THE IMPACT OF VERBALIZATIONS BY THE HEALTH PROFESSIONAL ON THE FOLLOW-UP BEHAVIOR OF THE ATTENTION-DEFICIT/HYPERACTIVITY DISORDER PATIENT

El impacto de las verbalizaciones del profesional de la salud en el seguimiento del paciente con TDAH

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Abstract

Introduction: Adherence to treatment involves complex behavior that develops in the interaction between the patient and the health professional. An interaction that is made primarily through the verbal behavior of both. As a first step for studying this interaction, we analyze the doctor's verbal behavior within the clinical context. This analysis will allow us to identify variables related to behaviors comprehended by adherence to treatment, such as attendance to a second appointment and follow-up on the doctor's indications. Objective: To analyze (1) the differences between the doctor´s verbalization pattern in cases where there is a follow-up of the doctor´s indications and in cases where there is not; and (2) the differences between the doctor's verbalization pattern in cases where there is a second appointment and in cases where that is not the case. Method: The sample was selected by non-probability sampling, consisting of patients who attended their consultation within a 5-month period at the Neuroscience care unit of the University of Guadalajara and agreed to participate in the study. Video recordings were made of the first consultation of 10 children diagnosed with ADHD (all male, between 4 and 9 years old) attended by a neurologist. To carry out the video recording, the participants signed a consent form. The follow-up behavior was evaluated based on attendance records of the appointments, along with the tutor´s analysis of the observations. The doctor's verbalizations were categorized according to the SISC-INTER-CVT. The pattern of verbalizations emitted by the neurologist was compared in each analysis. Results: We found the same pattern of verbalizations in both comparisons. This pattern was characterized by a greater number of verbalizations with the informative function and a fewer number of verbalizations with the punishment function. Conclusions: Based on the obtained data, we identified some functions of the verbal behavior of the health professional that may be important factors to take into consideration in the follow-up of the doctor´s indications and patient assistance.

Keywords: verbal behavior, adherence, ADHD, communication, childhood

Resumen

Introducción: La adherencia al tratamiento comprende un comportamiento complejo que se desarrolla en la interacción entre el paciente y el profesional de la salud. Una interacción que se realiza principalmente a través del comportamiento verbal de ambos. Como primer paso para estudiar esta interacción, analizamos la conducta verbal del médico dentro del contexto clínico. Este análisis nos permitirá identificar variables relacionadas con las conductas comprendidas por la adherencia al tratamiento, como la asistencia a una segunda cita y el seguimiento de las indicaciones del médico. Objetivo: Analizar (1) las diferencias entre el patrón de verbalizaciones del médico en los casos en que existe un seguimiento de las indicaciones del médico y en los casos en los cuales no existe dicho seguimiento; y (2) las diferencias entre el patrón de verbalizaciones del médico en los casos en los cuales existe una segunda cita y en los casos en los cuales no la hay. Método: La muestra fue tomada por muestreo no probalístico, la cual consistió en pacientes que asistieron a consulta en un período de cinco meses a la Unidad de Atención de Neurociencias de la Universidad de Guadalajara. Se realizaron 10 grabaciones de video de la primera consulta de 10 niños

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diagnosticados de TDAH (todos varones, de entre 4 a 9 años de edad) atendidos por un neurólogo. Para llevar a cabo la grabación, los participantes firmaron un consentimiento informado. La evaluación del seguimiento se llevó a cabo a través de la revisión de la agenda y la observación y evaluación del tutor. Las verbalizaciones del neurólogo se categorizaron según el SISC-INTER-CVT. En cada análisis se comparó el patrón de verbalizaciones emitidas por el médico. Resultados: Encontramos el mismo patrón de verbalizaciones en ambas comparaciones. Este patrón se caracterizó por un mayor número de verbalizaciones con función informativa y un menor número de verbalizaciones con función de castigo. Conclusiones: Con base en los datos obtenidos, se identificaron algunas funciones de la conducta verbal del profesional de la salud que pueden ser factores importantes a tener en cuenta en el seguimiento de las indicaciones del médico y la asistencia al paciente.

