Construction and validation of an instrument to assess the care for prisoners living with HIV/AIDS

Construção e validação de instrumento para avaliação do cuidado a prisioneiros que vivem com HIV/Aids

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ABSTRACT This study aimed to build and validate indicators for the health care of those deprived of freedom living with HIV/AIDS, being a methodological development study carried out in two stages. In the first stage, there was the construction of indicators through a literature review in national and international databases. In the second stage, the content and appearance validation were performed using the Delphi technique method; ten judges specialized in the care of the person living with HIV/AIDS and practical performance in the prison environment participated in this stage, most of them being nurses working in prison units. After that, the internal consistency analysis was performed, and the instrument was applied to 10 health managers of prison units, and the Cronbach's alpha coefficient was calculated. The instrument resulted in five dimensions: Physical Structure; Human Resources; Work Process Organization; Health Records; and Adherence to Treatment. The instrument obtained 80% of agreement from the judges regarding content and appearance. The overall Cronbach's alpha was 0.90. The instrument was validated in appearance, content, and consistency for the evaluation of care to those deprived of freedom living with HIV/AIDS.

KEYWORDS Prisoners. Health care quality. Program evaluation. Acquired Immunodeficiency Syndrome. Validation studies.

RESUMO *Este artigo objetivou construir e validar indicadores para o cuidado à saúde dos privados de liberdade com HIV/Aids, sendo um estudo de desenvolvimento metodológico realizado em duas etapas. Na primeira, houve a construção dos indicadores por meio de revisão da literatura nas bases de dados nacionais e internacionais. Na segunda, realizaram-se a validação do conteúdo e a aparência utilizando o método da técnica Delphi; dez juízes especialistas no cuidado à pessoa que vive com HIV/Aids e atuação prática no ambiente prisional participaram dessa etapa, sendo a maioria enfermeiros atuando em unidades prisionais. Após, foi realizada a análise de consistência interna, desta feita, o instrumento foi aplicado a dez gestores de saúde de unidades prisionais e calculado do coeficiente alfa de Cronbach; a escolha dos gestores versou por meio de sorteio. O instrumento resultou em cinco dimensões: Estrutura Física; Recursos Humanos; Organização do Processo de Trabalho; Prontuários de Saúde; e Adesão ao Tratamento. O instrumento obteve 80% de concordância dos juízes com relação ao conteúdo e a aparência. O alfa de Cronbach geral foi de 0,90. O instrumento foi validado em aparência, conteúdo e consistência para avaliação do cuidado ao privado de liberdade com HIV/Aids.*

PALAVRAS-CHAVE *Prisioneiros. Qualidade da assistência à saúde. Avaliação de programas e projetos de saúde. Síndrome da Imunodeficiência Adquirida. Estudos de validação.*

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Introduction

The Unified Health System (SUS) is the better designed and more successful Brazilian public policy in recent decades. This evaluation is based on the commitment of this system concerning equity, the ideal of care integrity, the participative management model and outcomes related to sanitation development and social inclusion – an extremely difficult and complex track over history. When searching for consolidating those precepts, SUS has been facing institutional structures still dominated by paradigms already left behind concerning health comprehension, the work in health and public responsibility as to health[1].

Therefore, when structuring health public policies with equity, that is, based on the assumption that equity is materialized where all persons enjoy fair opportunities to reach their full health potential, one faces a population deprived of liberty, confined in penitentiaries – a conglomerate of individuals living in and sharing the same space. Over the years, health in the penitentiary system has been built up as a public policy, largely impelled by inter-ministerial regulations involving health and justice departments, such as Administrative Rules Nr. 668/2002 and Nr. 1777/2003 – both already revoked –, which did put into place the National Health Plan in the Penitentiary System (PNSSP). It is currently in force the National Policy of Integral Attention to Liberty-Deprived Individuals in the Penitentiary System, enacted by the Health Ministry in 2014, which assures and regulates health actions for those SUS population[2].

