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SEÇÃO: ARTIGO

Training on animal hoarding disorder for public health professionals

Capacitação sobre o transtorno de acumulação de animais para profissionais que atuam na rede pública de saúde

Capacitación en Trastorno de Acumulación de Animales para Profesionales que Trabajan en el Sistema de Salud Pública

Dalton Breno Costa¹

orcid.org/0000-0002-8167-1513
daltonbrenocosta@yahoo.com.br

Elisa Arrienti Ferreira²

orcid.org/0000-0002-2935-2937
elisa.arrienti@gmail.com

Luis Henrique Paloski²

orcid.org/0000-0001-6965-3139
luishenriquepaloski@gmail.com

Tatiana Quarti Irigaray⁴

orcid.org/0000-0002-3078-4219
tatiana.irigaray@pucrs.br

Carmen Moret-Tatay³

orcid.org/0000-0002-2867-9399
carmenmorettatay@gmail.com

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Abstract: Animal Hoarding Disorder (AHD) is a phenomenon little known in a structured way by professionals who work with the hoarding theme. This study aimed to evaluate a training course offered to professionals working in the public service of the State of Rio Grande do Sul, Brazil, with people who hoarded animals. Thus, 82 individuals aged between 18 and 65 years participated (M = 39.68; SD = 10.89). A questionnaire of sociodemographic data and an instrument for assessing knowledge about AHD (pre- and post-training) were applied. It was observed the knowledge regarding AHD improved significantly in the evaluation performed after the training. Finally, evidence of the effectiveness of training on AHD demonstrates the importance of developing and offering continuing education activities as tools for the qualification of professionals who work with the theme.

Keywords: animal hoarding disorder, training, professionals

Resumo: O Transtorno de Acumulação de Animais (TAA) é um fenômeno pouco conhecido de forma estruturada por profissionais que atuam com a temática da acumulação. Este estudo teve por objetivo avaliar uma capacitação oferecida a profissionais que atuam no serviço público do Estado do Rio Grande do Sul, Brasil, com pessoas que acumulavam animais. Participaram 82 indivíduos com idades entre 18 e 65 anos (M = 39,68; DP = 10,89). Foram aplicados um questionário de dados sociodemográficos e um instrumento para avaliação de conhecimentos sobre TAA (pré e pós-capacitação). Observou-se que o conhecimento sobre o TAA melhorou significativamente na avaliação realizada após a capacitação. Por fim, as evidências de bons resultados da capacitação sobre o TAA destacam a importância do desenvolvimento e da oferta de atividades de educação continuada como ferramentas para a qualificação dos profissionais que trabalham com essa temática.

Palavras-chave: transtorno de acumulação de animais, capacitação, profissionais

Resume: El Trastorno de Acumulación de Animales (TAA) es un fenómeno poco conocido de forma estructurada por los profesionales que trabajan con el tema de la acumulación. Este estudio tuvo como objetivo evaluar una capacitación ofrecida a los profesionales que trabajan en el servicio público del Estado de Rio Grande do Sul, Brasil, con personas que acumulan animales. Participaron 82 individuos con edades comprendidas entre 18 y 65 años (M = 39,68; DT = 10,89). Se aplicó un cuestionario de datos sociodemográficos y un instrumento de evaluación de conocimientos sobre el TAA (pre y post adiestramiento). Se observó que el conocimiento sobre el TAA mejoró significativamente en la evaluación realizada después del entrenamiento. Finalmente, la evidencia de buenos resultados formativos en TAA apunta a la importancia de desarrollar

¹ Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), Porto Alegre, RS, Brasil.

² Alitius Educação, Passo Fundo, RS, Brasil.

³ Universidad Católica de Valencia "San Vicente Mártir" (UCV), València, Espanha.

y ofrecer actividades de educación continua como herramientas para la cualificación de los profesionales que trabajan con la temática.

Palabras clave: trastorno de acumulación de animales, capacitación, profesionales

Animal Hoarding Disorder (AHD) is defined by the accumulation of a large number of animals and a failure to provide minimal standards of nutrition, sanitation and veterinary care and to act on the deteriorating conditions of the animals (including disease, starvation or death) and the environment (overpopulation, extremely unsanitary conditions). The causes of animal hoarding disorder are still little known, characterized by persistent difficulties of the individual in donating animals, regardless of its actual value, as a result of a strong perception of the need to conserve them and suffering associated with its disposal (American Psychiatric Association, 2014).

