Limits and strategies of health professionals on adherence to treatment of diabetes: integrative review
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Objective: To know the limits and strategies of health professionals in the process of adherence to treatment of people with diabetes. Method: Integrative review with time frame of 10 years. Follow six simple steps for selecting and analyzing the data, we found 388 articles, only 15 met the inclusion criteria. Results: For the limits of health professionals regarding the process of adherence to diabetes revealed three themes: organizational factors, individual factors and occupational factors, the strategies used by them were grouped into individual proposals, inter and customer relations. Conclusion: The professionals seem to understand the magnitude of the elements limiting their practice and engender efforts to overcome it. It was evident the importance of understanding the issues that relate to the accession process and the lack of studies that focus on these aspects in the professional perspective. Descriptors: Diabetes mellitus, Health personnel, Patient compliance.

Objetivo: conhecer os limites e estratégias de profissionais de saúde no processo de adesão ao tratamento de pessoas com diabetes. Método: Revisão integrativa, com recorte temporal de 10 anos. Seguiu-se seis etapas pré-definidas para seleção e análise dos dados, encontrou-se 388 artigos, apenas 15 atenderam aos critérios de inclusão. Resultados: Para os limites de profissionais de saúde frente ao processo de adesão ao diabetes emergiram três núcleos temáticos: fatores organizacionais, fatores profissionais e fatores individuais; as estratégias utilizadas por eles foram agrupadas em propostas individuais, interprofissionais e na relação com o cliente. Conclusão: Os profissionais parecem entender a amplitude dos elementos limitantes da sua prática e engendram esforços para sua superação. Ficou evidente a importância de entender as questões que se relacionam com o processo de adesão, bem como a carência de estudos que enfoquem tais aspectos sob a perspectiva profissional. Descritores: Diabetes mellitus, Personal de saúde, Adesão do paciente.

Objetivo: Conocer los límites y las estrategias de los profesionales de la salud en el proceso de adherencia al tratamiento de diabetes. Método: revisión integrativa con el marco de tiempo de 10 años. Siga los seis pasos para la selección y el análisis de los datos, encontramos 388 artículos, sólo 15 cumplieron los criterios de inclusión. Resultados: En los límites de profesionales de la salud sobre el proceso de adhesión a la diabetes reveló tres temas: factores organizacionales, factores individuales y los factores ocupacionales, las estrategias utilizadas por ellos se agruparon en distintas propuestas, las relaciones inter y cliente. Conclusión: Los profesionales parecen entender la magnitud de los elementos que limitan su práctica y los esfuerzos para superarla. Era evidente la importancia de comprender el proceso de adhesión y la falta de estudios en el área. Descriptores: Diabetes mellitus, Personal de salud, Cooperación del paciente.
INTRODUCTION

The growing magnitude of Chronic Non-communicable Diseases (NCDs) is a health problem that accounts for 72% of the causes of death worldwide, affecting strongly the poor strata of the population and vulnerable groups.1-2 The current trend to demographic and epidemiological transitions and nutritional ratify the emergence of NCDs in a society that has been marked by an aging population, the reduction in morbidity from infectious origin and the emergence of overweight / obesity as new diseases of modernity, these components the metabolic syndrome strongly associated with diabetes.1,3

As stated earlier, this scenario falls within the Diabetes Mellitus, which stems from an insulin disorder that will result in metabolic changes that show a common hyperglycemia4. For the World Health Organization, worldwide there are more than 346 million people with diabetes and over 80% of deaths occur in low-income countries.3 The disease is identified as the fourth leading cause of death in Brazil.5

Like any chronic disease, diabetes is characterized by non-transferability, irreversibility and long clinical course6, causing this disease morbidity brings both biological and psychosocial implications for individuals who have it and requires attention from professionals’ health on these elements.

The maintenance of good glycemic control, achieved through the process of adherence to treatment still represents a challenge for health professionals in order that a portion of people with diabetes do not make any treatment, among those who do not share the glycemic control and many others is interrupted by the difficulty of access to it, either by their reactions or due to the existence of socio-cultural barriers.

