THE APPLICATION OF THE ARCH OF PROBLEMATIZATION METHOD IN THE DATA COLLECTION OF A NURSING STUDY: EXPERIENCE REPORT

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ABSTRACT: This study was developed with 152 employees of a psychiatric hospital of the state network of Paraná in 2008. Aim: to report the experience of applying the Arch Method in the data collection of a nursing study. The data used for the description of the experience were obtained through the application of the Arch Method. The development of the steps of this method requires critical analysis and reflection of the study object and well-designed planning so that the results are achieved. The experience of applying the Method in the research to construct a benchmark for mental healthcare allowed the reflection-action-reflection, from the experiences of the work quotidian of the subjects, and presented a possibility for research data collection It contributed to the humanization of the care provided and mobilized those involved for the significant learning of the reality, in a dynamic and complex form.

INTRODUCTION

The human being possesses the ability to interact with the object of knowledge, with the phenomena present in their reality and to establish social relationships. This context reveals the importance of knowing the preconceptions and/or common sense, described by the subjects involved in the teaching-learning process, in order to achieve the best form of appropriation of scientific knowledge and of overcoming the epistemological obstacles.1-3

Thus, researchers, by resorting to educational practices, in conjunction with research, should choose a method of working that guides them, leading to satisfactory results, and that is consistent with the proposed objectives. Problematization Methodology, where the theoretical and philosophical principles are grounded in humanism, in phenomenology, in existentialism and in Marxism, constitutes a methodology for the performance of projects of care practice and research.3-5

This Methodology entails the active participation of the subjects, considers the context of their lives, their history and experiences, respecting the rhythm of learning of each. In this way, by the problematization of common knowledge mediated by the theory, it is possible to promote conceptual reconstructions in this thought, understanding and deepening of the scientific knowledge.3-6

Based in humanism, Problematization Methodology recognizes the man and the human values above all other values. The phenomenology adopts the basic postulate of the notion of intentionality of the human consciousness, by affirming that the object only exists for the subject who gives it significance and that the consciousness of the object is progressively revealed, and never ends, becoming an exhaustive exploration of the world. Existentialism uses the belief that man constructs himself and may be the subject. When integrated into its context, the subjects reflect and commit to the context in the pursuit of realization of the work of conscientization, through the process of raising critical consciousness of the reality that is progressively unveiled. Finally, Marxism uses the concept of praxis as a transforming activity, by making it possible to move from the theory to the practice, conscious between thought and intentionally realized action.3 Consisting of a set of methods, techniques, procedures or activities intentionally selected and organized, Problematization Methodology has the primary purpose of “preparing the [...] human being to become aware of their world and to also act intentionally to transform it”.4-10 Thus, man starts to be active in the transforming process of the world and society in order to improve the quality of human life.3,6

When using Problematization Methodology, the subjects are led to focus on the reality that surrounds them, to reflect about it and to inquire about the reasons why something seems problematic.3-4,7 Therefore, this method has as its starting point the reality of the subject, the scenario where the subject belongs and where the various problems can be seen, perceived or deduced, so they can be studied together or in pairs. The observation of the reality depends on the worldview and the life experiences of each person, and may differ from one observer to the other.6

The work scheme constructed by Charles Maguerez, called the Arch Method,6 has been widely used by professionals of the healthcare area, including those of nursing. Thus, this resource has been applied in projects arising from the professional practice of involving users in health education, with professionals in training and continuing education, in the formation and in research.7-18

The Arch Method has as its starting point the observation of reality, in a broad, attentive way, in which it is sought to identify what needs to be worked, investigated, corrected, perfected. From the aspects verified, problems are selected to be studied. The second step is to identify the key points, when what will be studied in respect of the problem is defined. The theorization, the third step, consists of the thorough investigation of the defined key points. It is in this step that reading of research and studies is encouraged in order to seek clarification of the situation-problem.6,15