The behaviors present in AHD cause suffering to the individual and animals, generating social, emotional, physical, financial, and even legal consequences that are harmful to the hoarder and their family members (Paloski et al., 2017). In a North American survey, 54 cases of animal hoarding were analyzed, reporting that 80% of the animals lived in precarious conditions or were already dead inside the house of the hoarder. The justifications of hoarders for keeping animals in their houses were attributed to beliefs that animals were substitutes for children and the feeling that animals would not be cared for by others or would be killed in animal shelters (Patronek, 1999).

A study performed in southern Brazil investigated the characteristics of a sample composed of 33 individuals who hoarded animals. The average age of the sample was 61.39 years (SD = 12.69), and the average education level was 9.39 (SD = 4.40). The results of this study found a higher prevalence of women (73%) and the elderly (64%) in the sample. The total number of animals hoarded by the 33 individuals was 1.357, with an average of 41 animals per hoarder (SD ± 24.41), with only 22% (n = 7) of the participants keeping all their animals neutered. Most of the animals lived in precarious

situations, with minimal sanitary and veterinary conditions. In addition, dramatic situations such as violent fights over territory, extreme malnutrition, cannibalism, injured caged animals and untreated were observed in most of the houses visited (Ferreira et al., 2017).

According to the study by Ferreira et al. (2020), the psychopathological symptoms comorbid to AHD are depression, anxiety, memory deficits, mania, and obsessive-compulsive disorder. The authors found a greater occurrence of these symptoms among individuals who had hoarded animals for more than 20 years. According to Paloski et al. (2020), individuals that hoarded animals have cognitive impairments, difficulties in memory, reasoning, and executive functions. Paloski et al. (2017), performed a systematic review on AHD analyzing nine articles, corroborating the fact that it is still little scientific literature on the area. The review found that hoarders were in a greater proportion of females (90%) and hoarded an average of more than 30 animals. The housing conditions were unsanitary, and the most hoarded animals were dogs and cats. The authors showed that due to the lack of empirical studies on the subject, further research needs to be performed to fill this gap and, consequently, build intervention strategies.

AHD does not only harm animals but also affects the quality of life of the hoarders, living in unsanitary conditions, putting their health and safety at risk (HARC, 2002). Numerous consequences are cited for the person who hoards animals, such as difficulties in moving around the house, cooking, cleaning, personal hygiene, and even sleeping. In severe cases, hoarding can put individuals at risk of fire, falling (especially elderly individuals), as well as subjecting them to poor sanitary conditions and other health risks. This disorder is associated with professional impairment, poor physical health, and intense use of social work (American Psychiatric Association, 2014).

Conflict with neighbors due to smell, noise, and local authorities is common, and a substantial proportion of individuals with severe hoarding disorder have been or are involved in legal pro-

ceedings (American Psychiatric Association, 2014; Calvo et al., 2014; Paloski et al., 2017). The negative consequences of this disorder also affect public health due to the risk of zoonoses (Steketee et al., 2011), in addition to generating high costs for government agencies (Dozier et al., 2019; Ferreira et al., 2017; HARC, 2002). Employees dealing with cases of animal hoarding commonly have little training in how to deal with these problems (Dozier et al., 2019).

Due to the recent inclusion of hoarding disorder in the DSM-5, there are still no studies available in the literature on the type of psychological treatment most suitable for animal hoarding disorder (American Psychiatric Association, 2014; Hill et al., 2019; Maher et al., 2012; Pogolian, 2010; Tolin et al., 2007). A study performed in the United States evaluated an intervention offered by multidisciplinary teams composed of veterinarians and municipal health agents that consisted of establishing a bond of trust through several visits to people who hoarded animals. After establishing the bond, a plan for the gradual removal of the animals was presented and executed. Most of the animals were transferred to shelters and later donated. There was no specific psychological or medical intervention, only the participation of specialist psychologists in crisis situations that were required for conversations with people who do not readily accept the intervention (Strong et al., 2018).

Individuals who hoard animals, most of the time, demonstrate low insight, little critical judgment, low motivation to perform some type of treatment, and an impoverished social network. Thus, these individuals tend not to recognize their symptoms and have difficulty in making decisions, which can hinder their adherence to psychological interventions (Maher et al., 2012; Patronek, 1999; Pogolian, 2010; Tolin et al., 2007).