Palabras clave: conducta verbal, adherencia, TDAH, comunicación, infancia

1. INTRODUCTION

The World Health Organization (2003) defines adherence as: "the extent to which a person's behavior, meaning: taking medications, following a diet and changes in lifestyle, corresponds to the agreed recommendations of a healthcare provider" (p.3). Gil, Belda and Piñeiro (1999) consider it important to add to the definition of adherence: attendance to scheduled appointments, participation in health programs, and the search for self-care. In addition to these considerations, the term has evolved from just comprehending the doctor's instructions to including complex behavior that develops in the interaction between the patient and health agents (Amigó, Fernández, & Pérez, 2009) and in which multiple factors related to the patient and the disease intervene including their environment or context, the treatment, the health professional and their relationship with the patient (Silva Sarmiento, Galeano, & Correa, 2005).

The emphasis on the study of adherence has increased in recent decades due to the increase in the incidence and prevalence of chronic diseases and the high economic impact that it has represented for health systems worldwide (Chapel, Ritchey, Zhang, & Wang, 2017). It has been calculated that only 50% of adult patients with a chronic disease adhere to treatment (World Health Organization, 2003).

The consequences of non-adherence to treatment directly impact the progression of diseases which has caused an increase in health problems. Furthermore, it represents an obstacle to the proper evaluation of the effectiveness of treatments, as well as the diagnosis and prognosis of the disease itself, which translates into an unnecessary increase in the costs of health care (Martin-Alfonso & Grau-Abalo, 2005).

Attention deficit hyperactivity disorder (ADHD) is no exception to adherence problems. ADHD is a neurodevelopmental disorder composed of persistent behaviors of inattention, hyperactivity and impulsivity (American Psychiatric Association, 2013). Other symptoms involve deficiencies in emotional processing, executive functioning deficits

and disruptive behaviors (Kasper, Alderson, & Hudec, 2012; Pishyareh, Tehrani-Doost, Mahmoodi-Gharaie, Khorrami, & Rahmdar, 2015). In recent years the research on this disorder has increased, due to its conditions and its high prevalence in children, which has been estimated in 5.3% worldwide (Polanczyk, De Lima, Horta, Biederman, & Rohde, 2007). In a review of the literature on adherence to psychostimulants in the pediatric population, variable adherence rates were found, however, a consistent finding was the tendency to decrease adherence in the medium and long term (Chacko, Newcorn, Feirsen, & Uderman, 2010). In various studies it has been found that non-adherence to psychostimulants in patients with TDH-A was associated with poor school performance in the pediatric population (Schaefer et al., 2017) and poorer functioning generalized, mood disturbances and low sleep quality in the adult population (Bijlenga, Kulcu, Van Gellecum, Eryigit, & Kooij, 2017).

Primarily, the study of adherence has focused on four main axes: the therapeutic regimen, the characteristics of the disease, the psychosocial aspects of the patient, and the interaction of the patient with the health professional (Rodriguez-Marin, 1998).

The studies focus on variables related to the treatment regimen have reported a relationship between non-adherence and long waiting time for medical follow-up, unwanted side effects, and the high cost of the prescription drugs (Sitholey, Agarwal, & Chamoli, 2011).

The principal barriers to adherence, related to the characteristics of the disease, are the severity of the disease, some type of sensory disability, numerous and long hospitalizations, chronicity of the disease, a history of substance abuse and the presence of multiple comorbidities (Dunbar-Jacob, Gemmell, & Schlenk, 2009).

The most studied axis of adherence focuses on the psychosocial characteristics of the patient. Multiple explanatory models of adherence behavior have been developed. Among them, the health belief model (Maiman & Becker, 1977) stands out with the greatest empirical support. According to this model, the determining variables for adherence are the value of health assigned by the patient and his estimate of the probability that certain behaviors lead him to maintain or to recover health. Following this model, DiMatteo, Haskard and Williams (DiMatteo, Haskard, & Williams, 2007) made a meta-analysis of the literature on adherence, in which they found positive correlations between the patient's beliefs about the severity of disease and greater adherence. However, it has been point out the important explanatory gap resulting from the apparent inconsistency between health beliefs and adherence behavior observed in several studies (Moreno, Pedro, & Roales-nieto, 2003) and, also, the lack of consideration of socio-cultural and economic variables (DiMatteo et al., 2007).

