

The effects of palming on eyesight

Tomasz Zurek

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Tutor: Caroline Owen

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Abstract

A study was done on the effects of palming on eyesight. It was hypothesized that overtime, palming would permanently improve eyesight. The experimenter was the only participant. Palming exercises were performed in attempt to improve eyesight. A special eyesight test was developed and regularly used to gauge any changes. The hypothesis was not supported with no consistent improvements in eyesight being observed. It was concluded that palming exercises did not appear to improve eyesight though it appeared to be possible to adapt to eye test charts improving ones recognition of characters on them.

## The effects of palming on eyesight

Tomasz Zurek

Since ancient times, many people have believed that poor eyesight can be cured by special eye exercises. Over time, many of these exercises have popped up and eventually receded. Despite many claims, a one-time reputable physician, William Horatio Bates, M. D., brought some eye exercises into the spotlight with his 'Bates Method'. In 1920, Dr. Bates published a book called, "The Cure of Imperfect Eyesight by Treatment Without Glasses". In this book, Dr. Bates explained his theories of how refractive errors in our eyes resulted not from a problem with the basic shape of the eyeball or lens, but by derangement and strain in the muscles on the outside of the eyeball. He claimed that perfect vision could only result from relaxation of these eye muscles. This theory has been totally refuted by science that has shown that the outside muscles don't have anything to do with focusing with one's eyes.

Despite these pivotal errors in Dr. Bates' theories, there have been many pieces of anecdotal evidence especially with patients of the doctor that claimed that their eyesight had improved with his exercises. From the many exercises the doctor offered, he claimed that "palming" was the most important. This exercise was "borrowed" from a yoga exercise that according to Dr. Bates, helped improve eyesight. It simply involved covering the closed eyes with one's palms blocking out all light and relaxing them, in attempt to see "perfect darkness". Palming was to be done everyday for over an hour and consistently over time for up to a year. Through this, the relaxation required for perfect eyesight was supposed to be achieved. In his book, Dr. Bates claimed that one of his patients almost completely cured his vision defects with a 20 hour palming exercise.

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There has never been any research done on the 'Bates Method'. The large flaws in the theory behind it coupled with its position as an 'alternative therapy' has left it out of any serious consideration as a therapy worth investigating.

The aim of this study was to examine the effects of the palming exercise. If any improvements did result it would be important to see if these were long term. Based on the anecdotal evidence it was hypothesized that overtime, palming would permanently improve eyesight.

## Method

### *Participants*

The experimenter, a 19-year-old male was the only participant in this study.

### *Materials*

For the palming exercises, a beanie and comfortable flooring was used. A special eyesight test was designed for this study. It consisted of a randomly generated chart containing descending font sizes from 5 to 2 was used. The characters were upper case and bold with the Times New Roman font. A font size of 5 was 7 mm high on screen. A computer monitor with a viewable size of 40 cm was used to display the chart.

### *Procedure*

With the eyesight tests, the participant would stand a fixed distance away from the computer screen. The distance between the eyes and the center of the computer screen was 2.68m. Beginning from the top row, the participant would read ten characters and write down what letters they saw on a piece of paper from each row. An example of this chart is included in Appendix A. These would then be checked

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and from the first two rows read which contained errors, a vision score was calculated using the formula in Figure 1.

Figure1. Formula used to calculate eyesight score for each test.

$$\frac{10 - (\text{Font size} + \% \text{ of incorrect readings in row}) + 10 - (\text{Font size} + \% \text{ of incorrect readings in row})}{2}$$

2

These eyesight tests were done after waking and before sleep on a daily basis. The two scores were averaged to produce a vision score for that day. If one or both of the tests were not done, an average of the last three valid scores would be used to fill in the missing value. In such cases the vision score for that day was marked as invalid.

The palming exercises were altered in this study. Instead of using one's hands, the participant would lie down in a dark room on a comfortable surface. A beanie would be worn over the eyes to eliminate any light entering the eyes. The participant would close their eyes and relax. During this time, the participant would listen to music or audio books to relieve boredom and prevent him from falling asleep. This exercise would be done for as long as the participant wished. The length of these exercises was recorded.

The study lasted for 79 days. An example of the recordings log can be found in Appendix B.