In this perspective, this study aimed to investigate the effectiveness of a training offered to professionals who worked or have worked with people who hoarded animals, assessing the learning throughout the training by assessing the participants' scores before and after. In this sen-

se, adequate and evidence-based professional training enables the development of new skills (Moraes & Paiva, 2017). The association between socio-demographic profiles of the professional (age, education level and time in the work position) and knowledge about AHD were also investigated.

Method

A quantitative and comparative study, in which the pre- and post-training scores of the participants were compared.

Participants

The sample calculation (Figure 1) was performed based on the inference of the average number of correct answers presented by the professionals in the pre- and post-training assessment, on the total number of 22 questions that investigated the knowledge about AHD. It was assumed the average of correct answers was 40% in the pre-test (8.8 correct questions on average) and it was assumed in the post-test the correct answers would increase to 70% (15.4 questions on average). It was assumed the standard deviation of this difference of 6.6 more questions was equal to 8.0 for paired samples and assuming error of 5% and error of 10%, a sample of approximately 20 pre-tests and post-tests was obtained (Jekel et al., 2006).

$$nP = \frac{[(Z\alpha + Z\beta) Sd/D]^2}{}$$

nP = number of pairs

Z α ($\alpha=5%$) = 1.96

Z β ($\beta=10%$) = 1.64

Sd = standard deviation of the difference between the pairs estimated at 8

D = mean difference between pairs = 6.6 or (15.4 – 8.8)

The initial sample consisted of 115 participants. The inclusion criterion established was to be a professional from the public health and law network in the region of Porto Alegre and participate

in the training. However, 33 individuals did not complete the research protocol and were excluded from the study. The final sample consisted of 82 individuals. The process of recruiting participants was for convenience. Thus, professionals from health departments such as veterinarians, doctors, nurses, psychologists, social workers and health agents from cities in the Rio Grande do Sul were invited to participate in the training through emails and phone contacts, as well as government employees of the Public Ministry from the same state during the first semester of 2018.

Instruments

Sociodemographic Questionnaire. The following variables were evaluated: age, sex, time in the work position, education level, past or current experience with animal hoarding disorder.

Animal Hoarding Disorder Knowledge Questionnaire (AHDKQ). The questionnaire was built based on the literature and by experts in AHD, consisting of 22 statements that included symptoms described in the DSM-5 such as the presence of an excessive number of animals, nutritional deficiency of the animals, and sanitation problems (APA, 2014). The questionnaire was answered individually by a two-point scale (agree or disagree). Examples of questions are: "The number of animals is crucial for the diagnosis of Animal Hoarding Disorder" and "Most animals hoarded do not have poor nutrition and health conditions".

Ethical and data collection procedures

This study is part of a project approved by the Research Ethics Committee of PUCRS (CEP-PUCRS) under CAAE number 44489715.8.0000.5336. For data collection, contacts were made with the professionals, through phone calls and emails, and those who agreed to participate in the survey completed and signed the Informed Consent Form (ICF). Then the participants responded individually to the instruments.

Professionals from public health, environment, security, and justice services in cities in the state of Rio Grande do Sul received an eight-hour training course on AHD. The training was divided into

two meetings of four hours each, with an interval of one week, both taught by a psychologist trained in the area. The first group was composed exclusively of professionals from the municipality of Alvorada, who participated in the training on the premises of the city hall. The second group of professionals, from nine other cities, participated in the training at the *Pontifícia Universidade Católica do Rio Grande do Sul*. The training of the participants occurred during the second semester of 2018 and in the face-to-face modality.

At the first meeting, the AHD was characterized and data from the previous research developed were presented (Ferreira et al., 2020; Ferreira et al., 2017; Paloski et al., 2020), as well as data from classic research in the area (Patronek, 1999; Steketee et al., 2011). In the second meeting, possibilities for interventions were discussed. In both meetings, participants were encouraged to ask questions and clarify doubts about the theme. In the first meeting, before the start of training (pre-test), the professionals were invited to participate in the research, and those who accepted signed the ICF and completed the sociodemographic datasheet and the AHD knowledge questionnaire. The post-test was performed immediately at the end of the second training day. In the post-test, the professionals answered the AHD knowledge questionnaire again. The participants were asked to complete the self-administered questionnaires in the same place at the training site using a clipboard, pencil, and paper provided by the researchers.

