

# Content Validation of the Adult Depression Diagnostic Protocol (ADDP) Alpha Version®

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**Abstract:** Health service professionals find it hard to diagnose depression, for it is camouflaged in symptoms present in other diseases. As a consequence, depression is still underdiagnosed. To facilitate the diagnosis of depression, especially in the context of mental health, there is an instrument called Adult Depression Diagnostic Protocol (ADDP), which was elaborated by specialists in mental health. This work, therefore, aims to present the content validation of the ADDP by health professionals. Thus it was conducted a cross-sectional, descriptive study of quantitative and qualitative data for validation of the content from ADDP as an instrument projected to diagnose depression. The research was conducted in 2019 and had a sample of 23 participants, 56.6% of whom were female, 43.5% of brown skin color, 56.5% newly-graduated in the health area, 43.5% nurses, and 43.5% working in primary health care. In addition, considering the method of evaluation of the tested content, the ADDP presented  $95.65\% \leq AP \leq 1.00$  and  $0.98 \leq CVI \leq 1$ . It is concluded that the ADDP is a reliable and effective instrument for the diagnosis of depression in adults. It is worth mentioning, however, that health professionals should be able to correctly apply this instrument in patients treated in health services.

**Keywords:** Depression, Adult Depression Diagnostic Protocol (ADDP), Psychiatric Nursing, Clinical Psychology and Mental Health

## 1. Introduction

Depression can be explained by a deficit in the production of neurotransmitters, poorly elaborated mourning, distortions in cognitive schemes, learned helplessness and social skills deficit [1, 2]. In addition, this pathology causes intense psychic suffering and impairs interpersonal, socioeconomic, and affective relationships [3]. The World Health Organization (WHO) estimates that at least 350 million people suffer from depression worldwide, and that by 2020 this disease would be the second cause of health disability. In Brazil, the prevalence of depression is 7.6% [3], and women are twice as likely to have depression than men, at a ratio of 2.6 [4]. In primary health care, cases of depression are predominant, so a study identified that 78.1% (256) of the patients who were cared

for had a depressive episode. Also, with depression stratification, 5.6% were mild, 26% moderate, 34.4% moderately severe, 32.4% severe and 30.0% of patients were at high risk of suicidal behavior [5].

Depression is often underdiagnosed and undertreated, mainly because depressive symptoms can also occur in chronic diseases. Therefore, it is important that Brazilian public health have a depression diagnosis protocol, based on international criteria, which can favor the identification of depression effectively, with universal characteristics, i.e., which can be accepted and used by different health professionals [6]. The Adult Depression Diagnostic Protocol (ADDP) is a psychometric instrument for the diagnosis of depression elaborated in 2015 by a mental health nurse and a clinical psychologist, both with experience in mental health. This instrument is based on the International Classification of Diseases (ICD-10).

The construction of the ADDP followed the methodological steps of the participant research and had active participation of researchers and technicians from a mental health unit service, with psychosocial care center for severe and persistent mental disorders [7-9].

The ADDP is structured in four parts. The first one is depressive symptomatology, which has three fundamental symptoms: continuous low mood or sadness, increased fatigue and loss of interest and pleasure, as well as eight accessory symptoms: decreased appetite, decreased activity, low self-esteem and self-confidence, poor concentration, short attention span, feeling of guilt and uselessness, suicidal thoughts, sleep problems, desolate and pessimistic view of the future [8]. The second part presents non-recurring and recurrent depression. These are mild, moderate, severe, psychotic, other depressive, atypical, secondary, bipolar, and postpartum episodes. The third part presents chronic depressions, such as dysthymia, cyclothymia, and other persistent mood disorders (specific or not). The fourth part presents another persistent mood disorder, which are fast-paced depressive episodes [9].

The pilot validation of the ADDP by the mental health technical team demonstrated that it is operative, applicable to the mental health service, facilitator of the diagnosis of depression and that it can improve mental health care, whether individual or collective [7, 10]. For the ADDP to consolidate itself as an instrument for diagnosing depression in mental health, it needs constant rebuilding and validation, due to the fact that mental health is a dynamic field which is in constant transformation, since it deals with human beings and their existence. Thus, in the Health Sciences, the instruments, in this case the ADDP, are expected to have important attributes such as validity, reliability, practicality, sensitivity and responsiveness [11].