## Results

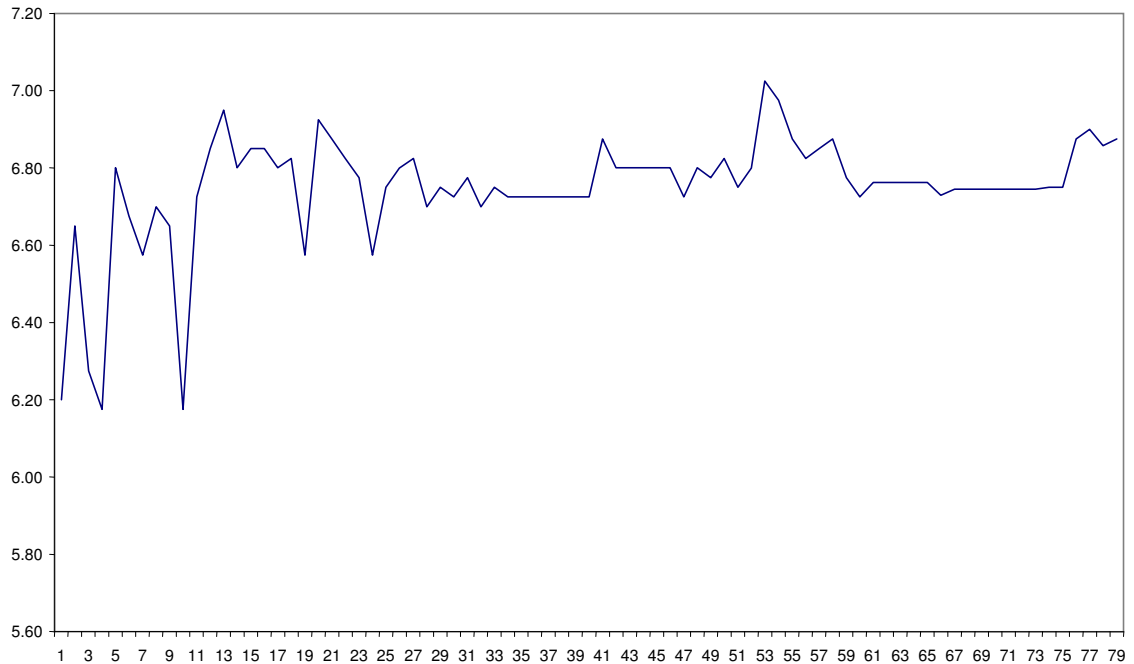
Palming exercises were done 54.4% of the time and when done, lasted an average of 58 minutes. Only 36.7% of the vision scores contained no invalid scores.

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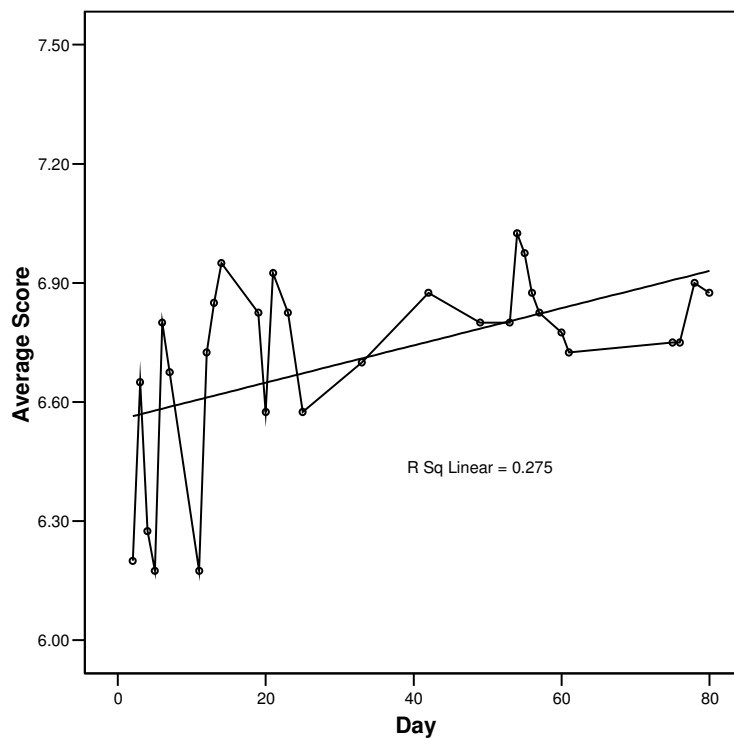
The plot of vision scores with included invalid scores appears in Figure 2. This graph appears to have a positive trend though it looks more logarithmic than linear with a sharp initial rise and a leveling off over time.

Figure 2. Vision score over time with invalid scores included.