Data Analysis

All analyzes were performed using the Statistical Package for the Social Sciences (SPSS, version 22) program for Windows. The data were described by absolute (n) and relative (%) frequencies for qualitative variables and by median, mean, and standard deviation for quantitative variables. The univariate distribution of variables was investigated using the Shapiro-Wilk test, considering a significance level of 0.05. Due to the non-normal distribution of data, non-parametric statistical tests were used in this study.

In order to assess whether the intervention contributes to increasing the level of knowledge about animal hoarding, the McNemar's test and the Wilcoxon Signed Rank Test were used to compare the gross scores of the participants before and after the intervention. The level of significance adopted was 5% ($p < 0.05$). Spearman's correlation was also performed between the level of learning and age, education, and time in the work position.

Results

The final sample consisted of 82 participants, 81.70% were women with an average age of 39.68 years ($SD = 10.89$) (Table 1). The most prevalent professions in the sample were health agent (18.29%), veterinarians (10.97%), psychologists (9.75%), social workers (9.75%), nursing technicians (7.31%), and nurses (7.31%), totaling 63.38% of the sample.

Table 1 – Sociodemographic characterization of professionals

Variables	n	%	M	SD	Mdn
Age (years)	82	100	39.68	10.89	38.00
Sex					
Male	15	18.30			
Female	67	81.70			
Time in the work position (months)	81	98.78	78.10	79.31	60.00
Education Level					
Complete Primary Education	1	1.20			
Incomplete High School	1	1.20			
Complete High School	13	15.90			
Incomplete Higher Education	14	17.10			
Complete Higher Education	27	32.90			
Postgraduate Studies	26	31.70			
Have you worked with people who hoard animals?					
Yes	40	48.80			
No	42	51.80			
Are you currently working with people who hoard animals?					
Yes	31	37.80			
No	51	62.20			

Note. M = mean; SD = standard deviation; Mdn = median.

After training, participants increased their levels of knowledge regarding AHD. Before training, the total median of correct answers was 17.50 ($M = 16.48$; $SD = 3.84$) and, after training, the median of correct answers increased to 18.00 ($M = 17.45$; $SD = 2.88$). Through the Wilcoxon Signed Rank Test, it was possible to notice this difference is

statistically significant ($Z = -2.003$; $p = 0.04$). Among the 22 questions proposed to assess training, 10 questions obtained a significant increase in learning. More details on the effect of training among participants are presented in Table 2.

Table 2 – Evaluation of the effects of the intervention due to the AHDKQ (n = 82)

	Pre-training		Post-training		<i>P Value*</i>	Difference n
	n	%	n	%		
1 – The number of animals is crucial for the diagnosis of Animal Hoarding Disorder.						
Errors	61	75%	51	62%	0.08	-10
Hits	21	25%	31	38%		10
2 – People who hoard animals usually accept the idea of donating their animals.						
Errors	12	15%	1	1%	0.00	-11
Hits	70	85%	81	99%		11
3 – Most animals hoarded do not have poor nutrition and health conditions.						
Errors	36	44%	25	30%	0.04	-11
Hits	46	56%	57	70%		11
4 – People who hoard animals often stop having social life and leisure activities to care for animals.						
Errors	10	12%	3	4%	0.06	-7
Hits	72	88%	79	96%		7
5 – Most people who hoard animals have difficulties in perceiving the deterioration of the environment and animals.						
Errors	10	12%	2	2%	0.02	-8
Hits	72	88%	80	98%		8
6 – Rarely people who hoarded animals have problems with their neighbors and family members due to the disorder.						
Errors	19	23%	14	17%	0.30	-5
Hits	63	77%	68	83%		5
7 – People who hoard animals believe that other people would not be able to care for their animals as they do.						
Errors	12	15%	3	4%	0.00	-9
Hits	70	85%	79	96%		9
8 – People who hoard animals have no difficulty donating the animals in their care.						
Errors	8	10%	5	6%	0.50	-3
Hits	74	90%	77	94%		3
9 – People who hoard animals often believe that collecting animals is their mission in life.						
Errors	13	16%	7	9%	0.07	-6
Hits	68	84%	74	91%		6
10 – Rarely do people who hoard animals show significant changes in their daily routine and health care due to the hoarded animals.						
Errors	24	30%	29	35%	0.35	5
Hits	58	70%	53	65%		-5
11 – The professional life of people who hoard animals is always affected by the disorder.						
Errors	28	34%	14	17%	0.00	-14
Hits	54	66%	68	83%		14
12 – Often people who hoard animals are away from their friends and family.						
Errors	14	17%	2	2%	0.00	-12
Hits	68	83%	80	98%		12

