

## Action and coping plans related to the behavior of adherence to drug therapy among coronary heart disease outpatients<sup>1</sup>

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Objective: to analyze the action and coping plans related to the behavior of adhering to drug therapy, developed by coronary heart disease (CHD) outpatients, and to identify the barriers perceived to adopting this behavior. Methods: the participants (n=59) were invited to formulate action plans and coping plans for the behavior of adhering to the cardio-protective medications and the symptom-relief medications. Results: specific action plans for taking the medications associated with temporal markers and the sleep-wake cycle were shown. The most frequently reported obstacles were forgetfulness and absence of routine in daily living activities. The coping plans for overcoming forgetfulness were the most specific. Conclusion: this study's findings support the application of implementation intentions aimed at optimizing adherence to drug therapy among patients with CHD.

Descriptors: Nursing; Drug Utilization; Behavior; Planning Techniques; Coronary Disease.

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## **Planos de ação e de enfrentamento de obstáculos relacionados ao comportamento de adesão à terapia medicamentosa em coronariopatas**

Objetivo: analisar os planos de ação e de enfrentamento de obstáculos, relacionados ao comportamento de adesão à terapia medicamentosa, elaborados por pacientes coronariopatas, em seguimento ambulatorial, e identificar as barreiras percebidas para adoção desse comportamento. Método: os participantes (n=59) foram convidados a elaborar planos de ação (action planning) e de enfrentamento de obstáculos (coping planning) para o comportamento de adesão aos medicamentos cardioprotetores e de alívio dos sintomas. Resultados: foram evidenciados planos de ação específicos para a tomada dos medicamentos que associaram o comportamento a marcadores temporais e ao ciclo vigília/sono. Os obstáculos mais frequentemente relatados foram o esquecimento e a ausência de rotina nas atividades de vida diária. Os planos de enfrentamento, elaborados para superar o esquecimento, foram os mais específicos. Conclusão: os achados deste estudo subsidiam a aplicação da implementação da intenção para otimizar a adesão de coronariopatas à terapia medicamentosa.

Descritores: Enfermagem; Uso de Medicamentos; Comportamento; Técnicas de Planejamento; Doença das Coronárias.

## **Planes de acción y de enfrentamiento de obstáculos relacionados al comportamiento de adhesión a la terapia medicamentosa en pacientes con coronariopatía**

Objetivo: analizar los planes de acción y de enfrentamiento de obstáculos relacionados al comportamiento de adhesión a la terapia medicamentosa, elaborados por pacientes con coronariopatía en seguimiento de ambulatorio e identificar las barreras percibidas para adopción de este comportamiento. Método: los participantes (n=59) fueron invitados a elaborar planes de acción (action planning) y de enfrentamiento de obstáculos (coping planning) para el comportamiento de adhesión a los medicamentos cardio-protectores y de alivio de los síntomas. Resultados: fueron evidenciados planes de acción específicos para la toma de los medicamentos que asociaron el comportamiento a marcadores temporales y al ciclo vigilia sueño. Los obstáculos más frecuentemente relatados fueron el olvido y la ausencia de rutina en las actividades de vida diaria. Los planes de enfrentamiento elaborados para superar el olvido fueron los más específicos. Conclusión: los hallazgos de este estudio subvencionan la aplicación de la implementación de la intención para optimizar la adhesión de pacientes con coronariopatía a la terapia medicamentosa.

Descriptorios: Enfermería; Utilización de Medicamentos; Conducta; Técnicas de Planificación; Enfermedad Coronaria.

## **Introduction**

In the last three decades, evidence has proven that treatment with beta-blockers, angiotensin converting enzyme inhibitors (ACE), angiotensin receptor antagonists (ARA II), platelet antiaggregant and lipid-lowering drugs reduces cardiovascular events and

mortality after acute coronary syndrome<sup>(1)</sup>. Low or non-adherence to cardioprotective therapy after an ischemic event, however, has been frequently documented and associated with increases in cardiovascular morbidity and mortality<sup>(2)</sup>. Interventions for improving adherence

to drug therapy have been developed and evaluated<sup>(3)</sup>. Among these, those based on theoretical assumptions are the most remarkable, especially those based in social-cognitive theories, in which the intention or motivation for carrying out a specific behavior is the action's main determinant. Positive intentions, however, do not always translate into the desired behavior<sup>(4)</sup>. Although intention is a strong predictor of a behavior, there are reports of a *gap* in the Intention-Behavior relationship – that is, people with positive intentions fail to accomplish the behavior<sup>(5)</sup>. Therefore, strategies such as the 'implementation intentions' have been used as tools for supporting motivated people to transform positive intentions into actions<sup>(6)</sup>.