In this way, content validation protocols are used unanimously in validation papers. The following mathematical models are used for quantitative content evaluation [11]:

- 1) *Agreement Percentage (AP)*: method used to calculate the percentage of agreement among the evaluators whose formula is the number of evaluators who agree divided by the number of evaluators multiplied by one hundred. In addition, it is necessary that the result obtained have a concordance rate greater than or equal to 90%.
- 2) *Content Validity Index (CVI)*: it measures the proportion of evaluators who agree on certain items of the instrument. The formula is the number of responses marked on the *Likert* scale graded in '3' or '4', divided by the number of total responses marked. Therefore, a concordance rate is obtained that should be greater than 0.80.

Therefore, a question arises as to whether the ADDP works well to identify depressive episodes in patients. Is it effective in diagnosing depression? Does it present technical and scientific consistency?

The hypothesis is that ADDP is effective in the diagnosis

of depression in adults, and its applicability can be performed by health professionals (doctors, nurses, psychologists, social workers, physical educators, physiotherapists, etc.), provided that one is trained for this purpose. In addition, hypothetically, ADDP can be implemented in any health context, whether in primary, secondary or tertiary care. In this sense, conducting this work has clinical justifications, because it is necessary to contribute to the diagnosis of depression, quickly and efficiently, in health services, which will provide correct treatment and quality of life. That said, there is a need to validate the ADDP and demonstrate its reliability to the scientific community. Thus, the study aimed to present the content validation of the ADDP.

## 2. Method

The present research was a descriptive study of quantitative and qualitative approaches. To start, the content validation has a methodological process defined as the ability of accuracy that an instrument has to be able to measure the object studied [12], in this case as a specific and effective depression diagnosis made by the ADDP. Thus, data collection lasted from July to August 2019, and it only began after a favorable opinion by the Research Ethics Committee (REC) of the Federal University of Rondonia, Brazil, was obtained. The population that participated in the study was found with the help of professionals of mental health units of Rondonia's capital city. These professionals held a high position in health areas and some relationship with the mental health service. Each participant received instructions on the goals of this research, and they had 30 days to return the completed instruments:

- 1) Free and Informed Consent Form (FICF): a term that explained to the participants the objectives and the methodological procedures of this research;
- 2) Adult Depression Diagnostic Protocol (ADDP): an instrument for the purpose of depression diagnosis constructed with the personal opinion of the participants of the research. This instrument can be found in full and free of charge at: <<https://revistas.ucu.edu.uy/index.php/enfermeriacuidadoshumanizados/article/view/1462/1483>>;
- 3) Instrument for Validation of the Adult Depression Diagnostic Protocol (VADDP): this adapted instrument was used to gather participants' evaluation [11, 12]. The instrument contains 14 multiple choice questions, each of which is graduated through a *Likert* scale range from 1 to 4, namely: 1=not relevant or non-representative, 2=item requires great revision to be representative, 3=item requires small revision to be representative, and 4=relevant or representative item.

At the end of the process, 50 participants had been selected to take part in the research. However, when excluding the professionals who had improperly filled out the research instruments, a sample of 23 participants was obtained, who became the evaluators of the ADDP in the present study. To tabulate the collected data, a database in *.xls* format (Excel

2010) was built and statistically analyzed by the software *Statistical Package for Social Science (SPSS), 20.0 – IBM for Windows*. The analysis generated the tables of this research.

### 3. Results

Follow below the results of this research, presented in tables so as to facilitate understanding.

**Table 1.** Characterization of ADDP evaluators.

Variable	f	%
Sex		
Male	10	43.5
Female	13	56.5
Race	f	%
Black	4	17.4
White	9	39.1
Brown	10	43.5
Schooling	f	%
Master's Degree	2	8.7
Specialization	8	34.8
Higher Education	13	56.5
Profession	f	%
Nutritionist	1	4.3
Pharmacist	1	4.3
Physician	2	8.7
Physical Educator	2	8.7
Psychologist	3	13.0
Social Worker	4	17.4
Nurse	10	43.5
Education	1	4.3
Social Assistance	3	13.0
Hospital Mental Health Referral Service	9	39.1
Primary Care	10	43.5

Note: f=Frequency, %=Percentile.

