Using Dolphins, To Treat Mild To Moderate Depression In The Framework Of The Biophilia Hypothesis

The main objective of the article conducted by Antonioli, Christian, & Reveley, Michael A, (2005) was to assess how successful animal facilitated therapy was using dolphins, to treat mild to moderate depression in the framework of the biophilia hypothesis (Antonioli, Christian, & Reveley, Michael A, 2005). In the research study that was conducted, participants were recruited through volunteering sampling method. All participants were outpatients, in which they were recruited through announcements on the radio, internet, newspapers, and hospitals. A total of 30 participants took part, with an age range between 18 and 65 (mean age of 40.2) All participants that were recruited were diagnosed with mild or moderate depression. The experimental design of the study that was conducted was an independent measure design this was because participants were randomly assigned to two groups of treatment in which 15 were assigned to the experimental group and 15 to the control group. (However, three participants withdrew their consent from the control group and two participants dropped out in the experimental group). In this research study the independent variable was the type of treatment (animal care and outdoor nature programme) and the dependent variable of this study was depression and anxiety scores. Patients were asked to discontinue taking any kind of antidepressant drugs or psychotherapy, 4 weeks prior to the experiment. A research assistant used a random number table to generate the group allocation. In the animal care programme (experimental group) participants were asked to play, swim and look after of the dolphins. Each participant was given an introductory session in which they explained about safety and dolphin behaviour. The dolphins would then perform following the trainers signal. During the first part of the trial participants were able to touch the dolphins. The second part of the trial was unstructured, participants were able to snorkel with the dolphins. On the other hand, in the control group participants were assigned to an outdoor nature programme which was similar to the animal care programme but excluding the use of dolphins. In the control group participants were able to swim and snorkel in the coral reef. Both groups had a similar amount of individualised human contact. Patients were also given an introductory session explaining safety, marine ecosystem and the barrier coral reef. Both programmes lasted for a period of 2 weeks, five times a week one hour per day. Behavioural and psychological measures were conducted at start and at the end of treatment by using a modified Hamilton rating scale for depression and Zung self-rating anxiety scale. The findings of the article suggested that animal facilitated therapy is an effective treatment for mild to moderate depression as shown by the randomised single blind controlled trial. The findings further suggested the depressive symptoms was more reduced in the treatment group than in the control group. (Hamilton rating scale for depression, P = 0.002; Beck depression inventory, P = 0.006).) As a result, this suggests that the animal care programme (experimental group) significantly improved the severity of the depressive symptoms more than the outdoor nature programme (control group). In conclusion the therapy was effective in improving symptoms of depression after two weeks of treatment.

The aim of the research article conducted by Kline et al (2009) was to investigate whether therapy dog's moderate anxiety levels in emergency department patients (Kline et al, 2019). In the research that was conducted participants were recruited through a volunteering sampling method. All participant in the research study were approached for participation with the approval

of an emergency physician stating that the participant was experiencing moderate to high level of anxiety (Physicians were unaware of the treatment assignment). A total of 80 patients meet the criteria and were able to participate. 81% of patients who were enrolled to the clinical trial were female. The experimental design of this study was an independent measure design as 40 patients were randomly allocated to each group (The therapy dogs or the control group). Participants were then approached by the researcher and explained the purpose of the study and screened for exclusion criteria. The research study required patients to be aged 18 and above, who were awake and alert able to walk, and were not intoxicated. Prior to the study medical records, demographics, and medications of all participants were reviewed. In this research study the independent variable was the type of treatment (the therapy dogs and the usual care) and the dependent variable of this study was anxiety, pain and depression. Patients were enrolled to each group, both groups were studied at the same location, with the same physician and nurse, with rooms consisted of only one patient. Patients appointed to the control group (usual care) were told at the start of the consent process that they were not able to see a dog. Patients assigned to the therapy dog group were exposed to a dog and handler for 15 minutes. Handlers were given a script to introduce themselves and the dog. Patients were allowed to touch or pet the dog. Using instructions given by the researcher, participants were then asked to self-assess their anxiety, depression and physical pain assessments on a FACES scale (0-10). The three measurements that were anxiety, depression and pain were attained at three different times, once prior to dog therapy or control, then 30 minutes after exposure to the dog or usual care and then finally before participants were discharged. Physicians were also inquired to rate patient’s anxiety, depression and pain on the same scale used by patients. While dog handlers were also told to report patients use of words, behaviour and patient’s mood, before during and even after being exposed to the dog. The clinical trial illustrated that compared to usual care, animal assisted therapy caused a 35% reduction in patient reporting anxiety, depression and pain after being exposed to the dog. While on the other hand, usual care patient’s anxiety, pain and depression remained constant throughout the stay. Handlers notes also implied that exposure to the therapy dogs converted patient affect from negative to positive and so it resulted in a positive emotional change.

