A Study Upon the Benefits of Therapeutic Horseback Riding

by

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The type of care provided for those classified as mentally disabled has changed substantially over the last couple of decades. Instead of releasing patients from a mental institution directly out into the world, a transitional step has been implemented. Community care is this transitional step now emphasized, and this involved the slow re-integration of the mentally disabled back into community life. Basic coping necessities are taught at these centers, and these involve budgeting, social skills, etc. Such skills are taught to try and help clients achieve a good quality of life. However, the factors which determine quality of life are still a bit uncertain for people with severe mental disabilities. Thus, considerable research is still needed.

The purpose of the present study is to ascertain whether there are any quality of life benefits related to therapeutic horseback riding. The rationale behind conducting such research is taken from the literature provided by the North American Riding for the Handicapped Association, Inc. (NARHA). This literature from the NARHA is based upon clients who are physically disabled. Hippotherapy (horse therapy) is said to have a great psychological value of nurturing self esteem and self control, as well as developing a concern for others (Scheidell, 1988). This goal comes from stable management as well as recreational and competitive riding. Scheidell also asserts that "it is a well known fact that being close
to and responsible for animals has great psycho-therapeutic and physiological value."

Furthermore, learning responsibility for a dependent being and learning how to exercise control over the horses may make the clients feel important as well as enhancing concern for other beings. Another possible benefit could be the bond that is formed between the rider and the horse. This may lead to communication and eventually, trusting relationships with other people (Donahue, 1987). As stated before, this evidence is taken from clients who are physically disabled. It is therefore of interest to examine if the same benefits will apply to psychiatric clients.

There are a small number of studies which have addressed the question of the effects of therapeutic horseback riding on the mentally disabled client. Much of this literature is not in English and consequently was not readily available. However, positive effects have been reported from this type of therapy on different psychiatric symptoms such as narcissism, depression, compulsion, and aggression (Scheidhacker, 1987; Gunter, 1984). It would be useful to determine if psychiatric clients reap any of these benefits and if in fact these benefits contribute to an enhanced quality of life.

Subjects

Subjects consisted of volunteers from both Muncie and New Castle CMHS. The Muncie CMHS group consisted of 13 volunteers (five male and eight female). The New Castle
CMHS group consisted eight volunteers (two male and six female). The attrition rate was rather high, with Muncie CMHS ending in four active participants (three female and one male), and New Castle CMHS ending in six active participants (five female and one male). The initial group was mentioned because a first assessment was obtained for these participants.

**Measures**

The Rosenberg 10-Item Self-Esteem Scale (Rosenberg, 1965) was used to measure self esteem, self concept and overall self perception. Second, to measure the overall emotional climate through the program, the PANAS (Positive and Negative Affect Schedule) was used (Watson et. al., 1988). This scale gave a separate measurement of both positive and negative affect. Third, the 90-Item Symptom Checklist (Derogatis, 1974) was used to assess the overall life satisfaction and to obtain a measure for depression, anxiety, and sensitivity. Finally, in order to measure concern for and trust in others, a slightly modified version of the Inventory of Social Supportive Behaviors (Barrera, 1981) was used. In addition to these dependent variables consisting of self esteem, positive affect, negative affect, depression, anxiety, sensitivity, social support and overall symptoms, the subject's gender and prior horseback riding experience was recorded.

**Procedure**

All measures were completed on both groups of
volunteers for an initial baseline measurement. The Muncie CMHS group was chosen arbitrarily to complete the first six weeks of horseback riding (the frequency of which was once a week). The New Castle group participated in a group hike, lasting six weeks (again the frequency being once a week). A second assessment of both groups was obtained at the end of the first intervention condition. The New Castle group then participated in therapeutic horseback riding for six weeks while the Muncie group acted as a control group by continuing only normal daily activities. A third measurement was obtained after the second six week period.

Results

A correlation coefficient was run across all variables for the beginning 21 subjects. A significant positive relationship was found between positive affect and self esteem ($r=.53$) as well as positive affect and social support ($r=.45$). A significant negative relationship was found between self esteem and negative affect ($r=-.76$), self esteem and depression ($r=-.83$), self esteem and anxiety ($r=-.79$), self esteem and sensitivity ($r=-.87$), and self esteem and overall symptoms ($r=-.86$).