From a conceptual standpoint, adherence to treatment comprises a collaborative process that facilitates the acceptance and integration of a therapeutic regimen in everyday person, assuming their participation in the decision of the same.7 The treatment of individuals with chronic disease, in this view, should facilitate compliance with their health condition, equipping it so that, through their own resources, develop mechanisms to meet their health / disease process so identify and prevent complications, diseases, and especially early mortality.8

Whereas adherence is a complex and multifactorial phenomenon, understanding the factors that limit the performance of health professionals face this process for individuals with diabetes, tangent of the elements involved in the treatment, whose reflections will focus on professional practice and the health of individuals.

Thus, the time spent in consultations, how communication and interpersonal relations are established on the approach to individuals with diabetes between the team and the
motivation to comply with the treatment plan, the empowerment of individuals against their treatment and technical preparation for disease management are some of the elements identified as roles of health professionals to achieve adherence to the diabetes regimen and, concomitantly, as limiting the role of these professionals in that they do not realize.\textsuperscript{2,7,9}

In this direction, there is a perceived paucity of studies which approaches are focused on limiting found / pointed out by health professionals and the coping strategies implemented in relation to diabetes with a view to treatment adherence. Thus put, this study seeks through an integrative review of literature about the range of health professionals in the process of adherence to treatment of people with diabetes and related coping strategies aimed at your face.

**METHOD**

Study of qualitative and descriptive, developed through an integrative review what constitutes a research method that allows revision gather information within a comprehensive research on a topic, weighing the evidence and the integration of information to draw conclusions about what discusses.\textsuperscript{10}

This research was guided components of integrative review\textsuperscript{11} summarized in the following steps: 1 - Establishment of research question 2 - Sampling or literature search, 3 - Categorization of studies; 4 - Evaluation of the studies included in the review, 5 - Interpretation of the results, and finally, 6 - Synthesis of knowledge presentation and the review.

In the stage of problem formulation, broke up the following question: What limits and strategies of health professionals in the process of adherence to treatment of people with diabetes mellitus?

The second stage involved the construction of the database. For this we used search strategies in the information database online indexed in the National Library of Medicine (Pubmed), Latin American Literature Health Sciences (Lilacs) and Scientific Electronic Library Online (SciELO).

The articles were searched as descriptors of the database DeCs (Descriptors in Health Sciences) in Portuguese and English, these being: Diabetes Mellitus, Professional Health and Patient Adherence. In this search, the keywords were used in combination, as well as all possible combinations. The selection criteria for use of articles included those who answered the survey question with a minimal approach after mathematical combination of at least two descriptors, to bring a qualitative approach and that were published in the period between 2000 and 2012.

Articles were selected in two stages. At first the total eligible items found was 388. In this step, we excluded 353 articles by title, and 6 articles were excluded due to be duplicated in more than one database. By reading the abstracts two articles were excluded because they
were repeated in different combinations of descriptors, as well as 5 articles were excluded because they were not found in full, totaling 22 articles. The second moment was made to read the full articles that were identified who had a match with the inclusion criteria initially outlined. The final sample of articles was achieved through an individual selection of two independent researchers, followed by subsequent comparison to final selection, to avoid selection bias. We excluded seven items whose approaches did not meet the proposed criteria, a total of 15 articles. The selection process is explained in Figure 1.

![Figure 1: Quantitative aspects of the articles found in databases.](image)

In the third step, the abstracts were read by independent researchers, at which time the corpus was formed and subsequently listed the categories based on the core themes highlighted and summarized in the figure and table format. The evaluation of articles, meta-synthesis and interpretation were the subsequent steps, which were made light of the theoretical.
RESULTS AND DISCUSSION

The analysis of the 15 articles selected from the Pubmed bases (n = 4) Lilacs (n = 8) and SciELO (n = 3) enabled the creation of three thematic elements related to limiting the practice of health professionals in the accession process the treatment of people with diabetes, namely: organizational factors, individual factors and occupational factors. The strategies used by these professionals to promote adherence were grouped into individual proposals, inter and customer relations.

