



Animal-Assisted Interventions and Psychiatric Disorders: Knowledge and Attitudes among General Practitioners, Psychiatrists, and Psychologists

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Abstract

There appears to be a growing interest among farmers and researchers in animal-assisted interventions (AAI). However, less is known about the attitudes toward the use of such interventions among therapists. In this study, Norwegian general practitioners, psychiatrists, and psychologists were asked about their knowledge of, and experience with, AAI and their motivation for learning more about AAI. About two-thirds of the respondents had some or significant knowledge of AAI and were motivated to adapt AAI to their own practice. Almost 9 out of 10 thought that AAI should be used more in psychiatric treatment; however, GPs were not as positive as the psychiatrists/psychologists. More than 2 out of 3 respondents wanted to learn more about AAI, the men being more positive than the women. There were no professional differences on this question, while number of years with clinical work was negatively related, and earlier experiences with AAI positively related, to this motivation to learn more about AAI. Belief in treatment effects was a positive predictor.

Keywords

animal-assisted interventions, attitudes, companion animals, farm animals, psychiatric patients, therapists

Introduction

Companion animals are to an increasing extent being utilized in the medical treatment of different target groups. This is usually called Animal-Assisted Interventions (AAI) and is defined as "any intervention that intentionally includes or incorporates animals as part of a therapeutic or ameliorative process or milieu" (Kruiger & Serpell, 2006, p. 25). A distinction is made between situations where nonhuman animals¹ generate positive emotional responses in

humans (recreation, entertainment, animal-assisted activities), and situations with intentional therapeutic effects. Animal-assisted activities (AAA) imply that the animal visits the human and is utilized in different settings by specially trained professionals or volunteers, while animal-assisted therapy (AAT) is performed by licensed health personnel who use animals within the scope of their professional expertise. AAI with farm animals is a major part of so-called *Green care*, a European concept comprising different varieties of services that take place at ordinary farms in collaboration with health-care institutions or institutions responsible for social security (Sempik, Hine, & Wilcox, 2010). These services may be geared toward children or adolescents with special educational needs, may entail training for the mentally disabled, or may involve dedicated services for people with present or past mental health problems.

AAI research has, until now, dealt with areas such as: (1) physiological effects of human-animal interactions (Barker & Dawson, 1998; Friedmann & Thomas, 1995; Anderson, Reid, & Jennings, 1992); (2) animals as social support and a means of improving interpersonal communication (McNicholas & Collis, 2006); and (3) interaction with animals to promote self-confidence and coping (Bizub, Joy, & Davidson, 2003). The referenced studies show that animals may help reestablish routines and structure after a serious disease, enhance human physical and mental health, and as such positively contribute to public health. A relatively extensive meta-analysis of 49 studies found that various interventions were associated with moderate effect sizes in areas such as behavioral problems, medical problems, and mental health difficulties (Nimer & Lundahl, 2007). A meta-analysis of the effects of animal-assisted interventions on depression identified effects of medium magnitude (Souter & Miller, 2007). A literature review concludes that AAI may ameliorate the behavioral and psychological symptoms of dementia, but that the duration of the beneficial effects has not been explored (Filand & Llewellyn-Jones, 2006).

No comprehensive studies on attitudes toward the use of AAI among therapists have been conducted, but less comprehensive studies have shown that health personnel without clinical training were more positive toward AAI than experienced clinicians and that female therapists were more positive than their male colleagues (Herzog, 2007; Moody et al., 2002; Mason & Hagan, 1999). In a Norwegian study of 60 therapists (mainly psychiatric nurses, but also psychiatrists) who were clinically responsible for psychiatric patients and who joined a research project on AAI with farm animals, no differences across professions were identified with regard to the motivation for more use of AAI (Berget, Ekeberg, & Braastad, 2008). An exploratory descriptive study of 10 behavioral health staff involved in pet-assisted therapy programs with dogs reported that the use of the animals fostered the staff's creativity by giving

them an alternative treatment strategy for the patients (Rossetti, DeFabiis, & Belpedio, 2008).