The concept of implementation intention refers to the shaping of action plans specifying *when*, *where* and *how* to carry out the behavior. They are defined as conditional plans that anticipate critical situations and specify how to act in such circumstances<sup>(4)</sup>. Once the mental representation of such a situation becomes highly activated, the control of the behavior is delegated to specific situational clues which, when present, trigger the action, increasing the probability of the behavior to be accomplished<sup>(7)</sup>.

However, the planning of *when*, *where* and *how* to act does not address the habitual responses to routine situations which appear in response to social pressure. In this context, "coping planning"<sup>(8)</sup> has been used, which comprises a strategy focused on the transposition of barriers, by combining prospective plans (*If/then*) with coping strategies, that is, if barrier *y* should occur, then behavior *x* is undertaken to overcome it. It represents a mental union between anticipated risk situations and appropriate coping responses. Individuals who plan how to manage such conditions have a higher probability of maintaining the behavior in the existence of difficulties<sup>(8)</sup>.

Formulating plans for implementing intentions has been effective in promoting health-related behaviors, such as physical activity<sup>(6,9)</sup> and consumption of fruit and vegetables<sup>(10)</sup>, among others. In the literature, there are reports about the importance of investigating the quality of the action and coping plans developed in intervention studies<sup>(7,11)</sup>. Hence, the present study is intended to analyze action and coping plans produced by patients with Coronary Heart Disease (CHD), related to cardioprotective and symptom-relief medication adherence recommended in the treatment of CHD, as well as identifying the perceived barriers to adopting

this behavior. It is expected that this study's findings support the application of the implementation intention technique for optimizing adherence to drug therapy in CHD.

## Objectives

This study was aimed at analyzing the action and coping plans related to the behavior of adhering to cardioprotective and symptom-relief drug therapy, developed by outpatients with CHD. The study also aimed to identify the perceived barriers to adopting this behavior.

## Methods

### Sample and Procedures

This study's data derives from a wider study<sup>(12)</sup> which evaluated the effectiveness of planning strategies in medication adherence and quality of life among patients with CHD. It was an experimental study, which included 115 outpatients with CHD, aged over 18 years, with previous clinical manifestation of myocardial infarction or angina and undergoing regular follow-up for at least six months in one of the two participating hospitals, in the state of São Paulo. The sample size was determined based on a pilot study (n=30), considering the change of the measurement of the proportion of adherence (difference: final *minus* initial) as a response variable, as well as the level of significance of 5% ( $\alpha=0.05$ ), considering a statistical power of the test of 80% ( $1-\beta$ ). Therefore, a sample of 60 participants for each group was estimated, with the goal of detecting the same difference in the average percentage of proportion of adherence (final *minus* initial) between the Intervention Group (IG - 5.13) and Control Group (CG - 0.99) observed in the pilot study. Individuals were included if they presented effective verbal communication and had been continuously using at least two oral medications for treatment of CHD for at least the last month. Those who presented an ischemic event within the six month period prior to the data collection period were excluded, as were those whose drug treatment had been suspended or modified. The participants were randomized into Control (CG=56) or Intervention Group (IG=59). The individuals of the IG were submitted to Action and Coping Planning strategies and the controls received usual care, which consisted of regular medical follow-up. The present study analyses the action and coping plans devised by the 59 participants of the IG.

## Data Collection

The data was collected between June 2010 and May 2011. The participants responded to a validated questionnaire for gathering demographic and clinical data and to the Brazilian version of the Morisky Self-Reported Measure of Medication Adherence Scale<sup>(13)</sup> for measuring factors related to non-adherence regarding cardioprotective medications, as well as to CHD symptom-relief drugs. The medication adherence was evaluated by the proportion of drug adherence and by the global evaluation of the adherence<sup>(14)</sup>.

### Data collection instruments

- *Morisky Self-Reported Measure of Medication Adherence Scale*<sup>(15)</sup>: comprises four questions related to non-adherence to medications – forgetfulness, carelessness, stopping taking medication due to perceiving of improvements and stopping taking medication due to perceiving of worsening of the health status. In the version used, the responses are structured in Likert-type scales with four or five response options, whose sum generates a score varying from 4 to 18; considering the lower the score, the greater the favorability of adherence<sup>(13)</sup>.