13 – Often people who hoard animals have the perception that they take good care of animals and the environment in which they live.						
Errors	10	12%	13	16%	0.62	3
Hits	72	89%	69	84%		-3
14 – Most people who hoard animals recognize that their behaviors and beliefs about hoarding are harmful to both animals and themselves.						
Errors	11	13%	6	7%	0.22	-5
Hits	71	87%	76	93%		5
15 – The environments where the hoarded animals live have, in general, good sanitation conditions.						
Errors	6	7%	3	4%	0.25	-3
Hits	76	93%	79	96%		3
16 – Whenever people who hoard animals find an animal at risk or sick on the street, they feel obliged to take it home.						
Errors	13	16%	13	16%	1.00	0
Hits	68	84%	68	84%		0
17 – Hoarders often do not neuter their animals or interfere with the reproduction of animals.						
Errors	41	50%	16	20%	0.00	-25
Hits	41	50%	66	80%		25
18 – Animals often occupy areas that could be used for other purposes, such as bedrooms and kitchens.						
Errors	14	17%	3	4%	0.00	-11
Hits	68	83%	79	96%		11
19 – Often people who hoard animals stop spending money on themselves to spend on animals.						
Errors	9	11%	6	7%	0.54	-3
Hits	73	89%	76	93%		3
20 – People who hoard animals may have few animals in their household.						
Errors	59	72%	54	66%	0.35	-5
Hits	23	28%	28	34%		5
21 – Often people who hoard animals show symptoms of depression and social anxiety.						
Errors	22	27%	10	12%	0.01	-12
Hits	60	74%	72	88%		12
22 – Recognizing their problems due to hoarding, most people who hoard animals accept help.						
Errors	20	24%	11	13%	0.04	-9
Hits	62	76%	71	87%		9

Note. *McNemar's test

Table 3 shows the correlations between the variables education level, age, and time in the work position. The findings demonstrate that

younger professionals obtained better scores in evaluations performed before and after training.

Table 3 – Correlation between pre- and post-training scores and sociodemographic variables

	Pre-training	Post-training
Education level	0.265*	.167
Age	-.263*	-0.352**
Time in the work position	-.273*	-.254*

Note. * Significant correlation 0.05. ** Significant correlation 0.01.

Discussion

The main objective of this study was to verify the effects of training on AHD for professionals. In addition, this study aimed to verify whether the profile of the professional was related to the level of knowledge about AHD and the effects of training. As the main finding, there was a significant increase in knowledge about the disorder between the pre- and post-training assessments. A hypothesis to explain this data may be related to the execution of the training, which used a dialogical expository format, lasting eight hours to share the main scientific information about the disorder (Cardoso et al., 2018). Thus, the format and the number of hours of continuous training appear as important variables for adherence and learning of participants (Costa et al., 2019; Zimmermann et al., 2016).

Studies indicate training is an effective tool to expand the knowledge repertoire of health professionals (Forsetlund et al., 2009; Torres et al., 2010). The constant improvement of professionals after the completion of formal undergraduate studies enables the development of new acting skills (Jesus et al., 2016; Martins et al., 2006). In another study that investigated the influence of training on the skills of health professionals, there was a significant improvement in the work provided by participants to users of the health service (Jakobczynski et al., 2018).

As the improvement in learning was observed, the importance of training programs that aim to meet theoretical and practical demands presented by health professional teams is emphasized. Often teams face difficulties in approach and therapeutic strategy, and even lack of knowledge

about the signs and symptoms of psychopathological conditions that are part of their routine (Mattos et al., 2019). After the training, it is believed the participants would have the technical knowledge to identify possible cases of individuals that hoard animals, thus opening the possibility of appropriate therapeutic interventions.