After the theoretical deepening, with analysis and discussion of the problem, the elaboration of assumptions or hypotheses of solution is proceeded to. In the fourth step, the participants use their creativity to make changes in the observed context. The fifth step is the application to the reality, in which the viable solutions are implemented and applied for the purpose of transformation, however small, in that portion of the reality.3,4,6
While the Problematization Methodology and the Arch Method are widely used in nursing studies, one must consider that the development of all its steps, and the inclusion of the subject as a participant, make its application a complex and difficult task. This occurs for diverse reasons, such as the fact that the majority of healthcare professionals have their academic formation based on the model of transmitter pedagogy. To work with this Methodology, internal flexibility and willingness are necessary to establish dialogue with the subjects, and to put oneself in the position of mediator, facilitator of learning, considering the various points of views and knowledge of each person. It also highlights that the facilitator and/or researcher has theoretical depth regarding the content to be problematized, as well as clarity concerning the method to be used. Given the above, the aim of this study is to report the experience of applying the Arch Method of Problematization in the data collection of a nursing study.

METHODOLOGY

This study is a report of the experience of using the Arch Method in a qualitative study of healthcare practice, developed in 2008, in a hospital specializing in Psychiatry, of integral hospitalization, of the state public network of Paraná.

The institution in which the study was developed reported the need to implement a program of ongoing education for its employees, in the form of training, and therefore, requested the support of the Department of Nursing of the Federal University of Paraná (UFPR) regarding this demand. With this, the opportunity was created of developing the proposals of sensitizing the nursing team of this institution, regarding mental healthcare. However, the institution recommended that this training be extended to all employees of that hospital—physicians, psychologists, occupational therapists, nutritionists, social workers, physiotherapists, including those who held administrative, technical and operational positions. This is because it was considered important that all the workers have a more comprehensive view of the nursing work. This approach is consistent with what is currently recommended by the public policies in mental health, which deal with more integration between the mental health professionals, with emphasis on the interdisciplinarity of the care. Thus, this study involved 152 workers of diverse professional categories, positions and functions, according to the rules of the institution (Table 1).

Table 1 - Characteristics of the participants according to education, professional category, position and occupation

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<tbody>
<tr>
<td><strong>Nursing team</strong></td>
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<tr>
<td>Nurse</td>
<td>05</td>
</tr>
<tr>
<td>Nursing Technician</td>
<td>01</td>
</tr>
<tr>
<td>Auxiliary nurse</td>
<td>74</td>
</tr>
<tr>
<td><strong>Other professionals</strong></td>
<td></td>
</tr>
<tr>
<td>Occupational Therapist</td>
<td>04</td>
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<tr>
<td>Psychologist</td>
<td>04</td>
</tr>
<tr>
<td>Social Worker</td>
<td>03</td>
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<tr>
<td>Physician</td>
<td>02</td>
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<tr>
<td>Physiotherapist</td>
<td>01</td>
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<tr>
<td><strong>Other services</strong></td>
<td></td>
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<tr>
<td>Kitchen worker</td>
<td>08</td>
</tr>
<tr>
<td>Operations assistant</td>
<td>06</td>
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<tr>
<td>Administrative Assistant</td>
<td>02</td>
</tr>
<tr>
<td>Administrative Technician</td>
<td>01</td>
</tr>
<tr>
<td>Maintenance Assistant</td>
<td>03</td>
</tr>
<tr>
<td>Telephonist</td>
<td>01</td>
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<tr>
<td>Driver</td>
<td>02</td>
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<tr>
<td>Support agent</td>
<td>10</td>
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<tr>
<td>General services assistant</td>
<td>17</td>
</tr>
<tr>
<td>Seamstress</td>
<td>03</td>
</tr>
<tr>
<td>Warehouse worker</td>
<td>01</td>
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<tr>
<td>Laboratory assistant</td>
<td>01</td>
</tr>
<tr>
<td>Security</td>
<td>01</td>
</tr>
<tr>
<td>Did not give their position (others)</td>
<td>02</td>
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</tbody>
</table>