- *Proportion of drug adherence*<sup>(14)</sup>: constructed to identify and quantify the medications and how they are used. It encompasses the variables: 1. Name, dosage and how the prescribed medications should be taken (posology); 2. Description of the way each medication is used, according to the used dose and how it should be taken, in the 24 hours prior to the interview; 3. Description of the use of the medications in the week prior to the interview and 4. Description of the use of the medications in the month prior to the interview. The proportion of adherence was then calculated based on the omitted doses, self-reported by the following calculation:  $[(\text{prescribed doses} - \text{missed doses}) \times 100 / \text{doses prescribed}]$ <sup>(16)</sup>. Participants were considered “adherents” if they obtained a percentage of consumption of prescribed medications which was equal to or greater than 80%<sup>(17)</sup>. For those making use of more than one medication, the proportion of adherence was calculated by the average of the percentages of adherence for each medication<sup>(14)</sup>. The proportion of adherence was analyzed as a continuous and binary variable – adequate ( $\geq 80\%$  of the prescribed dose) and inadequate dose ( $< 80\%$  of the prescribed dose).

- *Global evaluation of the adherence*: the number and

frequency of medications ingested was evaluated, along with its association with temporal markers: fasting, breakfast, lunch and dinner. Considering dosage and care, this measure was evaluated based in the following classification: Group I (adequate posology and adequate care regarding the medical prescription); Group II (adequate posology and inadequate care regarding the medical prescription), Group III (inadequate posology and adequate care regarding the medical prescription); Group IV (inadequate posology and inadequate care regarding the medical prescription). The use of one or more medications whose posology and association with temporal markers was not in accordance with the prescription was considered “inadequate care”. Patients classified in Group I were considered “adherents” and patients classified in groups II, III and IV were considered “non-adherents”<sup>(14)</sup>.

### Methodology for intervention strategies: action plans and coping plans

After the collection of clinical and sociodemographic data, health-related quality of life and adherence to the drug therapy, the IG participants were invited to produce – in partnership with the researcher – action and coping plans related to adherence to cardio-protective and symptom-relief medications. The construction of these plans was based on the theoretical presuppositions of “implementation-intentions”<sup>(6)</sup> and on a previous study undertaken in Brazil<sup>(9)</sup>. In a specially-made spreadsheet, the participants formulated up to three action plans concerning *when*, *where* and *how* they intended to take the medications and indicated up to three possible obstacles to the accomplishing of this behavior. Between one and three strategies were developed for overcoming each of the obstacles listed. This limited number of plans was due to the difficulty which the individuals – being elderly and with low cognitive function – had in memorizing the strategies planned<sup>(18)</sup>. All the plans were registered by the researcher by hand in the spreadsheet, and filed individually.

### Data analysis

The characterization data was submitted to descriptive analysis. The plans were subjected to quanti-qualitative analysis, which corresponded to the categorization and tabulation of the plans and the barriers reported; with later grouping by similarity of themes or ideas and the determination of the frequency which these were reported.

**Ethical aspects**

The study was approved by the local Research Ethics Committees (Decisions nº802/2009 and nº001-11). All the enrolled participants signed the Informed Consent.

**Results**

**Characterization: Sociodemographic, Clinical and regarding Adherence to Drug Therapy**

The sample (n=59) was mainly comprised of men (67.8%), with an average age of 63.4(8.9) years, Caucasians (72.9%), with an average of 5.5(4.0) years of schooling, who lived with partners (89.8%), were economically inactive (76.3%), and with a monthly family income equivalent to 3.6(3.2) minimum salaries. The majority (74.6%) had a previous history of myocardial infarction, as well as an average of 5.1(1.9) associated clinical conditions. Most of the individuals were using an average of 6.8(2.0) types of medications per day, average of 3.5(0.6) cardioprotective medications, and average of 0.9(0.7) medications for symptom-relief. The participants were considered adherents by the criteria of *proportion of drug adherence* and showed favorability for adherence according to the Morisky scale. However, only 19 (32.2%) persons reported using dose ≥80% and adopting the necessary care for the adequate use of the medications, which indicates non-adherence, according to this evaluation criteria (Table 1).