In relation to ADHD psychostimulant treatment, some factors associated with non-adherence have been found, such as low socioeconomic level, a low baseline of symptoms, previous history of relatives with ADHD, older age, low education levels of the parents, and sudden stop of medication intake (Gau et al., 2008). Regarding adherence with children, the treatments are aimed at parents who are in charge of

administering the medication to their children and acting as co-therapists, since they are the ones who will administer the instructions for the children to carry out the tasks that the health professional has indicated and will administer the reinforcements and punishments after having performed them. Parents' attitudes toward their child's ADHD have been found to influence medication adherence (Maiman & Becker, 1977). Studies have found the relation between low adherence and the belief that the child could become addicted, skepticism about efficacy, and fear of social stigmatization for medicating their children (Coletti et al., 2012; Marcus & Durkin, 2011; Sitholey et al., 2011).

Finally, the factors related to the health professional and the interaction with the patient have been one of the least studied axes. Despite the limited research in this field, some studies highlight the importance of communication between the patient and the health professional for improving adherence (Apter, Reisine, Affleck, Barrows, & ZuWallack, 1998; Chue, 2006). In this sense, Ruiz-Lurduy, Torres and Novoa (Ruiz-Lurduy, Torres, & Novoa, 2017), through a review of studies on the doctor-patient relationship and its impact on adherence, reported that variables such as lack of confidence in the doctor and lack of instructions has a negatively effect on the adherence. It should be noted that these studies were carried out through the application of questionnaires to patients after the medical consultation.

Some researchers have proposed that the direct analysis of the verbalizations of the health professional in the consultation could contribute to achieving a better follow-up of the treatment by the patient (Marchena-Giráldez, Calero-Elvira, & Galván-Domínguez, 2013; Ruiz-Lurduy et al., 2017). Considering the need of a clear methodology for the analysis of the verbalizations of the health professional in consultation, Froján et al. in 2008 (Froján-Parga et al., 2008) formulated the therapist's verbal behavior categorization system (SISC-CVT) and later the categorization of verbal behavior interaction in therapy or SISC-INTER-CVT (Froján Parga, Montaño Fidalgo, Calero Elvira, & Ruiz Sancho, 2011) as a result of research on verbal behavior and therapy processes from clinical psychology.

Unlike other analysis of the verbalizations emitted by health professionals (see Sandvik et al., 2002) focused on an analysis of the content of verbalizations, the SISC-INTER-CVT seeks to explain the mechanisms for clinical change through contingent analysis of the patient's verbal behavior and the consequent reinforcement of the health professional (Froján Parga et al., 2011). This perspective is based on two fundamental aspects: First, it conceptualizes the health professional-patient interaction as a process of discrimination and reinforcement, through which the professional shapes the client's behavior; in other words, through a process of stimulating client behavior and rewarding the achievement of goals to the general objectives that the client is achieving. And second, the study of the language emitted within-clinical sessions from an analytical-functional perspective; that is, the verbalizations that take place in the therapeutic context acquire certain psychological functions that affect the therapeutic relationship and lead to the change of desired behavior (Froján-Parga et al., 2008). Therefore, the

categories refer to the hypothetical functions that verbalizations would have as they are emitted by the health professional and the patient.

This category system consists of eight categories based on the hypothetical verbalization function described in Table 1.

Table 1. *Functional categories from the SISC-INTER-CVT*

Discriminative	**Verbalization leading to a patient behavior (verbal or non-verbal)**
Evocative	Verbalization that gives way to a patient's overt emotional response.
Reinforcement	Verbalization indicating approval, agreement, or acceptance of the patient's behavior.
Punishment	Verbalization indicating disapproval, rejection, and/or lack of acceptance of the patient's behavior.
Informative	Verbalization that communicates technical or clinical knowledge to a non-expert
Instructive	Verbalization that is directed at fostering a patient behavior in the clinical context or outside of the clinical context.
Motivational	Verbalization that explains the consequences that patient's behavior (whether the behavior and/or situation is mentioned) will have, is having, has had or could have (hypothetical situations) on clinical change.
Other	The verbalizations that cannot be included in any of the previous categories.

Source: *Froján Parga, Montaño Fidalgo, Calero Elvira, Ruiz Sancho.*

Some of the findings related to this methodology are the detection of verbal interaction patterns related to four therapeutic objectives that are pursued at different moments of psychological therapy (evaluation, explanation, treatment, and consolidation of change) (Froján, Montaño, & Calero, 2010; Ruiz-Sancho, Froján-Parga, & Galván-Domínguez, 2015); the detection of interaction sequences between the therapist and the client that shows how the therapist shapes the client's behavior (Froján-Parga, Ruiz-Sancho, & Calero-Elvira, 2016); in addition, the detection of patterns of verbal behavior that differentiate the experienced from the less experienced therapists (Froján-Parga, Ruiz-Sancho, Montaño-Fidalgo, Calero-Elvira, & Alpañés-Freitag, 2011). This data could provide insight into making treatment more effective.