Brazil concentrates one of the largest liberty-deprived population worldwide: there are 702.881 liberty-deprived individuals, there included prisoners in closed, semi-closed and transitory regime. In the State of São Paulo keeps in custody 218,909 liberty-deprived individuals, corresponding to 34% of such population in the country[3]. Nevertheless, being deprived of liberty shall not lead to reduction, or even more serious, to denial of health care rights.

Based on data by the Health Coordination of the Secretariat of Penitentiary Administration, in the report published in March 2021, it is estimated that 1,935 liberty-deprived individuals lived with HIV/AIDS in penitentiary units in São Paulo[4].

The health reorganization system carried out by the Health Ministry enabled for the implantation of a new model for looking after persons with HIV/AIDS assisted in the Basic Health System. Considering the deep inequalities in Brazilian society and the dissemination of the virus infection across the country, the HIV infection proves to be an epidemic with multiple dimensions, therefore reaching more vulnerable and discriminated segments of the society, remarkably the liberty-deprived population, more vulnerable to the HIV exposure[5–11].

The teams that deal with health in prisons follow technical directives by the Health Ministry when attending to and caring for health conditions in penitentiary units. In order to collaborate with this new model, the Health Ministry participates with instructions transmitted in handbooks and clinic protocols, such as the handbook for the multiprofessional team 'Integral Attention by the Basic Health Care for people living with HIV' and the 'Clinical Protocol and Therapeutic Directives for Dealing with the HIV Infection in Adults', norms to be followed by health institutions all over the country, bringing into a system both the assistance and the health management[12,13].

This new attention model, where actions are structured according to the local reality, favors and promotes early diagnosis, consideration, secrecy and therapeutic entailment, thus contributing for the promotion of a healthy life style, and yet collaborating with the evaluation of risk factors for other chronical-degenerative damages[13]. Nevertheless, in the penitentiary unit, this model takes even larger outlines, enabling for rescuing the life dignity for those individuals, not just from the biological point of view, but also in social and psychological

aspects, providing comfort and well-being, minimizing initiatives that may stimulate discrimination or prejudice, respecting ethic and legal principles, aiming at rescuing the sense of human existence under the perspective of each individual concerning the constitutional right, thus leading to an assistance that is both integral and qualified[13].

From the forensic point of view, the health attention to liberty-deprived individuals is more and more consolidated. However, the challenge is the practical operationalization, so as to approach the widened conception of health and the organization of the integral attention for those persons, due to the diversity and the complexity of health-illness problems and the social vulnerability of that population[14,15]. Furthermore, studies still lack that may provide subsides related to the theme inside the penitentiary environment; and it is extremely relevant to identify the factors that can make it easier and the barriers that exist within the penitentiary universe, in order to formulate an assistance planning aimed at the reality inside the units, as well as after the individual is released from prison. However, the many fragilities one can find in the practical performance of the health service organization of health conditions inside the prisons will reflect in the assistance.

As to the promotion of life quality to liberty-deprived individuals living with HIV/AIDS, the health quality is critical – and to get to know that reality, studies must be carried out that evaluate those services. In that purpose, a tool is required that can evaluate the quality of the in-prison health service provided to the individual with HIV/AIDS, based on the characteristics of the disease, as well as the specificity of the location to be evaluated. Therefore, this paper is justified by the originality of its theme.

Considering the above, the present study is aimed at building up and validating indicators meant to evaluate the health care provided to liberty-deprived persons with HIV/AIDS in the penitentiary context.

Material and methods

According to Standards for Quality Improvement Reporting Excellence – SQUIRE, the present study was developed in sequential phases, of construction and validation of an evaluation instrument of the penitentiary health system concerning the health care of liberty-deprived individuals who live with HIV/AIDS in the state of São Paulo, Brazil. On that purpose, the theoretic referential proposed by Donabedian was adopted, considering the three categories it presents for the evaluation: structure, process and results. Based on Donabedian's works, the evaluations in the health area were provided direction in the concept of quality, attaching new theoretic-methodological contours, making systematic a series of characteristics related to the care effects (efficacy, effectivity, impact), the costs (efficiency), resources availability and allocation (accessibility, equity) and the users' perception concerning the assistance received[16].