Table 1 – Socio-demographic and clinical characteristics of patients with CHD who were submitted to the strategies of planning for medication adherence (n=59). Campinas, São Paulo, Brazil, 2011-2012

Sociodemographic Variables	
Age, Average (sd*)	63.4(8.9)
Sex, % (n)	
Male	67.8(40)
Color, % (n)	
White	72.9(43)
Marital status, % (n)	
With partner	89.8(53)
Without partner	10.2(6)
Schooling (years), Average (sd)	5.5(4)
Habits/ Lifestyle, % (n)	
Currently a smoker	5.1(3)
Work status, % (n)	
Inactive	76.3(45)
Active	15.2(9)
Housewife	8.5(5)
Family income (MS)	3.6(3.2)

(continue...)

Table 1 - (continuation)

Clinical Variables	
Characterization of coronary disease, % (n)	
Unstable Angina	25.4(15)
Myocardial infarction (MI)	74.6(44)
Number of previous MI, Average (sd)	1.0(1.3)
Number of Associated Clinical Conditions, Average (sd)	5.1(1.9)
Associated Clinical Conditions†, % (n)	
Dyslipidemia	86.4(51)
Hypertension	84.7(50)
Diabetes mellitus	45.8(27)
Peripheral Artery Disease	22.0(13)
Heart failure	16.9(10)
Stroke	8.5(5)
Glucose intolerance	1.7(1)
Treatment, % (n)	
Clinical and Intervention (MR/PTA/MR and PTA)	67.8(40)
Clinical	32.2(19)
Number of medications in use, Average (sd)	6.8(2.0)
Number of Cardioprotective Medications - Average (sd)	3.5(0.6)
Number of symptom-relief medications, Average (sd)	0.9(0.7)
Morisky Score, Average (sd)	7.2(3.1)
Proportion of drug adherence, Average (sd)	92.1(13.7)
Proportion of adherence†, % (n)	
Adequate dose (≥80%)	53(89.8)
Inadequate dose (<80%)	6(10.2)
Global evaluation of adherence†, % (n)	
Adherents	19(32.2)
Non-adherents	40(67.8)

\*sd = Standard deviation; †Percentage per line.  
 MS = minimum salary (1MS=R\$ 545.00)  
 MR = Myocardial Revascularization  
 PTA = Percutaneous Transluminal Angioplasty

**Description of Action and Coping Plans**

The action plans most frequently devised in relation to *when* to take medication involved the associating of taking drugs with temporal markers such as meals (breakfast, lunch and dinner) and the sleep-wake cycle (on getting up and going to sleep). As for *where* to implement the behavior, plans associated with a specific place (at home or work) were most frequent, although plans for taking medication in any place were also found. Regarding *how* to take the medication, plans associated with meals were most noticeable (Table 2).

The barriers perceived to taking medications, and the plans for overcoming these barriers are presented in Tables 3, 4 and 5. It was determined to the participants to indicate barriers to taking medications in different situations; in *daily life*, during *work activities* and during *leisure time*. In *daily life*, the most frequently pointed-out barriers were forgetfulness (46.9%), the absence of routine for associating taking medications with daily activities (26.0%) and unawareness about the disease

(7.3%). During *work activities*, barriers related to the need for a break at work were emphasized (33.3%), as for regular meals during work hours (25.0%), as well as for forgetfulness (12.5%). Forgetfulness was also highly frequently mentioned (73.3%) in *leisure time*. The

formulation of a large number of plans for the issue of forgetting to take medications in daily life was observed, with the plan "Associating the taking of medications with temporal markers (meals) throughout the day" standing out (25.0%).

Table 2 – Description of Action Plans devised by the patients with CHD in relation to adherence to cardioprotective and symptom-relief drug therapy (n=59). Campinas, São Paulo, Brazil, 2011-2012

Action Plans	n	%
<b>When</b> (temporal markers)		
Associating the taking of medications with the sleep-wake cycle and temporal markers – meals (breakfast, lunch and dinner)	24	40.7
Associating the taking of medications with going to bed and with temporal markers – meals (breakfast, lunch and dinner)	16	27.1
Associating the taking of medications with temporal markers – meals (breakfast, lunch and dinner) throughout the day	12	20.3
Associating the taking of medications with DLA* (e.g. after brushing teeth) and the temporal markers – meals (breakfast, lunch and dinner)	7	11.9
<b>Where</b> (in which place)		
Only at home	37	62.7
Anywhere	14	23.7
At home and at work	8	13.5
<b>How</b>		
Associating with meals and with a cup of water/juice	30	50.8
Fasting and associated with meals with a cup of water/juice	27	45.8
Unassociated with fasting and/or meals with a cup of water/-juice	2	3.9