Limiting Elements of Professional Practice

Figure 2 was constructed as a way to represent the elements that limit the practices of health professionals in the accession process found in the articles analyzed. Evidence is a complex interaction of assumptions organizational, professional and individual explaining that such factors are presented as a true “web” of related elements multifactorial. The figure does not constitute a hierarchical model where a level has supremacy over another, instead, shows that the relationship between these elements occur not only unidirectional, but in multiple directions, making it clear that the interaction and interdependence of these limiting elements of the practice of health professionals, will directly interfere in the process of adherence to treatment of people with diabetes.

Figure 2 - limiting aspects of the practices of health professionals across the accession process to the treatment of people with diabetes.
Organizational factors

It is known that adherence to treatment of people with diabetes permeates the way health services are organized by the same access to these services and given by solving their health problems. In this sense, in developed countries, adherence among individuals with chronic diseases is around 50%, whereas this percentage decreases sharply when it relates to developing countries like Brazil, given the scarcity of resources and social inequalities in access health care, transforming non-adherence in a problem of great magnitude.\(^\text{12}\)

If for service users under treatment adherence, access and problem solving seem to have certain supremacy when we consider only those aspects,\(^\text{2,7}\) for professionals, organizational elements limiting membership becomes anchored in the service routines and in the work process.

The historical process of building what is now known as the Unified Health System (SUS) provides primary care as a gateway for priority access to the SUS. In this context, the articles showed that health facilities are made available to cover areas far beyond the capacity of care and once inserted into different realities, return your call followed upright models.\(^\text{13}\) Additionally, when the complexity of the cases goes beyond the level of primary care, it is clear that there is no linkage mechanism at this level with more specialized levels of care, which results in poor solutions to meet the demands of health service users.\(^\text{14}\) The lack of preventive and promotional health by professionals slips into a curative attention yet, limiting the possibility of a qualified hearing, bond and accountability, which are essential for an effective practice of adherence to therapy.\(^\text{13}\) Other authors\(^\text{14}\) corroborate the above model and point-dressing emergency as unable to produce personalized attention and create bond with the patient so that it can feel safe and motivated to adhere to treatment.

With regard to the work process, it is emphasized that there is still a practice of health professionals from subordination to medical knowledge, despite some renovating and autonomous practice. In this scenario, nursing is configured as a health profession more tied to medicine in the field of public health and also the most subordinate.\(^\text{14}\) In contrast, other aspects argue that the role of the nurse is to empower his team of helpers in carrying out activities, consultations and to identify risk factors for non-adherence forwarding to the doctor when needed.\(^\text{15}\)

In both situations, may be found to limit the scope of practice of the team should be called team integration, but in practice nothing but a team grouping, since little is the articulation of the actions and interactions of agents, ethical commitment and respect each other.\(^\text{16}\)

This practice inevitably brings up the concept traditionally widespread that membership represents the tracking of medical guidelines, where the “patient” is compliant passive and when these guidelines are not adhered deviant or resistant.

So the routine work imposed and / or constructed daily by health professionals, as well as work processes in health fragmented, reductionist and biologizing, parcelize health care, limited to professional practice and negatively impact the process of adherence to treatment people with diabetes, because there is no space to include user, share knowledge,
exchange information and define joint strategies for addressing the individual and collective problems allowing a service geared toward real health needs of the population.\textsuperscript{13}

**Factors professionals**

The conduct of health professionals today is seen as a predictor of adherence to their treatment of the individual. There are many criticisms to the position of some professionals who ignore the phenomenon of noncompliance, acting as if all therapeutic recommendations were followed smoothly by service users.\textsuperscript{17}

However, many professionals recognize their responsibility and show that the factors that limit the process of adherence to diabetes treatment are rooted in the process of academic training in the technical aspects of health care and on dialogue and interpersonal relationships.