The study involved two stages. For the first stage and for the set up and theoretical analysis, a revision of the scientific literature was carried out based on the main issue: 'What are the care strategies provided in penitentiary environments to liberty-deprived individuals with HIV/AIDS?'. Descriptors used, according to the Descriptors in Health Science (DeCS) database, were: Prisons, Prisoners, HIV Infections, HIV, Acquired Immunodeficiency Syndrome, AIDS-Related Opportunistic Infections, Comprehensive Health Care, Health Services, combined with one another by means of Boolean operators AND and OR. The following databases were consulted: Web of Science, PubMed, Lilacs, Scopus, Embase e Cinahl. The articles were selected after reading briefings, considering the inclusion criteria, the availability of complete publications in English, Portuguese and Spanish, within the period from 2000 to 2018. Publications that repeated databases were excluded, as well as those that did not relate to

the study object as described in the main issue. In order to complement this phase, information was searched in technical handbooks on the organizational process of both the health service work and the penitentiary health in clinical protocols of the Ministry of Health and the World Health Organization.

The questionnaire was built up from July 2018 to November 2018, and its procedure and operationalization involved concept, objectives, equation, population/sample, information type and background. Indicators were built up based on both national and international scientific productions on the theme; clinical protocol and therapeutic directives for handling the HIV infection in adults[17]; handbook on integral care provided by the Basic Attention to individuals with HIV[18]; handbook of physical structure of Health Basic Units[19]; notebook on good practices for the organization of basic attention services[20]; recommendation of good practices of ambulatorial assistance on AIDS at the SUS[21]; National Plan of Integral Health Attention in the Penitentiary System[22].

The instrument was constituted by five dimensions – Physical Structure of the Attendance Nucleus for Prisoners' Health (EFINASP): nine questions that included 54 items identified as patterns; Human Resources of the Integral Attention to Health in the Penitentiary System (RHNASP): 26 questions that included 109 items identified as patterns; Organization of the Assistance Process of the Nucleus of In-prison Health Attention (PRONTNASP): three questions that included nine items identified as patterns; Adherence to the Treatment with Anti-retroviral (ATARV): seven questions that included 34 items identified as patterns.

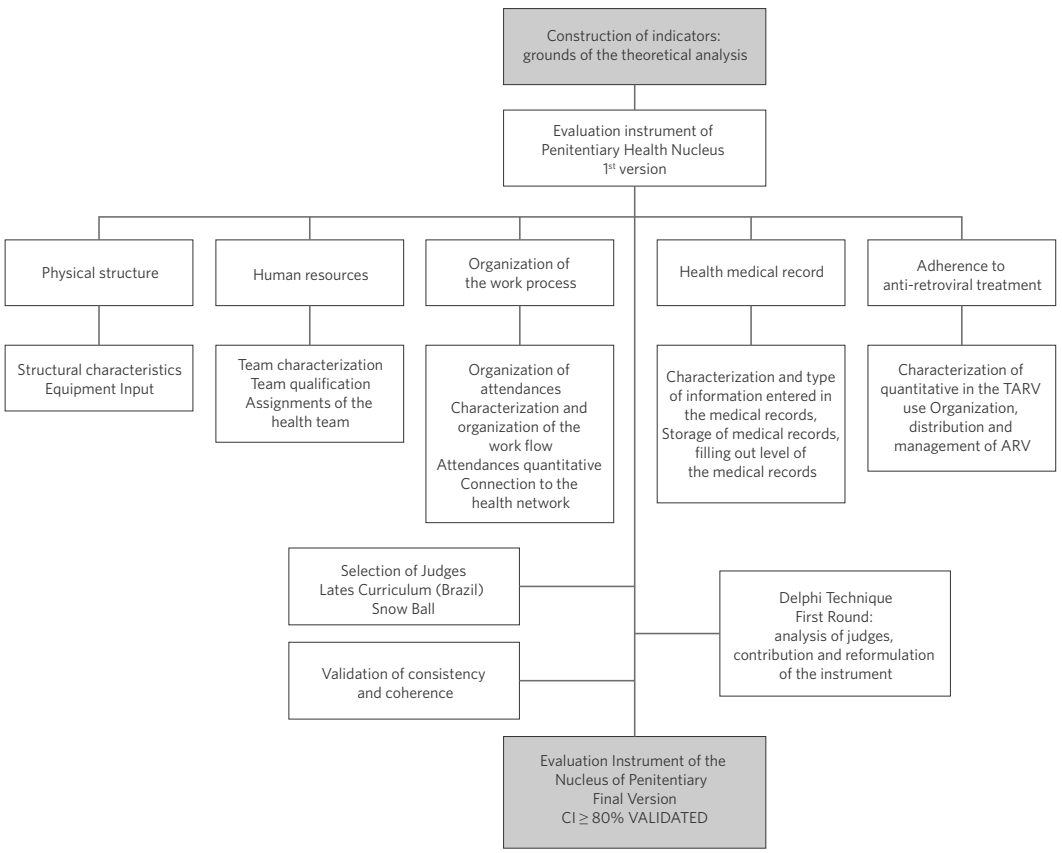
The questions of the instrument that included pattern items which formed each dimension were described in the instrument were posed with question marks, and the answers were the 'yes' or 'no' kind. The instrument included other 17 questions with open answers, so as to characterize the service – an easier format for the analysis and comprehension of the study.