\* Daily Living Activities

Table 3 – Coping Plans devised by the patients with CHD, relating to the behavior of adherence to cardioprotective and symptom-relief drug therapy in daily life (n=59). Campinas, São Paulo, Brazil, 2011-2012

In daily life					
Perceived Obstacles/Barriers	n	%	Coping plans	n	%
<b>Forgetfulness</b>					
Forgetting to take the medications at the prescribed times	45	46.9	Associating the taking of medications with temporal markers (meals) throughout the day	24	25.0
			Recording the times to take medications on the medications' packaging	12	12.5
			Request help from a family member to avoid forgetting the time to take the medications	9	9.4
Absence of family members for helping to remember taking the medications	8	8.3	Recording the times to take medications on the medications' packaging	7	7.3
			Memorizing the names of the medications and the times for taking them, in accordance with the prescription.	1	1.0
Forgetting to buy and/or pick up the medication from the health services	7	7.3	Recording the date for buying or picking up the medications and fixing it to a highly visible place (e.g. the front of the refrigerator)	5	5.2
			Counting the total of medications on a weekly basis to ensure the pick up or purchase of the medications before they run out	2	2.1
<b>Absence of routine</b>					
Absence of routine for the sleep-wake cycle	25	26.0	Establish a minimum routine for the sleep-wake cycle	23	23.9
			Use strategies which help in the adoption of the routine for Sleep (use of an alarm clock, for example)	2	2.1
Not having habitual intervals for having meals throughout the day	16	16.7	Establish a routine for meals and associate the taking of medications with meals	16	16.7
<b>Unawareness about the treatment</b>					
Unawareness about the action/purpose of the medications prescribed	7	7.3	Request guidance from doctor/health care professional in follow-up consultations	7	7.3
<b>Total</b>	<b>96</b>	<b>100</b>	<b>Total</b>	<b>96</b>	<b>100</b>

Table 4 – Coping Plans devised by the patients with CHD, related to the behavior of adherence to cardioprotective and symptom-relief drug therapy while at work (n=59). Campinas, São Paulo, Brazil, 2011-2012

Perceived Obstacles/Barriers	At work		Coping Plans		
	n	%		n	%
Difficulty in taking medications at work					
Difficulty in merging the time for taking medications with the break at work	8	33.3	Negotiate a break with the employer for taking medications in accordance with the prescription	8	33.3
Difficulty in unification of the taking of medications with the work	7	29.2	Arrange a break in work activities for taking medications	7	29.2
Associating the taking of medications with meals and having difficulty in establishing a routine for meals in the workplace	6	25.0	Seek to establish a minimum routine for meals in the workplace	6	25
Forgetfulness					
Forgetting to take medications at work	3	12.5	Place medications daily in a shirt/trouser pocket (men) or handbag (women) for taking to work	3	12.5
Total	24	100	Total	24	100

Table 5 – Coping Plans devised by the patients with CHD, relating to the behavior of adherence to cardioprotective and symptom-relief drug therapy during leisure time (n=59). Campinas, São Paulo, Brazil, 2011-2012

Perceived Obstacles/Barriers	Leisure time		Coping Plans		
	n	%		n	%
Forgetfulness					
Forgetting to take the medications during habitual leisure activities	33	73.3	Separate the medications and take them in the pocket/handbag	21	46.7
			Separate the medications and take them in the pocket/handbag along with a bottle of water	12	26.6
Forgetting to take the medications on outings/short trips away	9	20	Prioritize the placing of all the medications in the suitcase	9	20
Concomitant use with alcoholic drinks					
Consuming alcoholic drinks concomitantly with the use of medications	3	6.7	Avoid consuming alcoholic drinks concomitantly with use of medications	3	6.7
Total	45	100	Total	45	100

## Discussion

The present study's aim was to describe the action plans and coping plans devised by outpatients with CHD under regular follow-up, relating to the behavior of adherence to cardioprotective and symptom-relief drug therapy indicated in the treatment of CHD.