Regarding the correlations, the results showed that younger individuals and those with less time in their work position had better scores in the pre- and post-training assessments. However, it should be noted that in this study most participants were younger, and the magnitude of correlations are low. Regarding the education level, participants with a higher level of formal education performed better in the pre-training assessment. This finding may be related to the fact that these individuals, due to their degree of education, had a broader repertoire of information on different aspects of the phenomenon of animal hoarding (Oliveira et al., 2020).

In this study, half of the participants did not work with people who hoarded animals. However, these participants were associated with public health and justice departments that daily deal with people who hoarded animals. Training the professionals who work directly and indirectly with people who hoarded animals is important to ensure that all professionals can work together and to guarantee the effectiveness of the processes managed by these professionals (Ferreira et al., 2017; Paloski et al., 2017).

The present study contributed by presenting evidence of the effectiveness of training on AHD as a tool for the qualification of professionals in the areas of health and law who work with this

theme. Regarding the assessment method used, the AHD knowledge questionnaire was applied in two stages, pre- and post-training. A third assessment, one month after the last training meeting, could be applied to the participants as a way of analyzing whether learning was maintained. Also, there was a need to add an essay question after the end of the training that contemplated how the activity contributed to the knowledge about the disorder. Follow-up assessments are strategies for engaging health professionals who complete training (Carlson et al., 2017). Based on such limitations of the present study, further research is suggested to assess the effectiveness of training with samples in different locations, as well as the inclusion of follow-up interviews with participants who completed the training.

Finally, AHD is still little known by the public and among professionals from different areas of expertise. Training is an important tool for the propagation of descriptive and scientific knowledge about the characteristics of this psychopathological condition and aims to increase the level of knowledge of individuals who are involved with this theme. The proposal for structured training that included professionals from different areas in public power was a pioneering initiative in the Brazilian scenario.

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References

- American Psychiatric Association. (2014). *Manual Diagnóstico e Estatístico de Transtornos Mentais*. Artmed.
- Cardoso, R. B., Paludeto, S. B., & Ferreira, B. J. (2018). Programa de educação continuada voltado ao uso de tecnologias em saúde: percepção dos profissionais de saúde. *Rev. Bras. Ciên. Saúde*, 22(3), 277-284. <https://doi.org/10.4034/RBCS.2018.22.03.12>
- Carlson, J. M., Schwindt, R., Agle, J., Gassman, R. A., McNelis, A. M., Vannerson, J., & Crapp, D. (2017). Effects of training on social work, nursing and medical trainees' knowledge, attitudes and beliefs related to screening and brief intervention for alcohol use. *Journal of Alcohol and Drug Education*, 61(1), 14-35.
- Calvo, P., Duarte, C., Bowen, J., Bulbena, A., & Fatjó, J. (2014). Characteristics of 24 cases of animal hoarding in Spain. *Animal Welfare*, 23(2), 199-208. <https://doi.org/10.7120/09627286.23.2.199>
- Costa, G. D. D., Spineli, V. M. C. D., & Oliveira, M. A. D. C. (2019). Educação profissional sobre demências na atenção primária à saúde: revisão integrativa. *Revista Brasileira de Enfermagem*, 72(4), 1086-1093. <https://doi.org/10.1590/0034-7167-2018-0652>
- Dozier, M. E., Bratiotis, C., Broadnax, D., Le, J., & Ayers, C. R. (2019). A description of 17 animal hoarding case files from animal control and a humane society. *Psychiatry research*, 272, 365-368. <https://doi.org/10.1016/j.psychres.2018.12.127>
- Ferreira, E. A., Paloski, L. H., Costa, D. B., Fiametti, V. S., De Oliveira, C. R., de Lima Argimon, I. I., Gonzatti, V., & Irigaray, T. Q. (2017). Animal hoarding disorder: a new psychopathology? *Psychiatry research*, 258, 221-225. <https://doi.org/10.1016/j.psychres.2017.08.030>
- Ferreira, E. A., Paloski, L. H., Costa, D. B., Moret-Tatay, C., & Irigaray, T. Q. (2020). Psychopathological comorbid symptoms in animal hoarding disorder. *Psychiatric Quarterly*, 91, 853-862. <https://doi.org/10.1007/s11266-020-09743-4>
- Forsetlund, L., Bjørndal, A., Rashidian, A., Jamtvedt, G., O'Brien M., Wolf F., Davis, D., Odgaard -Jensen, J., & Oxman A. (2009). Continuing education meetings and workshops: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews*. 1(2) <https://doi.org/10.1002/14651858.CD003030.pub2>
- Hoarding of Animals Research Consortium. (2002). Health implications of animal hoarding. *Health and Social Work*, 27(2), 125-136. <https://doi.org/10.1093/hsw/27.2.125>
- Hill, K., Yates, D., Dean, R., & Stavisky, J. (2019). A novel approach to welfare interventions in problem multi-cat households. *BMC Veterinary Research*, 15(1), 434. doi: <https://doi.org/10.1186/s12917-019-2183-3>
- Jakobczynski, J., Frighetto, M., Perazzoli, M., Dambrós, B. P., Dallazem, B., & Kirschnick, A. (2018). Capacitação dos profissionais de saúde e seu impacto no rastreamento de lesões precursoras do câncer de colo uterino. *RBAC*, 50(1), 80-85. <https://pdfs.semanticscholar.org/556e/578f6b47381e66492baga8de269c1d89cafb.pdf>
- Jekel, J. F., Katz, D. L., & Elmore, J. G. (2006). *Epidemiologia, bioestatística e medicina preventiva*. In Epidemiologia, bioestatística e medicina preventiva (pp. 432-432). Artmed.
- Jesus, P. C. D., Oliveira, M. I. C. D., & Fonseca, S. C. (2016). Repercussão da capacitação de profissionais de saúde em aleitamento materno sobre seus conhecimentos, habilidades e práticas hospitalares: uma revisão sistemática. *Jornal de Pediatria*, 92(5), 436-450.