The majority of the participants in this study were female, aged between 41 and 60 years. The length of time since graduation and of practice in mental health is proportional and there was a prevalence of 69 (45.39%) of the participants who had worked in the institution, the field of study, for more than 21 years, 65 (42.76%) for between five months and 20 years and 18 (11.85%) who did not provide the information.
The reported information becomes important and justifies the need to provide time for reflection and discussion about the practice of mental healthcare, considering that some of the major changes in the legislation and national policy for mental healthcare have occurred in the last 15 years.

The data were collected using the Arch Method of Maguerez, in four meetings for each of the eight groups of employees of the institution, totaling 32 meetings, with the following organization: Groups A.1, A.2, B.1 and B.2, for the day shift workers, and Groups C.1, C.2, D.1 and D.2, for those of the night shift. The meetings were recorded on audiotape and supplemented by records of the accounts and non-verbal expressions of the subjects in the field diary of the researcher.

The meetings occurred during the work period; therefore the division of groups occurred, in order to repeat each meeting twice, for each shift, due to the timetable being 12 hours work and 36 hours of rest. The service is organized into four shifts: two day shifts and two night shifts. Thus, the workers were divided into two groups per shift, in which, some maintained the care activities with the patients, and the others participated in the meeting.

The ethical aspects were safeguarded through the formal consent of the hospital and the Terms of Free Prior Informed Consent, observing the legal and ethical standards for scientific research that involves human beings. The project was approved by the Research Ethics Committee of the Health Science Sector of the UFPR (CAAE 2035.0.000.091.0).

TRAIJECTORY OF THE APPLICATION OF THE ARCH METHOD

Observation of the reality and elaboration of the situation-problem – 1st Step of the Arch Method

At the first meeting the aims and methodology of the work were presented. For the initial step of the Arch Method, which consists of the observation of the reality, audiovisual resources were used to debate with the participants about the development of the care by the team, to whom the care is developed, and what it is like working in a team.

At that time, the participants reported that they felt the need for the discussion of concepts that sustain the mental healthcare and thus identified the situation-problem, namely, the construction of a benchmark for the care of the psychiatric patient of the institution in which they work.

Definition of the key points – 2nd Step of the Arch Method

In this step, the key points to be studied and discussed, which would support the resolution of the situation-problem, were identified. The participants considered the following concepts relevant to their practice: nursing, the human being, health-disease, the environment, the team and the interpersonal relationship.

The choice of concepts, performed in a shared way with the team and supported by a theoretical framework, allows reflection on the professional practice, as well as the conscious use of a theoretical framework and thus a critical and reflective practice. Thus, a benchmark is a relationship of concepts that are intertwined and through this mutuality create a correlation of meanings and values for a given professional practice, having the aim of supporting the nursing care. In this way, it directs the actions of the nursing professionals and constitutes an important “tool” for representation and identification of the characteristics of the knowing/doing of a profession that makes it possible to construct scientific knowledge through the reflection of the concepts that surround their work process.

Theorization – 3rd step of the Arch Method

In the third step, the discussion of the concepts chosen by the subjects occurred: nursing, the human being, health-disease, the environment, the team and the interpersonal relationship. Due to the plurality of the composition of the subjects in the meetings, to discuss the concept of nursing, the incomplete statement for me nursing is... was used for the nursing professionals, and I perceive the work of nursing as... for the other participants. The other concepts listed by the group, as inherent to the practice of the mental health workers, were problematized in a singular way: for me the human being is..., for me health and disease are..., for me the team is..., for me the environment is..., for me the interpersonal relationship is....