The second phase consisted of the content validation, the appearance and the consistence of the instrument, using two methods: analysis and methodological judgement by the judges and psychometric analysis. For the judges' analysis, the Delphi[23] method was used as methodological referential, as it proposes to look after and attain consensus by experts on one specific theme by means of validations in phases or cycles; resulting from the collective opinions by experts' who may also be called specialists or judges. This technique may be used in both qualitative and quantitative studies, and is an adequate strategy in order to stablish both the content validity and the instruments' appearance, often used in the health science area[23]. In order to analyze the consistence and the reliability of the instrument, the Cronbach alpha coefficient was calculated, as it is one of the most important tests used in researches that involve tests constructions and their application, and which allows for checking the correlation between answers of a questionnaire[24].

Judges were chosen intentionally, from November 2018 to February 2019, using two non-probabilistic methods – the first one was based on the analysis of curricula in the database of the National Council of Scientific and Technological Development (CNPq); and the second, the snow ball, the method that experts selected to compose the study use to indicate new participants who carry characteristics that match the interest of the investigation[25]. The literature indicates five expert judges minimum to be designed for the validation phase[26]. At first, 20 judges were invited, by e-mail. The criteria for such invitations were: reference expert in providing care for individuals living with HIV/AIDS and in the service evaluation, with published works related with the theme and experienced with liberty-deprive person with HIH/AIDS. In order to make this validation phase operational by the Delphi method, an instrument

was formulated in electronic format using the LimeSurvey open code software, which allows for the participants themselves to access a web page in order to fill in the Free and Informed Consent Term (TCLE). As the judge accesses the web page using any computer or electronic device connected to the internet, he/she would create a login and a password, required in order to access the instrument at any moment, according to his/her time availability. The judge would be able to leave and return later, as all contributions, comments and analyses already performed can be duly saved. So, the stages of data security and agility for the Delphi method were assured, as well as the comfort for the judges invited. As they access the link, judges would utter their opinion, evaluating 'Intelligibility and Objectivity', 'Pertinency', 'Appearance' and 'Accuracy' of the instrument. The answers provided by the judges were organized into a likert type scale, with three points: 'Agree', 'Do not agree nor disagree' and 'Disagree'; and at the end of each dimension, a text box was offered where the judges could include in writing their suggestions and changes. *Figure 1* describes the methodological stages when building the instrument.

Figure 1. Construction of indicators: grounds of the theoretical analysis



Source: Elaboration by the author.

