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Manuscript Title:
Changes in oxytocin and serotonin values in dialysis patients, after Animal Assisted Activities (AAA) with a dog. A preliminary study.

General Remarks:
• This study is an interesting contribution to the literature on the effectiveness of AAA. The authors add to this literature by describing a study of the effectiveness of AAA among a novel sample of individuals—specifically, individuals experiencing end-stage renal failure and undergoing dialysis.
• The major weakness of this study is that the authors did not include a treatment-as-usual comparison group. Thus, we do not know how serotonin and oxytocin levels might have changed over time among dialysis patients who did not participate in AAA.

Simple Summary:
• Page 1, lines 23-24: What is “game size”? 

1. Introduction
• There is a fair amount of research examining the benefits of AAA among individuals who experience diverse problems (e.g., alcohol/drug addiction, depression, impaired circulatory function, neurological disorders, and pain). The authors should provide a brief review (perhaps one paragraph?) of this literature. I have listed some helpful references below.


2.22 AAA: animal-assisted interventions

- Why did the authors schedule two meetings (after the AAA had taken place) without the dog? What was the purpose of these meetings?

3.3 Statistical analyses

- Did the authors hypothesize that serotonin and oxytocin levels would increase from T0 to T1 within each meeting? If so, this hypothesis is not explicitly stated.
- Did the authors have a hypothesis about how the levels of serotonin and oxytocin would change over the entire course of the study (i.e., all 14 weeks)? If so, this hypothesis is not explicitly stated.
- The authors used Wilcoxon paired tests to examine differences in serotonin and oxytocin concentrations from pre-AAA visit to post-AAA visit. Was this choice driven by the fact that the data were not normally distributed?

4. Discussion

- In the first sentence of this section, the authors report that “results showed an increasing trend of both inter-intervention serotonin and oxytocin without any clear difference between the age of patients and between men and women.” They do not, however, report such analyses in the Statistical Analyses section. If the authors wish to note this finding in the Discussion section, they should report the results in the Statistical Analysis section—or at least reference the findings in a footnote.
- The authors state, “The results display an interesting trend that suggests a prolonged effect, also evident on the behaviour of the patients.” What patient behaviors did the authors observe?
- Do the authors have any explanation (or theory) about why the serotonin and oxytocin levels showed a biphasic pattern? In the Discussion, they note that “As already mentioned in another work the fifth meeting represents the critical point of the path. One could hypothesize that it represents the point from which the therapeutic alliance is triggered, as also indicated in many reports.” This finding might explain the increase in
serotonin and oxytocin beginning during the fifth week. What might explain the drop in serotonin and oxytocin during the first four weeks of the study?

5. Conclusions

- In this section, the authors state, “From these preliminary results we can hypothesize that the AAAs with the dog induce a release of serotonin and oxytocin…” I’m not sure that the results of this study support such a strong statement—given that (1) during the first four weeks of the study, serotonin and oxytocin levels dropped and (2) there were no significant changes from T0 to T1. In addition, this study does not include a treatment-as-usual comparison group. Thus, we do not know how serotonin and oxytocin levels might have changed over time among dialysis patients who did not participate in AAA.

Figure 1 and Figure 2

- In the Blood Sampling section, the pretest values of serotonin and oxytocin are referred to as T0; the posttest values are referred to as T1. Figures 1 and 2 refer to them as T1 and T2. The authors should revise either the Blood Sampling section or Figures 1 and 2 to make the labels consistent.

Figure 2

- What does the abbreviation “pz” stand for? Patient?