Thus, it is evident how the academic education of health professionals have been guided by a positivist model of care, based on precepts specializing, which devalues diversity, uniqueness, which has a direct impact on their work practice, which shows is: little resolutely impersonal, detached living conditions of the population and focused on disease and not in subjects who undergo some physical or psychological suffering.\textsuperscript{18}

Nevertheless, it adds to the problem of a professional practice where the lack of technical standards of care programs to individuals with diabetes recommendations outdated models and often intuitive care.\textsuperscript{14}

Both the academic and technical preparation for working in health services in the manner mentioned above, act synergistically in the process of adherence to treatment of people with diabetes in that it reflects the establishment of conditions requiring greater self-care behavior aggravated by speech professionals often do so through information unrelated to the reality of those who live the disease. What is latent observation, are unidirectional speeches where the person’s vision careful not matter for the caregiver.\textsuperscript{19}

Interpersonal relationships also include a factor that influences the adhesion of the individual in relation to their treatment.\textsuperscript{18,20} They are understood as real tools which will allow not only the application of health technologies, as well as assist in overcoming the traditional forms of care grounded in technical success, making possible a dialogue as symmetrical as possible between professionals and service users.\textsuperscript{9}

In contrast, it is evident in the articles analyzed right outburst was pointed out that since there are few professionals who can hear the pangs of individuals with diabetes and shift the focus of the consultation in order to focus on the social aspects.\textsuperscript{21} Furthermore, the lack of reception, the devaluation of the knowledge of the living conditions of the user and its impact on treatment, represents obstacles to the proper approach to injuries, since that makes professionals attribute the problems in the sphere of accession to the lack of commitment of patients to treatment.\textsuperscript{14}

**Individual factors**
The experience of illness, for the individual who possesses it, involves cultural, familiar, emotional, social.22

Thus, these individual aspects pointed out by the articles analyzed, are often overlooked by health professionals and therefore demonstrate linkage with limiting adherence to therapy. Highlight for socio-demographic factors such as questions of financial constraints that often prevent adequate follow-up in the use of medications and diet, the level of education that hinders the identification of medications and causes is commonly associated with the use of medications alternatives; gender issues that often point to the male as having lower adherence compared with females.23

Even with regard to individual aspects, learning and rationalization of the disease as the body's responses and the need for changes in lifestyle are factors that generate instability and feelings of dependence, which also has an impact on treatment adherence.24 Given the above, health professionals need to provide interventions consistent and diversified, offering accompaniments closer, detailed and focused on positioning assumed by each individual with the condition of illness, the relationship maintained with the process of being diabetic and ways of dealing with the requirements of the treatment.25

Thus, it is clear that the stimulus to self-care is a complex process because of the difficulties in modifying lifestyles, beliefs, and behaviors to maintain these changes continuously21, as well as to accommodate cultural differences between what is recommended by health professionals and the action taken by individuals to these guidelines, considering the significance of different forms of the disease and treatment to those infected (the patient) and who is leading the therapeutic process (health professionals).

The scientific rationalization, based on an objective and quantitative measurement and mind-body dualist view underestimates the psychological dimension, social and cultural development of the health-disease showing that health professionals hold a knowledge which the patient usually does not participate.22

Therefore, the balance of blood glucose levels through the use of medications, regular exercise and mainly conducting a proper diet cause outrage, especially in relation to which patients perceive as excessive food restriction, being evidently important flatten knowledge, to clarify the people with diabetes the knowledge that allow to understand what and why the need to change your lifestyle for the promotion, maintenance and restoration of health.26

Another limiting factor of the accession process lies in the socio-family. What is observed is that the patient has family organic and psychosocial causing instability not only in itself but also repercussions within the family.

That said for diabetes is very important since the changes in lifestyle; especially dietary changes are difficult to follow when family members do not appear as sources of support in fighting the disease. Instead, when the family gets involved, this process can positively influence treatment adherence and glycemic control.25

Thus, care-individual family must help them develop resilience in the face of situations of risk and harm to health, should encourage and mobilize coping skills, resources for adaptability from relational experiences and the possibility of establishing vincular ties.27
Strategies used by Health Professionals front of adherence to diabetes treatment

We researched articles could be found strategies used by health professionals with a view to facilitating the person with diabetes in the accession process. This analytical perspective not sought to evaluate the best strategies nor generalize the results, but visibility practices developed by different professionals in diverse scenarios also aiming at the production of knowledge permeated critical analysis with a focus on elements related to health care professionals. In this regard, we identified three patterns of strategies developed by health professionals related to: individual aspects; aspects of the team and, in the relationship with the customer, which is discussed below.