Although this classification system was developed in the field of clinical psychology, it can be applied to the study of verbalizations emitted within-session in other areas of health. This is because this classification system is focused on the analysis of the discrimination and reinforcement process postulated by Skinner (Skinner, 1957), which is observable in any interaction, regardless of the setting, and does not depend on other theoretical constructs (Froján Parga et al., 2011). By understanding the doctor-patient interaction as a discrimination and reinforcement process it is possible to identify the role that each verbalization of the health professional has in relation to the patient's behavior and vice versa. This may allow the establishment of specific variables that lead us to better understand the adherence process and the role of the health professional in this process.

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The present study focuses on the application of the methodology used by Froján et al. (Froján-Parga et al., 2008) to the medical context to open a possible new avenue of research for adherence. The first step in the functional analysis of verbal behavior within-clinical sessions stems from the analysis of the doctor's verbalizations. In subsequent studies, the analysis will be completed with that of the patient's verbalizations.

2. OBJECTIVE

To analyze the differences between the doctor´s verbalization patterns in cases where there is a follow-up of the indications and in cases where there is not. Secondly, to compare the doctor's verbalization patterns in cases where there is a second appointment and in cases where there is no second appointment. To achieve this goal, we employ the SISC-INTER-CVT described above.

3. METHODOLOGY

A descriptive observational, correlational cross-sectional cohort study was performed. All patients and their parents or guardians who attended the first consultation with the neurologist of the neuroscience care unit in Guadalajara, México during the period from January to May 2018 were included. Inclusion criteria considered: children between 4 and 10 years old, derived from educational institutions; children with a diagnosis of Attention Deficit Hyperactivity Disorder evaluated by the neurologist based on the DSM-V criteria and the Varderbilt assessment scale; and that both, children and their parents, agreed to participate in the study. Exclusion criteria considered: that the patient was not diagnosed with ADHD or that he did not agree to participate in the study.

3.1. Sample

The sample consisted of 10 minors, all males, 5 attending elementary school, and 5 attending preschool. The age range was from 4 to 9 years with a median of 5 years. As it was a first approach to the functional analysis of verbal interaction in the medical context, we relied on non-probability sampling, taking only the cases of patients who attended a first appointment between January and May 2018 and agreed to participate in the study. The patients came to the consultation accompanied by their tutor, which in all cases was their mother, with whom the telephone follow-up was subsequently carried out.

Although the socioeconomic level of the patients was not taken into account as a variable for the study, the patients who attend the Neuroscience care unit often belong to a low socioeconomic group, taking into account the parent´s level of education and type of job, as well as the type and place of residence.

3.2. Variables

The independent variables considered were the verbalizations emitted by the neurologist during the consultation functionally categorized based on the SISC-INTER-CVT (Froján Parga et al., 2011). Taking the medication out of consultation at the indicated time and dose was considered as a dependent variable, as well as attending a second consultation. No other variables were not taking into account.

3.3. Instruments

A closed-circuit recording system was used, focusing only on the doctor. The analysis of the doctor's verbal behavior was carried out with the SISC-INTER-CVT (Froján Parga et al., 2011) and the Behavioral Observation Research Interactive Software (Boris) 7.4.11.

The Statistical Package for the Social Sciences (SPSS) software was used for statistical analysis.

3.4. Process

The study was approved by the Research Ethics Committee of the University of Guadalajara.

After obtaining the consent of the tutor (s), the pediatric patient and the doctor, video recordings were made of the first consultation with the neurologist doctor of the Neuroscience Care Unit of the University of Guadalajara. After this session, each patient was telephoned once a week for the following three weeks to verify the follow-up of the medical indication in relation to taking the medication with a questionnaire. In addition, attendance records of the second medical appointment in the same Neuroscience Care Unit were reviewed.