Three groups were formed and everyone was given note paper, with different colors.
(green, yellow and pink) to facilitate the mediation of the activities and the organization of the research data. The groups whose members were from the nursing team received the green paper, those composed of technicians/professionals (psychologists, doctors, social workers, occupational therapists, pharmacists), the yellow paper, and the other staff (telephonist, maintenance agent, kitchen and general services, administrative assistants), the pink paper.

This step was developed at individual and group times. In the individual time, it was asked that they reflect on the reality that they experience in the quotidian of their work in mental health in the institution and that they complete the statement: for me nursing is..., and I perceive the work of nursing as... This strategy was repeated until the discussion of the last concept. Thus, each participant expressed their experience regarding the concepts through their writing, with some complementing this with drawings.

In the sequence, the group discussion was carried out of the key points (concepts) elected by the participants in the second stage of the Arch Method. For the development of the activities, the participants who had the same color paper grouped together. When the number in the group exceeded eight, a division was suggested into two or more groups to allow better participation, valorization, and sharing of ideas in the discussion of each concept/key point.

After the formation of the groups, the members shared between each other the content they had individually recorded and as a result, formulated a concept that represented the idea of all that was written as a poster. After finalizing this activity, each group presented the constructed concept to the other groups. Regarding the way the presentation was carried out, the group fixed the poster on a line of string that circulated the walls of the room. The posters were numbered according to professional category/position and occupation of the participants. This dynamic was maintained for the other constructions, relating each concept with the mental healthcare developed by the workers of the institution, and seeking to valorize the experience of each participant.

After the construction in the group, each concept was theorized considering the Theory of Interpersonal Relationships. After each meeting, the posters were withdrawn and the papers of individual production picked up, analyzed, and the central ideas grouped to be discussed and validated by the groups that participated in the subsequent meetings.

**Elaboration of solution assumptions – 4th Step of the Arch Method**

In this step the solution assumption was prepared, which is the proposed construction of the benchmark to support the mental healthcare of the team. Respecting the reality and the conditions of the institution, previously described, seeking the feasibility of the assumption, the practice of the employees of the institution was problematized in light of the reference of Joyce Travelbee, which describes nursing as an interpersonal process, through which the nurse helps a person, family or community, aiming to promote health, to prevent or cope with the experience of illness and mental suffering. To this end, the nurse needs to create a social, biological, psychological, cultural and physical environment conducive to reciprocal relationships, through which every human being can learn. The human being is unique and insubstitutable, similar and, at the same time different, in relation to the other person. Therefore, each should be valorized and respected in their individuality. The team consists of members from diverse health disciplines, who can share and perform the therapeutic relationship, in order to help the person reintegrate into society.

Regarding the concept of health, Travelbee considers “something the person is, how they demonstrate certain behavior and attitudes” and these attitudes are related to the ability to love, to cope with reality and to discover a purpose or meaning in life. The experience of illness helps human beings to grow and strengthen, thus recognizing their limitations and potential. In this sense, the interactions should be planned with a view to care that enables the human being to comprehend, cope and deal with situations of disease or to live with the limitations imposed by them.

**Application to reality – 5th step of the Arch Method**

To develop the activities of the last step of the Arch Method, all the posters that contained the concepts constructed by the groups in the previous meetings were hung on the line. An order was maintained, where, for example, all the nursing concepts were together, and so on, similarly, with the others. When the participants...
arrived at the site of the meetings, they expressed surprise regarding the quantity of material produced by them, as well as satisfaction in reading what their colleagues from other groups and shifts had produced.

The participants were asked to circulate the room and read the concepts expressed in the posters and told that they should start with those of nursing, continuing in the order in which they were discussed and constructed during the meetings. Next, the concept, prepared by the researcher from the central ideas of all the posters, was presented. They were asked to read and validate the idea, as it was expressed in the set of concepts contained in the posters. There was intense participation. Inclusions, substitutions and exclusions of terms were suggested, so that in the final step, we obtained a concept that expressed the opinion of that group.