1) Individual aspects: it was identified that the posture of the individual healthcare professional should reflect positive intentions, i.e., show interest in their work and actions related to the understanding of customer needs as well as the repercussions of their actions on the even know how to communicate respecting the differences between subjects, be committed with knowledge about the disease process, signs and meanings as its accountability mechanism on the problem. On the issue of accountability, there is still that keep up to date and share the information reveals a simple mechanism to standardize and systematize the service user with diabetes in terms of health education, integrity and development of self-management.

Thinking sharing this information with you is important, however, the search for isolated update is not enough, one must know the determinants in the disease process, the particular factors that influence adherence and be motivated the search for links between interested sectors up case. In this regard and in the context of comprehensive care, was evident in some studies examined the necessity of awakening mobilizing other social sectors related to transportation, education, sport achievement whose demand articulation and engagement, political will and public charging.

The strategies under this point, therefore, the need to consider not only the horizon ruled in technical success, not only to describe the similarities and differences between knowledge, but above all to assume a strategic role in the transformation of the subject as a political device connotation with contextual and historical-social.

2) Issues related to staff: it could be seen in selected works that the relationship of the healthcare team must constantly pass by a reflection on the process of working through a debate involving the whole team. This subsidize a review of ideas and concepts of health, so that the problems experienced within the work are exposed and discussed, not just the existence of hidden tensions and conflicts in ways to accomplish health care, in order to raise awareness of thinking about such problems and strategies for solving them.

In teamwork, it is important that there be dialogue between health professionals so that each member has recognized the daily tasks of the unit and the other to optimize the potential of each of the user assistance. For this, there must be an insertion of all knowledge in the power hierarchy of health sciences "to unsujet the historical knowledge and make
them free (...) against the coercion of a theoretical discourse, and scientific unit"^29 and occur not only an improvement in labor relations, but especially an improvement in quality of care.

Making relationships and dialogue between the team allows more equitable and a greater sharing of knowledge, the division of responsibilities related to the management of individuals with diabetes and education thereof whose achievement is not a function of a single professional, but all team members.\textsuperscript{24,30}

In this sense, there was evidence in the articles in question as to the need for a standardization of educational talks, aimed at professionals designate separate guidelines which generates confusion among users and makes with the monitoring of pipelines is done by convenience or by relations of trusts that are established professionals and less need for real action consistent with its health status.\textsuperscript{19} Therefore, knowing the language of the community, involve family members and integrate them into the educational process is essential in the accession process.\textsuperscript{31,32}

This stance is intrinsically related to a concern with empathy established for the user, a factor that favors the approach of client health services, contributes to increase their motivation and therefore adherence to diabetes treatment.\textsuperscript{13}

Beyond Empathy, the host was cited as an important tool in the service and is a determinant in the consequent user satisfaction therefore also associated with a listening RF allows all health professionals to better understand the problems faced by the user, making this pose a mechanism for reasoning guidelines pipeline alternatives that are viable.\textsuperscript{13,15,21}

Thus, the trader needs to make room for the patient to express his doubts, difficulties and conflicts and thus to understand the context in which both are inserted, and understand the impact that each factor has on the individual's life and, from this, make adaptations whether nutritional, pharmaceutical or related to the sharing of information.\textsuperscript{14,21,26,30}

A space for the expanded scope of the assumptions described above finds support in the development of group actions, admittedly mechanism of positive influence in the accession process, since it allows the individual to find people exposed to the same conditions, decreasing feelings of anxiety and loneliness, raising self-esteem and valuing the knowledge about the care of their own health, creating an enjoyable learning environment, sharing with family and community members a learning process maximized by group dynamics and the less conventional way of relaying life stories and Health guidelines.\textsuperscript{13,15,21,30,32}