The consultation recordings were analyzed by an observer who coded all the doctor´s verbal behavior according to the SISC-INTER-CVT (Froján Parga et al., 2011). The SISC-INTER-CVT categories were registered using the BORIS Software. The observer had to click on the category that corresponded to the verbalization emitted by the doctor. Periodic analyses of observer's reliability were performed by calculating the degree of intra- and inter-observer agreement after each evaluator had reviewed the sessions independently. The percentage of agreement, Cohen kappa index, and the percentage of theoretical accuracy of the observers associated with the Cohen kappa index was calculated. Inter-observer reliability consisted of comparing session records between two different observers. Intra-observer reliability consisted of comparing the records codified twice by the same observer, the observation was separated by an interval of 10 days. The percentage of agreement for the same observers obtained a percentage of 94.6% and interobserver of 86.9%. The kappa coefficients Cohen's Kappa index was applied to the inter-observer records with a result of 0.74, which means that there is a good level of agreement between the observers, and the probability of random responses is low (Pita Fernandez & Pértegas Díaz, 2004). The degree of agreement

indicated by the kappa coefficients ranged from "good" to "excellent" according to the criteria of Bakeman (2000).

Administering of the medication was recorded through a questionnaire for parents or guardians detailing the dose and time for each course. Attendance was evaluated from the attendance records of the care unit.

Finally, two analyses were made in the study. The first analysis compared the doctor's verbalization pattern in cases where there is a follow-up of the indications and in cases where it does not (which consisted of taking the medicine). So, the cases were divided into two groups: Follow-up group and Non- follow-up group. The sample in each group of comparison was: 6 cases in the Follow-up group, integrated by the cases where the patient complied with the indication on taking the medication; and 4 cases in the Non-Follow-up group, integrated by the cases where the patient did not follow that indication.

The second analysis compared the doctor's verbalization pattern in cases where there is a second appointment and in cases where there is no second appointment. The cases were divided into two groups: Attendance group and Non-attendance group. The sample in each group of comparison was: 5 cases in the Attendance Group, integrated by the cases where there was a second appointment; and 5 cases in the Non-attendance group, integrated by the cases where there was not a second appointment.

These two comparisons were made using a parametric test, the Student t-test for independent samples. To choose this test, first the Shapiro-Wilk test was applied to determine if the data has a normal distribution and the Levene test to determine if there was equality of variance. The results of both tests showed a normal distribution of the data and equality of variance. The emission of verbalizations was analyzed in all cases with the Shapiro-Wilk normality test. All the values were greater than alpha 0.05, so distribution is established normally. According to Levene's test, all values were greater than alfa 0.05, therefore equality of variance is assumed. Accordingly, the parametric Student t-test for independent simples was chosen to mad the two comparisons.

4. RESULTS

4.1. Results related to Follow-up and Not-follow-up group

Table 2 shows the descriptive statistics of the mean and standard deviation of the comparison of the Follow-up and Non-follow-up groups of the indications (related to the consumption of the medication). The upper panel of Table 2 shows the data for the Follow-up group and the lower panel, the data for the Non-follow-up group.

Table 2. *Descriptive statistics and percentage of the categories emitted in Follow-up and Not-follow-up group.*

Follow-up group					
	Discriminative	Reinforcement	Punishment	Instructive	Informative
Mean	24,69	8,23	7,33	24,36	27,90
SD	13,65	4,66	2,47	6,75	8,35
Percentage	36,66	13,33	9,30	29,72	40,00
Not-follow-up group					
	Discriminative	Reinforcement	Punishment	Instructive	Informative
Mean	28,15	8,14	17,44	25,83	16,32
SD	6,87	7,19	9,39	7,11	5,14
Percentage	45,90	17,02	27,77	35,00	22,95

Notes. [a]Variable measured in frequency.