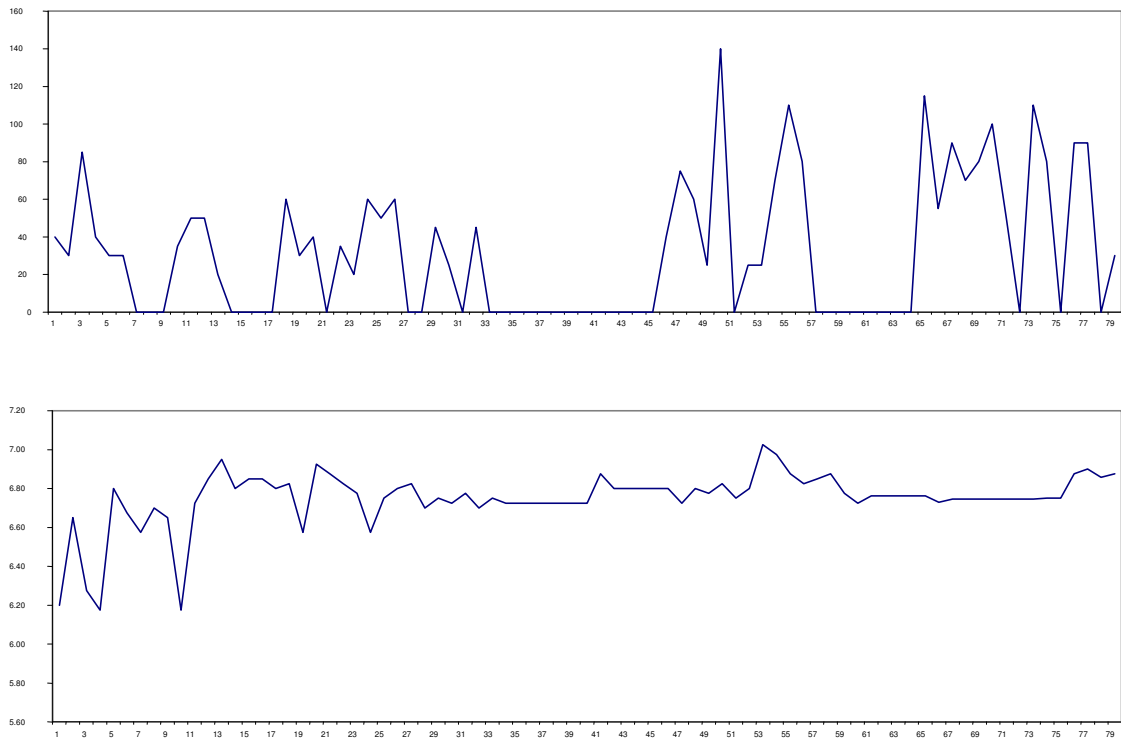
When invalid scores were not included, the graph of vision scores loses its apparent consistency. However, as Figure 3 shows, a positive trend still exists and a line of best fit is able to explain 27.5% of the variation in vision scores though the sharp initial rise and leveling off over time can still be seen. As in previous the graph, there does appear to be a series of peaks every now and then but they fail to remain consistent.

Figure 3. Vision score over time with line of best fit and invalid scores excluded.



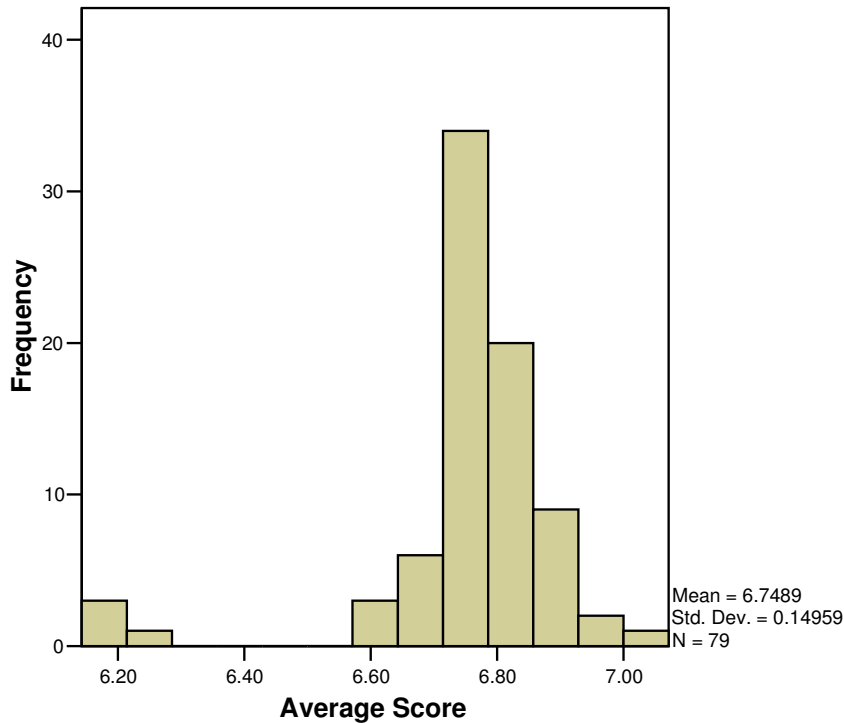
Further analysis with a side-by-side comparison of palming session length and vision score was made to examine any potential relationship between palming session length and improvements in eyesight. Figure 4 shows this comparison.