For the analysis of the Cronbach alpha, the instrument was applied to the managers of the Nucleus of Health Attendance to Prison Units. In the state of São Paulo, prison units are organized and divided into five coordination sectors; in order to choose the prison units and their respective managers in the health nucleus who did participate in this study, an electronic raffle determined two prison units out of each coordination sector, summing ten health managers from the prison units picked out by lot. The respective managers received a phone call inviting to take part in the study; then, the instrument in electronic format (link) was delivered by e-mail. The participants accessed the link in a web page, filled in the TCLE and created a login and a password. As the TCLE was duly filled in, the participant gained access to the questionnaire, using any computer or electronic device connected to the internet. The access could take place according to time availability, allowing for the participant to interrupt and return later, provided he/she did save the answers already entered. All managers invited did participate in the study.

As to data treatment, a quantitative analysis was carried out according to the consensus level of experts or judges. The consensus level is established by a validation index of minimum content, also known as Consensus Index (CI) or Favorableness. Studies adopt the CI between 70% and 80%[26,27]. In this study, the CI adopted was higher or equal to 80%. For the Cronbach alpha analysis, the value adopted was higher or equal to 70%, considered acceptable for exploratory studies, as it provides evidences of an internally consistent scale[18].

The study was developed once it was approved by both the Ethic Committee in Research of São Paulo State University (Universidade Estadual Paulista – UNESP) of Botucatu, upon opinion Nr. 2.937.404, and the Ethic Committee of the Penitentiary Administration Secretariat of the state of São Paulo, upon opinion Nr. 2.995.757. The judges were granted anonymity and explanations in all stages of the research. The TCLE signature was required to those who did accept taking part.

Outcomes

Still on the instrument evaluation, ten judges did take part in the present study. As to sex, nine were females and one was male; as to professional education, there were five nurses, one medical doctor, one social worker, one psychologist, one pharmacist and one geographer; as to education level, there were six with master degree and three PHD; as to occupation area, there were four in assistance, four in management and two in education and research; as to education and in-practice experience, most judges declared at least ten years; and as to the legal nature, the institution was 100% public.

The procedure of validation of content and aspect enabled for capturing the experts' opinions regarding the indicators presented in each dimension, and did aid for the reformulation of items and indicators proposed. The quantitative analysis of the CI of the dimensions is described in *tables 1 and 2*.

Table 1. Analysis of agreement regarding dimensions of the evaluation instrument – Nucleus of Penitentiary Health. Botucatu, São Paulo, Brazil, 2022

	EFINAPS		RHNASP		OPANASP	
Evaluation criteria	**Freq.**	**% of agreement**	**Freq.**	**% of agreement**	**Freq.**	**% of agreement**
Intelligibility and Objectivity						
Agree	9	90	9	90	8	80
Disagree	1	10	1	10	1	10
Do not agree nor disagree	0	0	0	0	1	10
Pertinency						
Agree	9	90	9	90	8	80
Disagree	1	10	1	10	2	20
Do not agree nor disagree	0	0	0	0	0	0
Appearance						
Agree	9	90	9	90	8	80
Disagree	1	10	1	10	2	20
Do not agree nor disagree	0	0	0	0	0	0
Accuracy						
Agree	9	90	9	90	10	100
Disagree	1	10	1	10	0	0
Do not agree nor disagree	0	0	0	0	0	0

Source: Elaboration by the author.

Freq. – Frequency; EFINASP – Physical Structure of the Nucleus of Health Attendance; RHNASP – Human Resources of the Nucleus of Health Attendance; OPANASP – Organization of the Assistance Process of the Nucleus of Health Attendance.

Table 2. Analysis of agreement regarding dimensions of the evaluation instrument – Nucleus of Penitentiary Health. Botucatu, São Paulo, Brazil, 2022

	PRONTNASP		ATARV	
Evaluation criteria	**Freq.**	**% of agreement**	**Freq.**	**% of agreement**
Intelligibility and Objectivity				
Agree	9	90	8	80
Disagree	0	0	1	10
Do not agree nor disagree	1	10	1	10
Pertinency				
Agree	9	90	8	80
Disagree	0	0	0	0
Do not agree nor disagree	1	10	2	20
Appearance				
Agree	10	100	9	90
Disagree	0	0		00
Do not agree nor disagree	0	0	1	10
Accuracy				
Agree	10	100	10	100
Disagree	0	0	0	0
Do not agree nor disagree	0	0	0	0

Source: Elaboration by the author.