Source: *Own elaboration from the results obtained.*

Graphic 1 shows the comparison between Follow-up and Non-follow-up cases of the doctor´s indication for taking the medication. The x-axes of the graph represent the percentage of verbalizations emitted and the y-axes, the verbalization categories. Comparison of Follow-up group and Not-follow-group showed the following: there were not verbalizations with the motivating or evocative function in either group; there was a higher number of discriminatory verbalizations, punishment and a slight majority of instructions; and, unlike the Follow-up group, in which we found a higher average of informative verbalizations and a slight majority of reinforcement.
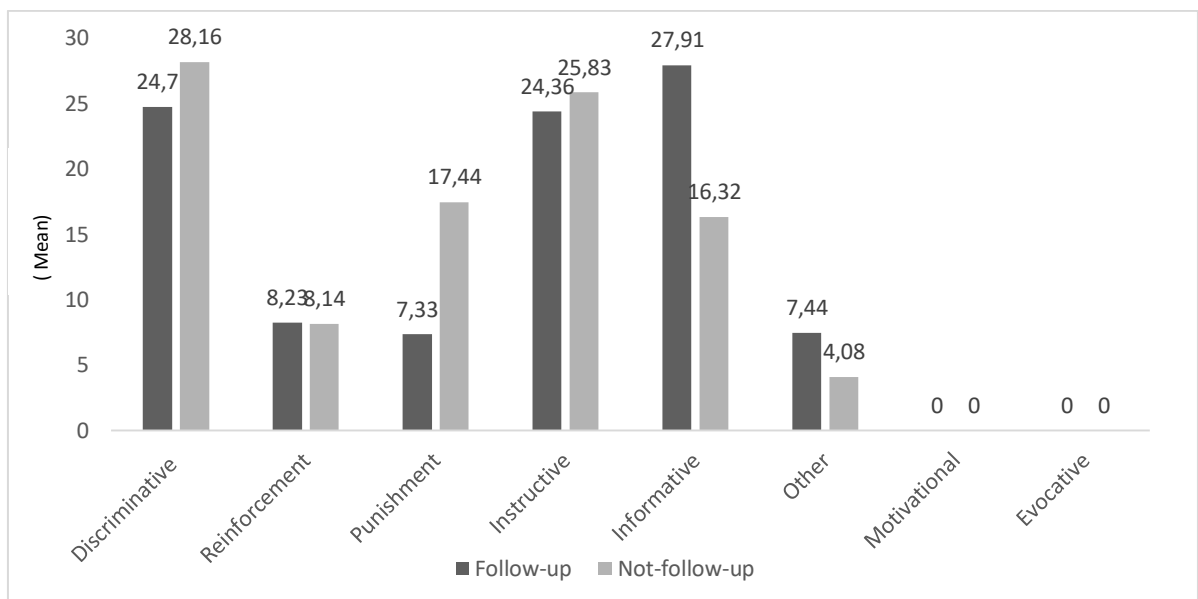
Graphic 1. *Mean of verbalizations emitted in Follow-up and Not-follow-up group.*
Source: *Own elaboration from the results obtained.*

According to Student's *t*-test, the difference in the emission of verbalizations with the punishment (*t* = -2,579, *p* = ,033) and informative function (*t* = 2,447, *p* = ,040) was statistically significant.

4.2. Results related to Attendance and Not-attendance group

Table 3 shows the descriptive statistics of the verbalizations emitted. The upper panel shows the data for the Attendance group and the lower one, that of the Non-attendance group.