3) Aspects of the relationship with the user: it was observed in relation to this topic, the articles selected for this review elements portrayed not only concerning settings normative functioning of health services and the scope of practice of each health professional, but much more the symbolic dimension and immaterial labor on action, representing the moment when two people (the health professional and the service user), intersubjectively act on one another and where creates complicity, reliability, hopes, eavesdropping and interpretations host.\textsuperscript{34}

In this perspective, it was noted that health professionals should expand the capacity of choice these individuals forward to the arsenal of possible therapeutic actions, aiming at coping with diabetes and sustain adherence to their treatment through "Therapeutic Alliances".\textsuperscript{19,23,31} For this, it is also important to plan health education strategies that are able
to promote self-esteem of the individual possessor of a chronic disease, changing the sense of accommodation and encouraging the development of mechanisms to overcome the adverse factors, raising the subjects a critical awareness of the reality and the empowerment and autonomy of life itself as a mechanism for improving quality of life. \(^{21,24}\)

It is important to make clear the emphasis of the articles in question analyzed the work of health professionals for accountability with improved treatment adherence of individuals with diabetes, as being not only an imposition of government programs or public health, but before all a matter of respect earned the right user at their most fundamental needs.\(^{23}\)

Thus, the above mentioned strategies targeted at users of the services are mentioned as those requiring higher porosity for health services and going back to an unconventional dimension of health work hegemony which is guided in the biological and technical knowledge.

The following table summarizes the strategies used by health professionals in order to achieve the accession process to the treatment of diabetes.

| Proposals |
|-----------------|-----------------|
| Interest in the work and the impact of their actions \(^{13}\) |
| Commitment and accountability \(^{13,14,19}\) |
| Articulation of technical knowledge and popular \(^{15,19}\) |
| Accessible language \(^{14,19,31,32}\) |
| Incorporating knowledge into practice \(^{15,26}\) |
| Training and professional development \(^{13,14,21,28,30,32}\) |
| Expanded understanding of the disease process \(^{13-15}\) |
| Searching for links between sectors \(^{13,14}\) |
| Reflection on the process of work \(^{28,33}\) |
| Interaction between team members “integration team” \(^{14,21,23,30,31}\) |
| Home and search for quality of care \(^{30}\) |
| Improved communication and interaction patterns \(^{15,19,21,23,31}\) |
| Socioeconomic analysis and context \(^{14,21,26,30}\) |
| Division of responsibilities and valuing patient relationships - family - professional - society \(^{19,21,24,26}\) |
| Valuation of shares in group \(^{13,15,21,26,30,32}\) |
| Expand the capacity of choice \(^{19,21,31}\) |
| Motivating the desire coping \(^{15,26}\) |
| Incentive to overcome the adverse factors \(^{21,24}\) |
| Formation of “Therapeutic Alliances” \(^{21,26,32}\) |
| Accountability for patient follow-therapeutic \(^{21,30,35}\) |
| Respect the right of user \(^{23}\) |
CONCLUSION

The recognition that multifactor influence the process of adherence to treatment of people with diabetes do not necessarily translate deletion of elements that limit the practice of health professionals faced with this process, such is the extent of limiting organizational, professional and individual unveiled in this review.

Faced with these limitations, health professionals seem to engender efforts to implement strategies of individual character, and related staff in relation to the user, which amplify adherence to diabetes treatment. However, it was observed in most of the approaches that work, though relatively consensual and recurrent, are very brief and somewhat systematized to offer a path for your consolidation; not enough, though some pointed out relevant strategies and the potential to positively impact adherence, not meet the limiting faced by health professionals in relation to adherence to diabetes treatment.

Clearly, the issues related to adherence are developing rapidly not only in nursing but in all health care disciplines. Although many studies address it on the issue, one can notice the paucity of publications about the perspective of the health professional in the accession process to the treatment of diabetes, which is a fundamental factor that can realize the limitations in exercising health work.

Thus it is possible to devise strategies that professionals are able to take innovative postures, within its capacity to act and that these can be applied in healthcare organizations to facilitate adherence. It is suggested further deepening of research in the area, in order that they are outside academics and have an impact on the practice of health professionals and the lives of patients with diabetes.

REFERENCES