Freq. – Frequency; PRONTNASP – Medical Record of the Nucleus of Health Attendance; ATARV – Adherence to the Treatment with Anti-retroviral Treatment.

The analysis of the first dimension – EFINASP – proved the agreement among the judges, represented by CI of 90%. However, experts posed proposals as to Intelligibility and Objectivity, Aspect, Pertinency and Accuracy of the instrument. The need of reformulating some questions was pointed out, and suggestions were accepted. The second dimension – RHNASP – achieved CI of 90% among the judges. One judge did not agree as to Intelligibility and Objectivity, Pertinency, Aspect and Accuracy. As to the OPANASP dimension, CI was 80% for the items Intelligibility and Objectivity, Pertinency and Aspect. As to Accuracy, CI was 100%, remarking two judges who did disagree concerning Intelligibility and Objectivity, and Pertinency. All analyses are presented in *box 1*.

Box 1. Physical Structure of the Nucleus, Human Resources and Organization of the assistance process at the Nucleus of Attendance to Penitentiary Health. Botucatu, Brazil, 2022

EFINASP	**Question according to the instrument**	**Changes suggested**
Intelligibility and Objectivity	Adequate room for clinical attendance, with hygiene, ventilation and privacy for the attendance?	Adequate room for clinical attendance, with hygiene, ventilation and granting privacy for the attendance?
Aspect and Accuracy	Waiting room with illumination conditions, ventilation and chairs for the users?	Separate the items in the alternative, as follows: - Illuminated waiting room - Ventilated waiting room - Chairs for user in the waiting room
RHNASP	**Question according to the instrument**	**Changes suggested**
Intelligibility and Objectivity	The penitentiary health technical team includes: clinical doctor; infectologist doctor, nurse, nurse auxiliary, nursing technician; psychologist, social worker, pharmacist; security officer; administrative assistants; buccal health assistant in the odontological office?	In theory, the security officer and the administrative assistant are not prepared to perform in the health area. Suggestion: change the question to 'The team of the ambulatory of penitentiary health counts on...'
OPANASP	**Question according to the instrument**	**Changes suggested**
Aspect and Accuracy	Activities performed by; pharmacist, psychologist and social worker?	Include nursing, dentist and doctor
Intelligibility and Accuracy	Identification and general characteristics of the HIV/Aids service?	Place at the beginning of the questionnaire of the first matrix.
	Is there a systematic registration of the number of attendances and procedures?	Explain what is a systematic registration. Is it a weakly registration? Does it involve a form with specific/standard blank to be filled in?
Aspect		Include the characterization of CD4 number under 350 and above 350. Include: are there difficulties for genotyping?
		Use the word Aids the same way all over the instrument.

Source: Elaboration by the author.

EFINASP – Physical structure of the Nucleus of Health Attendance;

RHNASP – Human Resources of the Nucleus of Health Attendance;

OPANASP – Organization of the Assistance Process of the Nucleus of Health Attendance.

The fourth dimension – PRONTNASP – was agreed on by 90% of the judges as to Intelligibility and Objectivity, and Pertinency. As to Aspect and Accuracy, it reached 100%. Finally, as to the fifth dimension – ATARV in the Nucleus of Attendance to Penitentiary Health, CI was 80% as to Intelligibility and Objectivity; Aspect reached 90%; and Pertinency, 100%.

Concerning the analysis of the Cronbach alpha, the instrument was applied to ten managers of the Nucleus of Health Attendance of prison units of the State of São Paulo upon allotment. In order to evaluate the consistency and the coherence of the questionnaire, the alpha results are presented in *table 3*.