Table 3. Descriptive statistics and percentage of the categories emitted in Attendance and Not-attendance group.
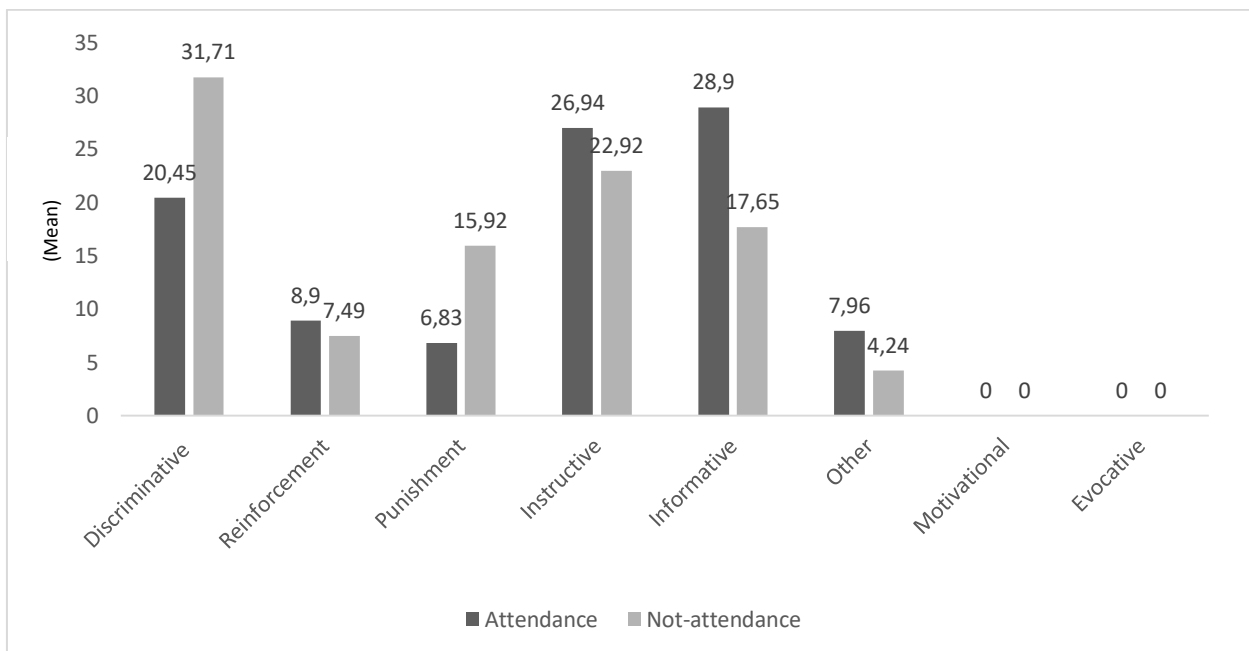
Attendance					
	Discriminative	Reinforcement	Punishment	Instructive	Informative
Mean	20,45	8,90	6,83	26,94	28,89
SD	9,90	4,88	2,40	2,77	8,96
Percentage	45,90	13,33	9,83	29,72	40,00
Not-attendance					
	Discriminative	Reinforcement	Punishment	Instructive	Informative
Mean	31,70	7,49	15,91	22,96	17,60
SD	9,92	6,39	8,81	8,90	5,35
Percentage	35,71	17,02	27,77	35,00	21,42

Notes. [a]Variable measured in frequency

Source: *Own elaboration from the results obtained*

Graphic 2 shows a comparison between Attendance and Not-attendance groups. The x-axes of the graph represent the percentage of verbalizations emitted and the y-axes, the verbalization categories. This second comparison showed the following: no verbalization with the motivating or evocative function; a higher average of verbalizations with the instructional and informative function in the Attendance group; and, in the Non-attendance group, we found a majority of verbalizations with the punishment and discriminatory function.

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Graphic 2. *Mean percentage of verbalizations emitted in Attendance and Not-attendance group.*
Source: *Own elaboration from the results obtained.*

The differences in the emission of verbalizations were analyzed with Student's *t*-test. The difference in informative function ($t = 2,410$, $p = ,043$) was statistically significant. This was the only statistically significant difference; however, it is important to denote that the verbalization with punishment function almost reaches a significant value ($t = -2,224$, $p = ,057$).

5. DISCUSSION

The objective of the present study was to identify a pattern in the verbalizations produced by the doctor associated with the behavior of following instructions or attending a follow-up appointment.

The comparison between the doctor's verbalizations emitted in cases where there was a follow-up of indications showed a pattern of verbalization in the cases where there was a second appointment. Even though the differences in verbalizations were unobtrusive, they had clear clinical significance.

A consistent pattern was observed in both comparisons: on one hand, the behavior of the follow-up group with attendance at a second appointment is associated with a greater emission of verbalizations with the informative function. On the other hand, the behavior of the non-follow group who did not attend a second appointment is related to a greater emission of verbalizations with the punishment function.

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This data could indicate, as hypotheses to verify in subsequent studies, that giving little technical information about the disorder may be related to lower levels of adherence. The results found are consistent with other empirical studies (Ruiz-Lurduy et al., 2017; Soria, Vega, Nava, & Saavedra, 2011), finding an association between the information provided to the patient and adherence to treatment. On the other hand, the greatest emissions of punishments could be related to interruptions made by the doctor when the patient spoke. These interruptions could make the patient hesitant to interrupt with the doubts that arise throughout the session, which ultimately causes the patient to poorly understand the treatment and not carry it out correctly. This data agrees with the literature which indicates that the patient only understands 50% of what the doctor says during the session (Schillinger et al., 2003).