Because this process was repeated with the other groups, the modifications in the concepts were highlighted in different colors to be validated by the subsequent groups. Each group repeated the process described above and first presented the concept previously developed by the researcher and accepted the collaborations of the group and, while progressing, re-presented the concept with the alterations suggested by the group that preceded it. Thus, at the end of the meeting, we had the concept of that group, considering the contributions of the previous group, culminating in the final concept after all the groups had gone through the same process.

This activity was then developed in each group again, in light of the reference of Joyce Travelbee, which generated new discussions, suggestions for inclusions, substitutions and exclusions regarding the concepts and even reflections of the practice of mental healthcare, culminating in the final conception of the group. This process was repeated with the concepts of nursing, the human being, health-disease, the environment, the team and the interpersonal relationship, resulting in the benchmark.

Summary of the trajectory followed

The experience of applying the Arch Method in the collection of data for the construction a benchmark for mental healthcare, allowed us to reaffirm its importance in the realization of this proposal. It should be noted that due to the dialogical-problematizing character intrinsic to Problematization Methodology, in which everyone involved in the teaching-learning process makes efforts and provides the possibility of comprehending and overcoming situations that are part of the study object, the construction that occurred through the collective experience was one of construction for both subjects and researcher equally.

For this study, the Arch Method was used in order to guide the methodological trajectory for the realization of a project that allied nursing care practice and research, which is similar to the majority of studies that use such a methodological approach. However, the study site provided the opportunity to cover, in addition to the nursing professionals, other professionals and workers directly or indirectly linked to the work of the nursing team, which provided the conditions in which various views were described in the problematization. Another aspect considered in this study and corroborated by others, consists of the significant learning characterized by the construction, the need for transformation and reconstruction of knowledge, in a move that the naive consciousness becomes critical and provides recognition of the professional in their participation in the healthcare. Therefore, as a result, the subjects gained with the appropriation of new knowledge, and the investigator/mediator deepened their knowledge of the study object, with regard to their meanings and what they came to signify for the subjects regarding how to teach. However, this study was limited by the impossibility of evaluating the influence of the application of the concepts in the practice of the subjects, since the last step concerns the implementation of the concepts constructed in the reality without providing conditions for the evaluation.

To exemplify the application, in particular the description of the steps, in accordance with the proposal of Magueretz, we chose to make the following graphical representation organized by the authors and adapted for this article. Figure 1 shows the trajectory followed in the collection of research data, using the steps of the Arch through Problematization, with the workers of the institution, as the field of this study.
FINAL CONSIDERATIONS

The Problematization Methodology supported the construction of the educational-reflective process, which contributed to the humanization of the care, from the significant experiences of the participants in the quotidian of the institution, as well as presenting an opportunity to collect research data. To reflect on the experience implies focusing attention on this Methodology, due to its contribution to the process of knowledge construction and due to providing the reflection-action-reflection about the practice of mental healthcare.

In the quotidian of the services, potential spaces for renewal, discussion and reflection on the practice in mental health have to be constructed, which provide the possibility to share information among the employees, the use of creativity, spontaneity, construction/deconstruction of new/old utopias in the practice of the the workers, for the advancement and consolidation of this new model of mental healthcare.

In the construction of the concepts that comprise the benchmark, the view emerged during the discussions that some workers posses the image and identity of nursing professionals. Thus, this study provided an opportunity to reflect and discuss with the team the concept they have of the extent of the imagination of the society regarding the profession, particularly in the area of mental health.

The dialogue established in the meetings evidenced the thoughts of the team concerning the context in which they are inserted, the relationship with the person with a mental disorder, with the institution, with the colleagues and with oneself. It also allowed both the researcher and the participants, to aim for the meaningful learning of the reality of a dynamic and complex form.

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Source: Adapted from Bordenave and Pereira. 

Figure 1 - Schematic representation of the trajectory followed in the use of the Arch Method for collecting the research data


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