Forming action and coping plans may be effective in implementing intention for different health-related behaviors. However, the use of this strategy entails that the people involved are capable of devising plans which lead to a behavioral change<sup>(7)</sup>. There are reports that the plans' quality influences the effectiveness of the adoption of the desired behavior<sup>(7,11)</sup>. A previous study<sup>(19)</sup> showed that participants who were advised/guided by the researcher in the production of plans for adhering to physical activity formulated more complete and thorough plans, compared to plans produced by the patients alone. In addition to this, an association was evidenced between plans that were more complete

and higher levels of physical activity after six months' monitoring.

Thus, in the present study, the low level of schooling associated with the recommendations of a previous study<sup>(6)</sup> contributed to the decision that the plans should be produced along with the researcher, in a non-directive manner, guided by the question: *When, where and how do you plan to take the medications prescribed for the treatment of your heart problem, considering your day-to-day activities?* Although some plans were devised independently, the majority was devised with the researcher, respecting the patients' desires in the formulated plans. As a result of the joint planning, the plans were complete, encompassing *when, where* and *how* the action would be implemented.

A randomized clinical trial tested the impact of the implementation of intention in clinically relevant changes in daily physical activity among adults in Holland. One of the reasons identified for the low effectiveness of the intervention was the fact that the plans were devised

autonomously by the participants, which may have influenced the plans' specificity and the quality<sup>(20)</sup>.

Researchers<sup>(21)</sup> also hypothesize that specific plans are more likely to promote an intentional action compared to those produced in a generic way. This premise is based on the idea that through pondering a detailed description of the critical situation and the action to be carried out, the risk situation can easily be recognized and can trigger the action previously planned<sup>(7,11)</sup>. A study<sup>(7)</sup> reported that instrumental plans (capable of promoting the change in behavior, and viable for the implementation of the intention in the context in which they were developed) with a high degree of specificity (those in which description of the situation is characterized by richness of details, facilitating recognition of the risk situation and the implementation of the action) resulted in a higher probability of abstinence from tobacco when compared to plans which were non-instrumental and of low specificity.

In the present study, the analysis of the plans evidenced that the largest number of plans was developed mentioning forgetfulness about taking medications in daily life. Additionally, it was observed that the plans related to forgetfulness in different situations (daily life, work and leisure time) were detailed and relevant to the context, with an exception for the plan "*Memorizing the names of the medications and the times for taking them, in accordance with the prescription*", which was considered unlikely to lead to behavioral change in a population with a high average age and a low level of schooling. However, generic plans were also observed, mainly related to the absence of routine in daily life, as well as to the difficulty encountered in conciliating the taking of medications with work activities. It was observed that such plans can difficult the implementation of action in a risk situation. It may be hypothesized that the more frequent development of generic plans is related to the low level of schooling in the population studied.

On the other hand, there is a report<sup>(7)</sup> that over-specifying actions does not necessarily result in beneficial effects, when one or more of the components of the desired action is not present or cannot be undertaken. Hence, the development of multiple and specific plans seems to be associated with a greater intervention effect. In the present study, however, it was not possible to analyze the number of plans devised, as the participants had been requested to devise up to three action plans, as recommended<sup>(6)</sup>.

Studies on plans for medication adherence are scarce. One study<sup>(21)</sup> which tested the effectiveness of planning strategies in adherence to antibiotic drug therapy also found, among the barriers to adherence, forgetfulness and the need for changes in routines. Its findings suggested, however, that implementation intention is useful in the management of non-adherence from non-intentional causes such as forgetfulness, but is little effective in the promotion of complex behaviors, such as changes of routine.

Currently, huge efforts are being made to understand non-adherence to drug treatment, but this is a challenge yet to be met, as the mechanisms involved in the behavior of drug adherence are complex<sup>(22)</sup>.

The future analysis of the results of the effectiveness of the implementation intention intervention among outpatients with CHD will contribute to refine this strategy with a view to replicating it in clinical practice.

## Conclusion

The findings evidenced the elaboration of complete and specific action plans associating the taking of medications with temporal markers and the sleep-wake cycle. The development of specific coping plans for overcoming forgetfulness concerning taking medications and generic plans for supplying the lack of routine in daily activities related to the taking of medications was observed. These findings provide support for the application of the implementation intention technique in intervention studies intended to promote adherence to drug therapy among outpatients with CHD.

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