The null emission of some verbalizations with motivational function seems noteworthy, as well as the low number of verbalizations with reinforcing function. Verbalizations with motivational function could encourage the patient to achieve the objectives of the treatment, highlighting the consequences of not following the treatment partially or totally, and the benefits of following it properly. Reinforcement verbalizations can be important to encourage the patient to ask their doubts, in addition to creating more empathy and a better therapeutic alliance that can be fundamental to carry out a better treatment. Finally, the fact that a greater number of discriminatory verbalizations were found in both the No-follow-up group and the Non-attendance group, coupled with the low number of informative verbalizations in these groups, it could be hypothesized that it is better to ask for less information and offer more in exchange.

As mentioned above, adherence is a complex process that encompasses a series of behaviors and attitudes on the part of the patient in interaction with multiple factors associated with the socio-economic context, treatment, disease and the health professional (Amigó et al., 2009; World Health Organization, 2003). Therefore, it is important to highlight that adherence to treatment is not limited to the behaviors of the patient that we analyzed in this study, referring to the follow-up of indications and attendance at the second follow-up consultation. However, these verbal behaviors are a fundamental part of the adherence process and their study could help us to clarify their role in this process. Regarding the impact of the doctor's verbal behavior, we do not intend to establish that it is a unique and determining factor for adherence. On the contrary, as we have already mentioned, it is a complex and multifactorial process, however, according to the results obtained, the doctor's verbalizations seem to be an important factor to take into account.

The study was conceived as a first approach to the study of adherence through a system of categories of doctor's verbal behavior. Due to the limited number of the samples, the results should be interpreted with caution. Furthermore, this study is limited to being based on correlational data. The results show a tendency in the pattern of verbalization used in the clinical context. In this sense, we can only highlight the finding that some verbalizations may be relevant for improving the attendance to a second appointment and the follow-up of doctor´s indications.

Regarding the adaptation of the methodology mentioned to the study of verbal behavior in the medical context, the fact that differences were found between the various cases and that these differences made clinical sense, may be a point in favor of considering that the methodology can be adapted to the medical context.

This study focused on performing a topographic analysis of the doctor's verbal behavior in the first consultation, so only the function of the verbalizations emitted was considered. Future research in this area should include an analysis of the content of these functional categories. This will allow us to analyze which aspects are most relevant to inform or reinforce the patient, since previous studies have found greater adherence in patients who are provided with information about the treatment, characteristics and its mechanisms of action, rather than information about the diagnosis and its characteristics (Soria et al., 2011).

One variable that would be interesting to analyze is a specific category system such as instructions or rules. These verbalizations had been found relevant in the study of adherence and effectiveness of psychological treatment (Marchena-Giráldez et al., 2013; Vargas de la Cruz, Pardo Cebrian, Martínez, & Froján Parga, 2017).

On the other hand, it will be relevant to study verbal behavior in follow-up appointments that allow us to identify variations in the pattern of verbalizations throughout the treatment process and to identify its impact on long-term adherence.

6. CONCLUSIONS

This study consisted in the analysis of the doctor's verbal behavior emitted during the first clinical session. We found the existence of patterns in the doctor´s verbalizations associated with certain patient's behaviors (following indications and attending a second appointment). This pattern consisted in a greater number of verbalizations with informative function and a lower number of verbalizations with punishment function.

The results showed a significant difference between the follow-up group and non follow-up group in informative function ($t = 2,447$, $p = ,040$) and punishment function ($t = -2,579$, $p = ,033$). The follow-up group was characterized by a greater number of verbalizations with informative function ($\mu = 27,90$; 40%) and lower number of verbalizations with punishment function ($\mu = 7,33$; 9,30%). the non follow-up group presented a lower number of verbalizations with informative function ($\mu = 16,32$; 22,95%) and a greater number of verbalizations with punishment function ($\mu = 17,44$; 27,77%). According to the second comparison, the results showed a significant difference between the attendance and non-attendance group in informative function ($t = 2,410$, $p = ,043$) and punishment function almost reaches a significant value ($t = -2,224$, $p = ,057$). The attendance group was characterized by a greater number of verbalizations with informative function ($\mu = 28,89$; 40%) and a lower number of verbalizations of punishment function ($\mu = 6,83$; 9,83%); the non-attendance group presented a lower number of verbalizations with informative function ($\mu = 17,60$;

21,42%) and a greater number of verbalizations with punishment function (μ = 15,91; 27,77%).

The present study constitutes a first step in the study of adherence through the analysis of verbal interaction during the ADHD treatment. The results obtained in this study and some guidelines to be verified in future research show that the applied methodology seems promising in the study of adherence.

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