In the present study, we measured experience with, and knowledge of, AAI in a larger group of therapists, including those who are not practicing AAI. Furthermore, therapists were asked to what extent they are motivated to learn more about AAI, and whether they think that AAI should be used more in psychiatric treatment. The study also examined whether gender, years of clinical experience, age, profession, and former experience with animals may affect the reported motivations with regard to AAI among therapists.

Methods

Participants

A postal questionnaire was sent to 400 general practitioners (GPs), 400 psychiatrists, and 300 psychologists in Norway. The GPs and psychiatrists were recruited randomly from the master file of the Norwegian Medical Association, while the psychologists were randomly selected from the occupational register of Statistics Norway. The data collection was carried out in December 2008, with one reminder in January 2009. The survey was approved by the Norwegian Social Science Data Services (NSD). Among the 1100 distributed questionnaires, 475 were returned (of which 3 were incomplete) giving an overall response rate of 43.2%. The response rates were 36% (144/400) for the GPs, 42% (169/400) for the psychiatrists, and 53% (159/300) for the psychologists. The overall gender ratio (♀/♂) was 0.9 (226/246), the percentage of females being 37% for the GPs, 36% for the psychiatrists, and 70% for the psychologists. Clinical experience averaged 19 (sd = 11.57) years, with a small majority being 50 years or older (53%).

Materials

The questionnaire contained questions on gender, age, profession, years of clinical practice, and the respondents' own history of contact with animals (companion animals and/or farm animals). We also asked about knowledge of, and former therapeutic experiences with, AAI and the motivation for using this kind of intervention in one's own clinical practice. Finally, we asked about the respondents' beliefs in the therapeutic effects of AAI. Questions were asked separately for six general effects (enhanced attention toward other humans; decreased symptoms, e.g., anxiety and depression; improved communicative abilities; more confidence in social situations; enhanced coping ability in daily

life; and better physical condition), and each question was also asked separately regarding the effects of companion animals and farm animals. Questions were also asked about beliefs in effects related to improvement in seven different classes of mental health problems [mental and behavioral disorders due to psychoactive substance use; psychoses (schizophrenia, paranoid, and other nonorganic psychoses); mood disorders (bipolar disorders, depressive disorders, other affective disorders); neurotic and stress-related and psychosomatic disorders; eating disorders; disorders of adult personality and behavior; and mental disabilities with psychiatric disorders]. Responses were given on four-point Likert scales from 0 (negative) to 3 (most positive). We also generated a composite measure of belief in therapeutic effects of AAI by adding the responses from all the 19 different belief items (7 classes of mental health problems, 6 general effects from companion animals, and 6 general effects from farm animals), yielding a normally distributed interval variable ranging from 0 to 57.

Results

Table 1 shows how former experience, knowledge, and motivation were reported by the three professions, and in total. Most of the respondents had never used AAI for their patients. Yet a pronounced majority reported to have some or much knowledge about AAI, to be motivated to learn more about it and to use it in their own practice, and most of them thought that it should be used more in psychiatric treatment.

Table 2 presents the results from two multiple logistic regressions with the third and the fifth questions in Table 1 as response variables (To what degree are you motivated to learn more about the use of AAI in psychiatric treatment? Do you think AAI should be used more in psychiatric treatment?). Five of the seven predictor variables are dichotomous (gender, GPs vs. psychologists/psychiatrists, psychologists vs. GPs/psychiatrists, own history of contact with animals [yes/no], former therapeutic experience with AAI [yes/no]); and two are interval variables: the belief in therapeutic effects from AAI (composite 19-item variable) and years of clinical experience. Years of clinical experience is strongly correlated with age, and, in order to avoid a problem of multicollinearity, both were not simultaneously included in the regressions. Here, years of clinical experience was preferred because it is a continuous variable in contrast to age (younger than 50 years and 50 years or older). The replacement of years of clinical experience with age did not affect our results much. Possible interaction effects were not tested for in this study.