Table 3. Cronbach alpha values for the questionnaire proposed in general and per dominium. Botucatu, Brazil, 2022

General	**Alpha**	
Considering 259 items	0,91	all items (259)
Considering 172 items	0,91	excluding items with same answers (0 or 1 in all items (152)
Per dominium		
Physical Structure	0,79	
HR		-
Process Organization	0,86	
Medical Record of the Nucleus of Health Attendance	0,67	
Adherence to the Treatment with Anti-retroviral	0,69	

Source: Elaboration by the author.

The results in *table 3* reflect the reliability of the *constructos*, which were tested by the calculation of the Cronbach alpha. Considering all the items in the questions, excluding those with the same answer – that is, redundant items – a high Cronbach value was obtained. Considering each domain, one may note that the values obtained in the Physical Structure and Organization of the Work Process were high or almost perfect. Nevertheless, RHNSP did not achieve Cronbach alpha values that could evaluate the consistence and the coherence. In that purpose, PRONTNASP and ATARV domains were low considering the acceptable values for this study.

Discussion

Once data were analyzed, one could verify that the instrument that was built up was considered valid to be used in the evaluation process of the attention provided by the health service to freedom-deprived individuals who live with HIV/AIDS. The process to evaluate the attention to health is driven by the commitment of institutions and professionals to perform based on directives established in public health policies as determined by the Ministry of Health, obeying local peculiarities of the prison conditions, with actions that prioritize the health promotion and illness prevention, besides offering efficient and good quality assistance. Therefore, the validation is an important and essential stage aimed at the development, as it allows for checking to what measure the items included do correspond to the theoretical construction that is the basis of the instrument, so as to make it possible to evaluate the phenomenon of interest[29].

Nowadays, the use of indicators concerned with the health assistance is considered vital for the evaluation of health services. Therefore, this principle is used to evaluate the health services in prisons to assist freedom-deprived individuals who live with HIV/AIDS, so that

constant evaluation and analysis of those indicators may result in information used to make sure the promotion and the prevention of illnesses and more serious conditions. The items included in the instrument are representative and relevant to embrace both the phenomenon and the health scenery in the prison system.

The judges who took part in the study proved large knowledge and expertise on the subject, concerning the practice, management education and research, thus contributing with suggestions for changes, which made the instrument more sensible and understandable regarding the phenomenon and the scenery proposed herein.

The construction of indicators of the evaluation instrument as to the assistance provided to freedom-deprived individuals who live with HIV/AIDS, in its EFINASP and RHNASP dimensions, is aimed at evaluating both the conditions and the characteristics of the building structure, equipment, materials and supplies, besides human means. When materials and supplies are not available, when human means are lacking, and there no skills to offer health attention to freedom-deprived individuals, que quality of the assistance is endangered. Physical structures that are insecure or inadequate can make it impossible to make integrality effective – one principle to be granted since SUS was created. This principle requires the development of actions and services meant to assure the promotion, the protection and the rehabilitation, and one can understand why the physical structure directly affects the continuity of health assistance procedures.

The organization of the health work in primary attention is essential for health teams as a whole, as it determines the care and integration to be present at the other assistance levels. Therefore, the OPANASP dimension was constituted in the perspective of evaluating the attention integration between the Nucleus of Prison Assistance and the Assistance Networks, as well as to evaluate the work process concerning health promotion and prevention actions and the public policies that involve the attention provided to individuals living with HIV/AIDS, so as to grant better assistance. A work process ill-structured may lead to poor outcomes in the primary attention[29,30].

Records on information concerning the assistance in the medical register of the patient bring together, in writing, the necessary information for the process to be continued, and therefore they reflect conditions of the assistance process that were observed and or measured that are able to provide data for the assistance to go on, for teaching, research, audits and planning of health services, besides being an instrument for legal protection. They also contribute to detect new problems, once the evaluation of the quality of the assistance in information in the medical record of the freedom-deprived individual enables for comparing answers by the user to tare actions provided by the health team[31].