A detailed observation of Table 1 allows one to infer that predominant among the evaluators were females (56.6%), brown-skinned (43.5%), mean age of 41.5 years-old, higher education (56.5%), professional nurse (43.5%), and acting in primary care (43.5%). However, it is worth noting that 34.8% of the evaluators had specialist titration and 39.1% worked in the mental health departments of high-quality hospitals.

**Table 2.** Validation of ADDP content.

ITEM	AP (%)	CVI
Size of titles and topics are suitable	100.0	1.00
Grammar	100.0	1.00
Understanding	95.65	0.98
Writing compatible with health professionals	95.65	0.98
Trust	95.65	0.99
Clarity	95.65	0.98
Consistency	100.0	1.00
Representativeness	95.65	0.99
Functionality	100.0	1.00
Suitable for use in health services	95.65	0.98
Health applicability	100.0	1.00
ADDP	97.2	0.99

Note: AP (%)=Agreement Percentage, IVC=Content Validity Index.

In Table 2, the content validation rates of the PDPA are presented, and it was noticed for the items analyzed that

$95.65\% \leq AP \leq 1.00$  and  $0.98 \leq CVI \leq 1$ . Thus, the ADDP presented as a whole:  $AP (\%)=97.2\%$ , and  $CVI=0.99$ .

### 4. Discussion

It is noteworthy that there is a predominance of women (56.5%) among the evaluators. The scientific literature is emphatic in considering that there was a significant and continuous increase in the presence of women in the health workforce, a phenomenon known as “feminization” [13] (MACHADO et al, 2006). Similarly, other studies showed similar results of the predominance of women as evaluators of research instruments [14-16].

There was also a significant number of brown-skinned participants (43.5%), a percentage close to that obtained by the Brazilian Institute of Geography and Statistics (IBGE) [17], which reveals that there are approximately 98,824.000 brown-skinned individuals in Brazil (47.1%).

The mean age of the evaluators of the present study was 41.5 years, like another study, which evaluated a care protocol in neurology [18].

It is also worth mentioning that among the evaluators there is a predominance of people with a college degree in the areas of health. This is justified by two hypotheses: a) the inclusion criteria demanding the evaluators should have a college degree; b) in the health care workplace college degrees and specialization courses are highly valued. Therefore, from the same point of view, the focus of this research is to offer a practical applicability to the ADDP, which has been created in the academic world. Moreover, this study shows that in the professional environment (excluding education) the number of masters and doctors is scarce [12].

In Brazil there are 14 health professions regulated by specific legislation (called the Law of Professional Practice), being medicine, nursing, dentistry, pharmacy, nutrition, biology, veterinary medicine, physiotherapy, speech therapy, social service, occupational therapy, biomedicine, physical education, and psychology [19]. It is worth mentioning that this research encompassed 7 out of the 14 health professions above mentioned [2, 6, 9].

All the evaluators participating in the present research were members of the Psychosocial Care Networks (PCN), regulated by the Brazilian Ministry of Health, under the number 3088/2011. This fact provides continuous access to dynamic and humanized public health care to patients with mental disorders [20].

As for the content validation of the ADDP, it was identified for the items analyzed that AP and CVI rates were on excellent levels. Thus, these findings are consistent with the revised literature which considers that AP has to be higher than 90% and CVI greater than 0.80 [11, 21, 22].

Therefore, this is in line with research with the objective of validating health instruments or protocols [12, 23-25]. Therefore, it can be concluded that the ADDP, by the findings indicated in the present study, reached Excellent Agreement among the evaluators.

## 5. Conclusion

Depression has been underdiagnosed in health services. Thus, to solve this public health problem, the ADDP, a protocol that facilitates the diagnosis of depression and prioritizes multidisciplinary in its application, was created. The ADDP was validated exclusively by a mental health team. Thus, by validating its content, as presented in the present study, the ADDP proved to be reliable, clear, coherent, operative, representative, adequate and applicable to mental health.

It can be concluded that the ADDP Alfa Version® is valid to be used in health services as a reliable and effective instrument for the diagnosis of depression in adults. However, it is emphasized the need for health professionals to be able to apply it in their patients assisted in health services.

It is important to emphasize that future research needs to compare PDDA with other instruments for diagnosing depression.

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