Table 1. Experiences with, Knowledge of, and Motivation for AAI for Patients with Psychiatric Diseases among Groups of Therapists (Percentage Distribution of Answers). The Number of Respondents (n) in Parentheses

		General Practitioners	Psychiatrists	Psychologists	Total
For how many patients have you applied AAI as part of a treatment program (former therapeutic experience)? (n = 475)	None	62.2	52.9	66.0	60.4
	One or more patients	37.8	47.1	34.0	39.6
To what degree do you have knowledge about AAI for people with psychiatric disorders? (n = 475)	No or little knowledge	21.3	40.0	32.7	31.6
	Some or much knowledge	78.7	60.0	67.3	68.4
To what degree are you motivated to learn more about the use of AAI in psychiatric treatment? (n = 470)	Not or less motivated	29.8	39.6	25.8	32.2
	To some degree or highly motivated	70.2	60.4	74.2	67.8
To what degree are you motivated to use AAI for patients with psychiatric disorders in your own practice? (n = 467)	Not or less motivated	33.8	35.2	36.3	35.1
	To some degree or highly motivated	66.2	64.8	63.7	64.9
Do you think AAI should be used more in psychiatric treatment? (n = 463)	No	17.3	10.8	5.8	11.2
	Yes	82.7	89.2	94.2	88.8

Table 2. Multivariate Analysis (Logistic Regression) of Variables Affecting the Probability of Being Motivated to Learn More about AAI (Model I, n = 450) and the Probability of Supporting More Use of AAI in Psychiatric Treatment (Model II, n = 445)

	Model I: Motivated to learn more about the use of AAI relatively to less motivated or not motivated at all ^{a,b} Odds-ratio (<i>P-value</i>) [95% CI]	Model II: AAI should be used more relatively to not using AAI more ^{a,c} Odds-ratio (<i>P-value</i>) [95% CI]
Gender (ref. men)	0.55 (0.03) [0.31-0.95]	0.60 (0.27) [0.24-1.49]
GP (ref. psychologist and psychiatrist)	1.41 (0.24) [0.78-2.53]	0.24 (0.00) [0.09-0.63]
Psychologist (ref. GP and psychiatrist)	1.21 (0.54) [0.64-2.27]	0.95 (0.93) [0.27-3.32]
Years of clinical experience	0.93 (0.00) [0.91-0.96]	0.95 (0.01) 0.91-0.99
Own history of contact with animals (pets and/or raised on farms with farm animals: ref. no pets/not raised on a farm with farm animals)	1.89 (0.08) [0.92-3.89]	0.63 (0.49) [0.16-2.37]
Former therapeutic experience with AAI (ref. no former experience with AAI)	2.35 (0.00) [1.41-3.93]	2.56 (0.04) [1.02-6.43]
The belief in therapeutic effects from AAI ^d	1.13 (0.00) [1.09-1.16]	1.24 (0.00) [1.17-1.31]
Hosmer-Lemeshow goodness of fit test	0.74	0.42

^a The reference (ref.) for each predictor variable is indicated. ^b The respondents were asked to report to what degree they were motivated to learn more about the use of AAI on a scale from 0 to 3 where 0 = not motivated, 1 = to a small extent, 2 = to some degree and 3 = highly motivated. The answers were recorded into a binary variable where answers 2 and 3 were given the value 1 while answers 0 and 1 were given the value 0. ^c This variable was given the value 1 for those answering "yes" to the question about whether AAI should be used more for psychiatric treatment. The same variable was given the value 0 if answering "no" to this question. ^d The respondents were asked, for 7 different mental problems and 12 different possible therapeutic effects from AAI, to assign a value on a scale ranging from 0 (no effect) to 3 (strong effects). The 19 responses were summarized, becoming a continuous variable (from 0 to 57) measuring to what degree the respondents believe in therapeutic effects from AAI.

The probability of being motivated to learn more about the use of AAI (model I) decreased with being a woman (OR = .55, 95% CI .31 to .95) and with years of clinical experience (OR = .93, 95% CI .91 to .96). The same probability increased with therapeutic experience with AAI (OR = 2.35, 95% CI 1.41 to 3.93) and a higher belief in therapeutic effects (OR = 1.13, 95% CI 1.09 to 1.16). Own history of contact with animals and differences between the three professions had no significant effect.