The access to antiretroviral treatment, which is granted by the SUS, did enable for mortality reduction, less hospital internment and occurrence of opportunist infections and vertical HIV transmission, thus leading to better quality of life for those living with HIV/AIDS. However, an important reduction in those indicators might occur as those living with HIV abandon the treatment or follow it incorrectly, thus becoming more vulnerable to opportunist infections. It is worth remarking that a number of factors may influence ATARV, either positively or negatively. Therefore, it is important to combine different methods in order to reach adherence and satisfactory monitoring. For those reasons, the ATARV evaluation was aimed at analyzing the adherence to the treatment of freedom-deprived individuals living with HIV/AIDS, as well as the methods used for the respective monitoring[32,33].

The analysis of Cronbach alpha made it possible to check both the consistency and the reliability of the instrument, as this method proposes the analysis of how efficient a set

of items is to measure the *constructo* in one single dimension. High indices were found for alpha when the items that compose the instrument were analyzed, either in general and/or excluding items with the same answer. In the analysis performed by dominium – that is, related to the Physical Structure and the Organization of the Work Process, concerning the inner coherence of the instrument, and regarding the PRONTNASP and ATARV domains –, values were lower than the minimum for the present study. Nevertheless, the values obtained by alpha are substantial for reliability validation – this value may variate without affecting the reliability[34]. However, the analysis of the RHNASP dominium did not obtain Cronbach values that would allow for evaluating both consistence and coherence. One may suppose that this outcome was due to restrictions of the statistic method when applied to a small number of respondents, as well as due to the withdrawal of questions with the same answer in different domains. Besides, the originality of the study makes it difficult to compare the results to other studies on the same theme.

So, although the values of the Cronbach alfa coefficient did not reach the level as desired, it is worth understanding that the instrument must be applied more widely so that other analyses on the internal consistence may be carried out, thus providing a continuous evaluation of the instrument.

Restrictions of the study

The restrictions of the present study result from the scarceness of theoretical references due to the small number of works published in the area of health and care to freedom-deprived individuals. Another aspect identified were the difficulties in the stage of validation related to the Delphi technique, that are reflected in a tool for gathering data that does not allow for in-person contact with specialists, as it demands both time and dedication to evaluate the indicators. The study presents as well restrictions as to the statistical analysis on the Cronbrach alpha and its application to a small number of respondents of the instrument.

Contributions for the area of public policies

In Brazilian penitentiary system, overcrowded with prisoners living in terrible physical conditions, counting on scarce human resources and unable to implement good quality public policies, the health professionals in penitentiary units are an axis of utmost importance in order to guarantee the access to the constitutional right to health care. Therefore, the study presents contributions to the areas of nursing, health and public policies, as the instrument validated herein may help as a tool that may guide the way of thinking and the way of doing regarding the health care provided to freedom-deprived individuals who live with HIV/AIDS, leading to quality in the assistance, adding to social phenomena of social integration by supporting the constitutional right to health and the maintenance of human dignity inside the prison, yet collaborating as to the development of future researches and the creation of protocols on the theme.

Final considerations

The methodology provided by the Delphy technique, applied to the validation of the instrument, was relevant for building up indicators specifically in the penitentiary scenery.

The contribution and the experience of the judges, based on their respective areas, of assistance, management, research and teaching, made the process even more complete and assertive, bringing together theoretical-practical consensus regarding the universe under observation. The Cronbach alpha analysis did guarantee the reliability of the instrument.

Both methods, associated, did provide for the construction and the validation of the instrument, which included five dimensions, aimed at evaluating the health service provided in penitentiaries for the assistance to freedom-deprived individuals who live with HIV/AIDS. However, it is worth understanding that the instrument must be more widely applied, so that, by means of other analyses of internal consistence, it may be continuously improved and updated.

With such development, the instrument might be used to evaluate the care provided to freedom-deprived individuals who live with HIV/AIDS in penitentiary units, contributing to the improvement of that service, while operating as a means to understand the quality of the assistance provided to that population and to subsidize actions of public policies in the health area for the penitentiary system.

Collaborators

Apolinário FH (0000-0002-5685-8968)*, Papini SJ (0000-0003-1714-1515)* e Spiri WC (0000-0003-0838-6633)* have equally contributed for the paper elaboration. ■

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