In both of the research papers there were many similarities and differences. In the target paper a total 30 participants took part, whereas in the canine therapy 80 patients were able to participate, thus more participants took part in the canine therapy. A particular focus for both of the studies could be the sample size as it was not representative to the general population due to the small sample of participants in the study. Research studies that have a small sample size increases the margin of error which can alter the study’s findings therefore resulting in low validity. In both studies participants were recruited through volunteering which resulted in bias as a certain type of person with a particular interest will volunteer, therefore the sample will not be representing the target population as volunteers may share psychological traits which differ from those who did not volunteer. In the target paper, participants were given an introductory session in which explained about safety and dolphin behaviour whereas in the canine study patients were not given an introductory session instead they were approached by the researcher explaining the purpose of the study. In the canine study 81% of the participants that were enrolled were female whereas 90% of the participants in the dolphin therapy were female. As more female participated in the studies compared to male this resulted in gender bias. Studies have shown female patients generally tend to score higher on anxiety scales while also female scoring higher in depression compared to males. Another difference between the two studies were that in the canine study the three measurements that were anxiety, depression and pain were attained at three different times whereas in the dolphin study the two

measurements that were depression and anxiety were attained once. The findings in both research papers were very similar as both implied that anxiety and depression levels were decreased due to the animal therapy. In the canine therapy, the dogs caused a 35% decrease in patients reporting anxiety and depression. On the other hand, the findings in the Antonioli, Christian, & Reveley, Michael A (2005) study suggested the depressive symptoms was more reduced in the treatment group than in the control group. (Hamilton rating scale for depression, P = 0.002; Beck depression inventory, P = 0.006).

The main objective of the research article titled conducted by Ambrosi et al (2019) was to examine dog assisted therapy effectiveness on depression and anxiety in elderly (Ambrosi et al, 2019). In the research that was conducted, participants were recruited through a randomised sample of institutionalised patients aged 65 and older. Patients were randomly selected from the patient population and must have met the criteria, records were then examined by a clinical team to identify which patient met the criteria. In total 31 participants (with a mean age of 82.6) met the Mini?Mental State Examination threshold and GDS-15 threshold. 17 participants were randomly assigned to the treatment group and 14 participants were in the control group. As a result, the experimental design of the study that was conducted was an independent measure design. Treatment group involved session involved one patient, one dog, one dog handler, and one observer, participants in the control group did not participate in these sessions nor any substitute activity. Therapy sessions took place once a week for 10 weeks and were exposed to the dog for 30 minutes. Participants in both groups continued with usual care and taking antidepressants. Participants in the treatment group were allowed to touch or play with the dog. Verbal interaction with the dog was defined as the patient speaking to the dog while non-verbal interaction with the dog was defined as stroking the dog or throwing a toy. At two-minute intervals, the observer recorded the interactions in the categories. The total number of interactions during each therapy session in each category was calculated. After each session participants completed a mini questionnaire about their mental state using the 5-point Likert scale. Participants also completed the GDS-15 Test again after completing the treatment. The findings suggested that animal therapy helped shift the depressive symptoms and instead positively affected their mood and enhanced social interaction. The scores on the GDS-15 test completed by the participants after being exposed to the dogs suggested a decrease of 33.5% indicating a significant decrease in depression. As a result, dog therapy shows promising results in reducing symptoms of depression in institutionalized elderly.

In both of the research papers conducted by Ambrosi et al (2019) and Antonioli, Christian, & Reveley, Michael A (2005) there were similarities and differences in how the study was conducted. In the Ambrosi et al study (2019) a total of 31 participants with a mean age of 82.6 were recruited to the study whereas in the Dolphin study a total of 30 participants took part, with a mean age of 40.2. In the dolphin study the age of participants was also another concern within the study as the mean age of participants were too low. This effected the results as acknowledged by Talukder et al (2014) that depression mostly occurred between the age of 19-29. Therefore, having a low mean age could alter the results as it does not represent all age groups. In the Antonioli et al (2005) study participants were required to discontinue the use of antidepressants four weeks before entering the study however in the dog therapy study participants continued using antidepressants. As participants were using antidepressant drugs this may have distorted the results as antidepressants may have helped patients with anxiety therefore a decrease in anxiety. In the Ambrosi et al (2019) study therapy sessions took place once a week for 10 weeks and were exposed to the dog for 30 minutes whereas in the dolphin study lasted for a period of 2 weeks, five times a week one hour per day. As Ambrosi et al

(2019) study took place for a longer period more data was collected and so the research was more reliable. In the Antonioli et al (2005) study the mean difference in change scores for animal care programme was 11.46 whereas for the control group mean change scores was 7.17 therefore depressive symptoms were improved in the treatment group. Similarly, in the Ambrosi et al (2019) study the scores on the GDS-15 test completed by the participants after being exposed to the dogs suggested a decrease of 33.5% indicating a significant decrease in depression. As a result, this further supports the findings of dolphin study.

Reference:

1. Ambrosi, Caterina, Zaiontz, Charles, Peragine, Giuseppe, Sarchi, Simona, & Bona, Francesca. (2019). Randomized controlled study on the effectiveness of animal-assisted therapy on depression, anxiety, and illness perception in institutionalized elderly. Psychogeriatrics,19(1), 55-64.
2. Antonioli, Christian, & Reveley, Michael A. (2005). Randomised controlled trial of animal facilitated therapy with dolphins in the treatment of depression. BMJ, 331(7527), 1231-1234.
3. Kline, Jeffrey A, Fisher, Michelle A, Pettit, Katherine L, Linville, Courtney T, & Beck, Alan M. (2019). Controlled clinical trial of canine therapy versus usual care to reduce patient anxiety in the emergency department. PloS One, 14(1), E0209232.
4. Talukder, U. S., Uddin, M. J., Khan, N. M., Billah, M. M., Chowdhury, T. A., Alam, M. F., & Alam, M. S. (2014). Major depressive disorder in different age groups and quality of life. Bangladesh Journal of Psychiatry, 28(2), 58-61.