Laurence, B. (2011). *Análise de conteúdo* (L. A. Retos, & A. Pinheiro, Trad.). Edições, 70.

Lucas, M. G., de Oliveira, É. B. C., de Oliveira, I. C., Basseto, M., & Machado, R. C. (2018). Impacto de uma capacitação para enfermeiros acerca da assistência no pós-operatório de cirurgia cardíaca. *Revista SO-BECC*, 23(2), 89-95. <https://doi.org/10.5327/Z1414-4425201800020006>

Maher, M. J., Wang, Y., Zuckoff, A., Wall, M. M., Franklin, M., Foa, E. B., & Simpson, H. B. (2012). Predictors of patient adherence to cognitive-behavioral therapy for obsessive-compulsive disorder. *Psychotherapy and psychosomatics*, 81(2), 124. <https://doi.org/10.1159/000330214>

Martins, C., Kobayashi, R. M., Ayoub, A. C., & Leite, M. M. J. (2006). Perfil do enfermeiro e necessidades de desenvolvimento de competência profissional. *Texto & Contexto-Enfermagem*, 15(3), 472-478. <https://doi.org/10.1590/S0104-07072006000300012>

Mattos, E. B. T., de Castro Barbosa, M., & Mendes, R. (2019). Capacitação de agentes comunitários de saúde para a detecção da demência na fase leve [Capacitating community health workers to detect dementia at the mild stage] [Capacitación de agentes comunitarios de salud para detección de las demencias en la fase leve]. *Revista Enfermagem UERJ*, 27, 422-444. <https://doi.org/10.12957/reuerj.2019.42244>

Moraes, T. P. R., & de Paiva, E. F. (2017). Enfermeiros da Atenção Primária em suporte básico de vida. *Revista de Ciências Médicas*, 26(1), 9-18. <https://doi.org/10.24220/2318-0897v26n1a3783>

Oliveira, G. S., da Paz Holodniak, A. C., Diniz, B. A. H. P., Quaresma, R. S. A., Alcântara, M. G., Emoto, K. L. A., Silva, G. L., Aguiar, D. R., Jardim, R. L. S., & Dias, R. S. (2020). Capacitação de agentes comunitários de saúde para identificação de casos de tuberculose em uma unidade saúde da família. *Revista Eletrônica Acervo Saúde*, (48), e3425-e3425. <https://doi.org/10.25248/reas.e3425.2020>

Patronek, G. J. (1999). Hoarding of animals: an under-recognized public health problem in a difficult-to-study population. *Public Health Reports*, 114(1), 81. <https://doi.org/10.1093/phr/114.1.81>