As concerns the question whether AAI should be used more in Norway (model II), there was no gender effect, but the probability for supporting more use of AAI was lower for GPs relative to psychologists/psychiatrists (OR = .24, 95% CI .09 to .63) and for years of clinical experience (OR = .95, 95% CI .91 to .99). The same probability increased with former therapeutic experiences with AAI (OR = 2.56, 95% CI 1.02 to 6.43) and the belief in therapeutic effects (OR = 1.24, 95% CI 1.17 to 1.31).

Discussion

The study showed that more than half (60.4%) of the respondents had no former experience with AAI as part of a treatment program, while 68.4% had some or much knowledge about AAI. Two-thirds showed some or high motivation for using AAI in psychiatric treatment; 67.8% were motivated to learn more; and 64.9% were motivated to use AAI with their own patients. Eighty-nine percent thought that AAI should be used more in psychiatric treatment in Norway.

This interest in AAI among doctors and psychologists prevails even if the majority of the nonrespondents were of a different opinion. For example, if the share of the nonrespondents who were motivated to some degree or highly motivated (the third and fourth question in Table 1) was only half (in percentage points) of that of the respondents, almost 50% of the full sample would still be motivated to some degree or highly motivated. Furthermore, if all nonrespondents thought that AAI should not be used more in psychiatric treatment (the fifth question in Table 1), almost 40% of the full sample would still be of the opinion that AAI should be used more.

Those who believed more strongly in the therapeutic effects of AAI and who had former therapeutic experience with AAI were more motivated to learn about the use of AAI and in favor of using AAI more. This is in accordance with a study of Salomonsen, Grimsgaard, & Fønnebo (2003), who found that among 105 hospitals in Norway, some form of alternative medicine (mostly acupuncture) was reported by 28 (27%). The most commonly

cited reason for offering alternative medicine was a hospital staff member's personal interest in the field. We also find that experienced therapists are less motivated to learn about the use of AAI and less in favor of using AAI more. Years of clinical experience is likely to capture a potential effect from age (confounding variable), which means that both clinical experience and age can make therapists less open to new modalities such as AAIs. GPs are less likely to be in favor of more use of AAI relative to psychiatrists and psychologists. This may be because they regard AAI as a specialized treatment, which might be conveyed through the psychiatric diagnoses used in the questionnaire, signaling relatively serious conditions that usually require hospitalization or treatment by a specialist. The fact that men were more motivated than women to learn more about AAI is not in accordance with other AAI studies, where female therapists were more positive than their male colleagues (Berget, et al., 2008; Herzog, 2007; Mason & Hagan, 1999). It should be noted that our study includes some variables not present in other AAI studies, e.g., belief in therapeutic effects from AAI.

The 19-item composite variable applied in this study is meant to capture the overall belief in the therapeutic effects of AAIs and better reflects the character of the questions that were used as dependent variables in our analysis. An alternative approach would be to use the 19 items (or some of them) as independent variables in our analysis. Such an approach, however, would reduce the degrees of freedom and would most likely introduce multicollinearity, since the items are highly correlated.

The moderate response rate calls for caution. There is probably an overrepresentation of respondents with a positive attitude who to a higher degree have former therapeutic experiences with AAI. Nevertheless, doctors and psychologists appear to have limited knowledge of, and experience with, such interventions, implying a clear potential for professional development.

Conclusions

This study undertakes an empirical investigation by means of a quantitative study of attitudes toward Animal-Assisted Interventions among GPs, psychiatrists, and psychologists. The study shows that former experience with AAI was limited, motivation for learning about and using AAI more was high, and a large majority of the therapists thought that AAI should be used more in psychiatric treatment. Thus, overall, our respondents can be perceived as being positive to AAI, but there is also clearly a demand for more information about such interventions. One way of doing this would be through postgraduate

education. The high proportion of therapists in favor of increased use of AAI in psychiatric treatment warrants further development of AAI services. However, as the evidence base for AAI is rather limited, further effect studies are also called for to get more precise information on how to match different AAIs with different patients, and how to measure the effects of such interventions.

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Note

1. Hereafter referred to as "animals."

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