list indicating its frequency.

Activity list:

1. Sleeping eight hours a night.
2. Get less than eight hours of sleep at night.
3. Sleeping more than eight hours at night.
4. Bathing, washing.
5. Have breakfast.
6. Dressing or changing your clothes.
7. Go to the study center and attend classes.
8. Being on time for your classes.
9. Attend all the classes you have each day.
10. Working.
11. Meet the demands of your work promptly.
12. Have a snack.
13. Talking to coworkers or classmates.

14. Have lunch.
15. Visit or be visited by a coworker or classmate.
16. Talk to a neighbor or friend.
17. Visit or be visited by a friend or neighbor.
18. Help a neighbor, classmate, or friend. Do them a favor.
19. To carry out or participate in some activity of a political nature guided by political or mass organizations. Fulfill a political duty.
20. Study materials from your school that go to final or partial tests or perform jobs ordered by teachers.
21. Showering.
22. Eating.
23. Helping your parents, taking care of them, fulfilling a duty to them.
24. Helping your siblings. Fulfill a family duty to them.
25. Helping your grandparents or uncles. Fulfill a family duty to them.
26. Helping your spouse (husband or wife). Cooperate with him or her.
27. Helping your children. Treat them properly. Fulfill your duty as a parent.
28. Helping your spouse's family and children. Fulfill a family duty to them.
29. Fulfill your job's tasks, but outside of it, in your free time.
30. Seeing your girlfriend or boyfriend.
31. Being in the company of your wife or husband.
32. Establishing sexual relationships. Make love.
33. Spend time with a person that is not your wife or husband, girlfriend or boyfriend, or your love partner.
34. Helping your girlfriend or boyfriend, your love partner.
35. Helping your girlfriend or boyfriend's parents, or your love partner's parents.
36. Spending time with your girlfriend, boyfriend, or partner's parents.
37. Going to the doctors (visit, check-up, or treatment).
38. Taking or applying medication.
39. Rest or sleep during the day.
40. Drinking coffee.
41. Smoking.
42. Reading the newspaper or magazines.
43. Read novels or other books just for pleasure, interest, or entertainment and not for work, studies, or any other duty.
44. Listening to the radio.
45. Watching TV.
46. Going to the movies.
47. Going to a cultural, musical, or sports show.
48. Exercising, playing sports.
49. Carrying out an artistic activity: singing, playing an instrument, dancing, painting, modeling, writing, acting, etc...
50. Playing (hobby or game).

51. Going to the beach.
52. Partying.
53. Going out of town or city, like a trip or distraction.
54. Talking with your parents.
55. Talking with your siblings.
56. Talking with your uncles or grandparents.
57. Talking with your children.
58. Talking with your spouse's family and children.
59. Grocery shopping.
60. Going to the mall to buy clothes or other items.
61. Do some kind of management to acquire or recover personal property (clothes, articles, furniture, etc.).
62. Doing chores to your benefit or the benefit of other members of the family.
63. Doing chores just to your benefit.
64. Fixing something in the house or looking for someone to do it (painting, carpentry, electricity, etc...)
65. Meditate or make plans.
66. Drinking alcoholic drinks.
67. Another activity.