Paloski, L. H., Ferreira, E. A., Costa, D. B., del Huerto, M. L., de Oliveira, C. R., de Lima Argimon, I. I., & Irigaray, T. Q. (2017). Animal hoarding disorder: a systematic review. *Psico*, 48(3), 243-249. <https://doi.org/10.15448/1980-8623.2017.3.25325>

Paloski, L.H., Ferreira, E.A., Costa, D. B., Oliveira, C. R., Moret-Tatay, C., & Irigaray, T. Q. (2020). Cognitive performance of individuals with animal hoarding. *Health Qual Life Outcomes*, 18, 40. <https://doi.org/10.1186/s12955-020-01288-1>

Pogosian, L. (2010). Treatment of compulsive hoarding: a case study. *The Einstein Journal of Biology and Medicine*, 25(1), 8-11. <https://doi.org/10.23861/EJBM20102579>

Strong, S., Federico, J., Banks, R., & Williams, C. (2018). A Collaborative Model for Managing Animal Hoarding Cases. *Journal of Applied Animal Welfare Science*, 22(3), 267-278. <https://doi.org/10.1080/10888705.2018.1490183>

Steketee, G., Gibson, A., Frost, R. O., Alabiso, J., Arluke, A., & Patronek, G. (2011). Characteristics and antecedents of people who hoard animals: An exploratory comparative interview study. *Review of General Psychology*, 15(2), 114. <https://doi.org/10.1037/a0023484>

Tolin, D. F., Frost, R. O., & Steketee, G. (2007). An open trial of Cognitive-Behavioral Therapy for Compulsive Hoarding. *Behaviour Research and Therapy*, 45(7), 1461-1470. <https://doi.org/10.1016/j.brat.2007.01.001>

Torres, H. D. C., Amaral, M. A., Amorim, M. M., Cyrino, A. P., & Bodstein, R. (2010). Capacitação de profissionais da atenção primária à saúde para educação em Diabetes Mellitus. *Acta Paulista de Enfermagem*, 23(6), 751-756. <https://doi.org/10.1590/S0103-21002010000600006>

Zimmermann, M. H., Silveira, R. F. M., & Gomes, R. Z. (2016). Formação continuada no ensino de ciência da saúde: avaliação de habilidades e feedback efetivo. *Ensino & Pesquisa*, 14(02), 197-213. <http://periodicos.unespar.edu.br/index.php/ensinoepesquisa/article/view/1061/607>

Dalton Breno Costa

Psicólogo pela Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSA), em Porto Alegre, RS, Brasil. Mestrando em Psicologia na Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), em Porto Alegre, RS, Brasil. Consultor Internacional na Organização Pan-Americana da Saúde (OPAS/OMS), no departamento de Evidence and Intelligence for Action in Health (EIH), em Washington, D.C., Estados Unidos.

Elisa Arrienti Ferreira

Doutora em Psicologia Clínica pela Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), em Porto Alegre, RS, Brasil. Professora na Wainer, em Porto Alegre, RS, Brasil.

Luís Henrique Paloski

Doutor em Psicologia pela Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), em Porto Alegre, RS, Brasil. Professor do Programa de Pós-graduação em Psicologia da Aitutus Educação, em Passo Fundo, RS, Brasil. Coordenador do GEAPSI - Grupo de Estudos em Avaliação Psicológica e Intervenções em Saúde e Carreira.

Tatiana Quarti Irigaray

Doutora em Gerontologia Biomédica pela Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), em Porto Alegre, RS, Brasil. Professora da Graduação e do Programa de Pós-graduação em Psicologia da PUCRS. Coordenadora do ARIHA - Grupo de Pesquisa em Avaliação, Reabilitação e Interação Humano-Animal.

Carmen Moret-Tatay

Doutora em Matemática aplicada em Ciência Cognitiva pela Universidade Politécnica de Valência e doutora em Ciências da Saúde pela Universidade Católica de Valência (UCV), em Valência, Espanha. Professora da Universidade Católica de Valencia, San Vicente Mártir (Espanha). Coordenadora do grupo de pesquisa MEB lab (Mind, Emotion and Behavioural research laboratory) da UCV.

Endereço para correspondência

Tatiana Quarti Irigaray

Pontifícia Universidade Católica do Rio Grande do Sul
Av. Ipiranga, 6681, Prédio 11, sala 919
Partenon, 90619-900
Porto Alegre, RS, Brasil

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