A $2 \times 2$ Analysis of Variance was run between Muncie CMHS vs. New Castle CMHS, and participants who completed the study (i.e., did not drop out) vs. non-completers. The following dependent variables were measured in each cell: gender, prior horseback riding experience, self-esteem.
positive affect, negative affect, depression, anxiety, sensitivity, overall symptoms and social support. The only interaction that was found was between completers and non-completers. Completers showed a greater degree of positive emotions in the initial assessment than did the non-completers. The means for completers and non-completers for initial positive affect are 34.6 and 26.6, respectively ($F(1.17) = 5.1, p = .038$).

Finally, a 2 x 3 multi-variate analysis of variance was run for each of the following dependent variables: self esteem, positive affect, negative affect, depression, anxiety, sensitivity, overall symptoms, and social support. The between subjects measures was the site from which the participants came (Muncie vs. New Castle), and the within subjects measures were the intervention conditions (initial assessment, control activity, treatment activity). In order to make a single analysis meaningful, all data were entered together in the order of initial assessment, post-control assessment, and post-horseback riding assessment. The reason for this is because of the very small numbers in each group of active participants.

The results showed no effects for site or intervention for the following dependent variables: self esteem, depression, anxiety, sensitivity, overall symptoms, and social support. The results showed a significant interaction between site and intervention for negative affect ($F(2.16) = 3.86, p = .043$). The Muncie group showed a
reduction in negative affect throughout the study. The means for each group and the subject pool as a whole are shown on the following table.

<table>
<thead>
<tr>
<th>Group</th>
<th>Muncie</th>
<th>New Castle</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>21.25</td>
<td>17.33</td>
<td>18.9</td>
</tr>
<tr>
<td>Post-Control</td>
<td>13.25</td>
<td>18.83</td>
<td>16.6</td>
</tr>
<tr>
<td>Post-Horse</td>
<td>15.50</td>
<td>18.67</td>
<td>17.4</td>
</tr>
</tbody>
</table>

For positive affect, the results showed a marginally significant difference in site throughout all intervention conditions ($F(1.8)=4.23, p=.074$), with the Muncie group measuring slightly higher.

**Discussion**

The correlation coefficients demonstrated a fairly predictable set of relationships. It is not surprising that positive affect is higher at the same time self esteem and social support are higher for an individual. It is also not surprising that self esteem would be lower while negative affect, depression, anxiety, sensitivity and overall symptoms are higher (or vice versa). Therefore, the relationships found in the correlation coefficients do not really lend any great insight.

The completers differed from the non-completers in only one way in the actual results, and the fact that completers began the study with more positive emotions overall than the non-completers is also not surprising.
These two groups of people did not differ in any other measurement, therefore the majority of the analyses showed no effect between completers and non-completers. This gives a reasonable assumption of equivalence between the two groups. That is to say, it is safe to assume that there is no meaningful difference between those who completed the study and those who did not.

The effect the interventions had upon negative affect was also consistent with expectations: negative feelings tended to decrease. Thus, it seems that there are some benefits to the horseback riding activity. However, there are two problems with this result. Why was there no effect upon negative affect for the New Castle participants, and why was negative affect the only variable that showed a significant difference? Perhaps because there were so many dependent variables run, it is a difference due to chance. After all, the Muncie group's negative affect decreased after the horseback riding condition and again after the control condition, but the control condition was a normal routine of daily activities.

The obstacles of this research were many, and the main ones are depicted below. This study was handicapped by its small number of subjects. However, enough subjects participated that if there had been a strong effect, it would have shown in the dependent variables. Larger numbers of volunteers should be sought out if at all possible in future research. There were also possible
problems in not obtaining an assessment very quickly after the intervention conditions were completed. Some subjects were finally tracked down and given an assessment after two weeks of completing the horseback riding condition. Some would argue that these delays could prove to be a strength rather than a hindrance upon the results. This argument comes from the idea that the assessments show more of a lasting effect, not a brief "after-effect" of the intervention condition.

Finally, perhaps the most important thing to remember in conducting an intervention study for those in community care is that there are a multitude of influences upon the lives of these individuals. It is difficult to isolate the effects of a brief experience, and these brief experiences will more than likely not have any lasting effects upon the lives of these people. Although there were no strong effects upon the participants due to the possible benefits of therapeutic horseback riding, this study lends insight for future research in the area of community care.
REFERENCES