Figure 4. Comparison of palming session length and vision score over time.



A look at the distribution of vision scores was done to help determine if chance was a high factor in the vision scores obtained throughout the study. The mean vision score was 6.75 with a standard deviation of 0.15. Figure 5 shows the distribution of the vision scores. A more detailed analysis of the vision score distribution appears in Appendix C.

Figure 5. Vision score distribution



Lastly, no unexpected relationships between variables were found.

### Discussion

Contrary to expectations, palming did not appear to have any significant effect on vision over time. There was no clear or consistent improvement in eyesight with the palming exercises over time. Due to the lack of consistency in the results, there was also no evidence to suggest any long-term improvements.

The findings do not lend any support for the palming exercises that Dr. Bates claimed helped improve eyesight. Graphs of vision score over time had little

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consistency. A few sudden peaks appeared every now and then but the scores would always return to a lower value. The sharp initial rise in scores was more likely attributed to an adaptation to reading smaller and / or blurred letters on the chart. Such an adaptation would also explain why the scores leveled off and stayed around the same level throughout much of the recordings. Apart from the possible adaptation, it also appeared that much of the variation in the vision scores was due to chance. A comparison of palming session lengths and vision scores over time showed no apparent relationship between longer exercises and improvement in eyesight. A distribution of the vision scores was somewhat normal. If there was some consistent increase in vision score we would expect a more variable set of results with a low peak. The distribution chart however, showed a high peak and apart from a few outliers, there was little variation. This suggested that much of the rare cases of high vision scores were better explained through chance rather than actual improvement.

The study had a couple of issues that could have influenced the results. Palming, according to Dr. Bates, was meant to be done over a long period of time, up to a year in order to get results. Each palming session should last over one hour. In this study, palming was only done in 54% of the 79 days that the study was run. When it was done, the average length was 58 minutes which might have been sufficient if not for the inconsistency in the exercises. Regarding the sharp initial rise in vision scores, this could have been more conclusively explained if a baseline or control week was run where no palming exercises would be done. Another issue was the classifications of valid and invalid vision scores. It would have been useful to make a distinction between vision scores generated from one test and one average and two averages. An additional useful consideration would have been to record the amount of time spent in front of the television and computer each day to see if those activities were affecting the results. Finally, the fact that the experimenter was the participant, could have introduced some experimenter bias into the results.

According to the findings, it would not be wise to encourage anyone to do palming exercises to improve eyesight. This would most likely result in a waste of time for the person which would not be the case with scientifically proven methods such as corrective laser surgery. It is possible however, that one can adapt to reading charts and be able to recognize small and / or blurred letters better. This could be a potential problem in such cases as driver's license exams. An applicant who for example, may really have marginally insufficiently powerful eyesight could still pass the eyesight test due to recent practice. The consequences of such a problem however, would not likely be very significant.

In conclusion, palming did not appear to have any significant effect on vision over time. There appeared to be evidence that one could adapt to reading eyesight test charts and this most likely was the reason for a sharp initial rise in vision scores. Other fluctuations in the vision scores were also likely to be a result of chance. Due to the potential benefits of palming working, a further study is recommended to address the methodological issues. However, palming is likely to be just another 'alternative' therapy that has failed to survive the scientific method.

## References

Bates W.H. (1920). *The Cure of Imperfect Sight by Treatment Without Glasses*.

Retrieved May 19, 2004 from

<http://www.iblindness.org/books/bates/>

Tan H. B. *Bates Method*. Retrieved May 19, 2004 from

<http://www.visionimprovementsite.com/bates.html>

Wooding K. (1997). *Palming*. Retrieved May 19, 2004 from

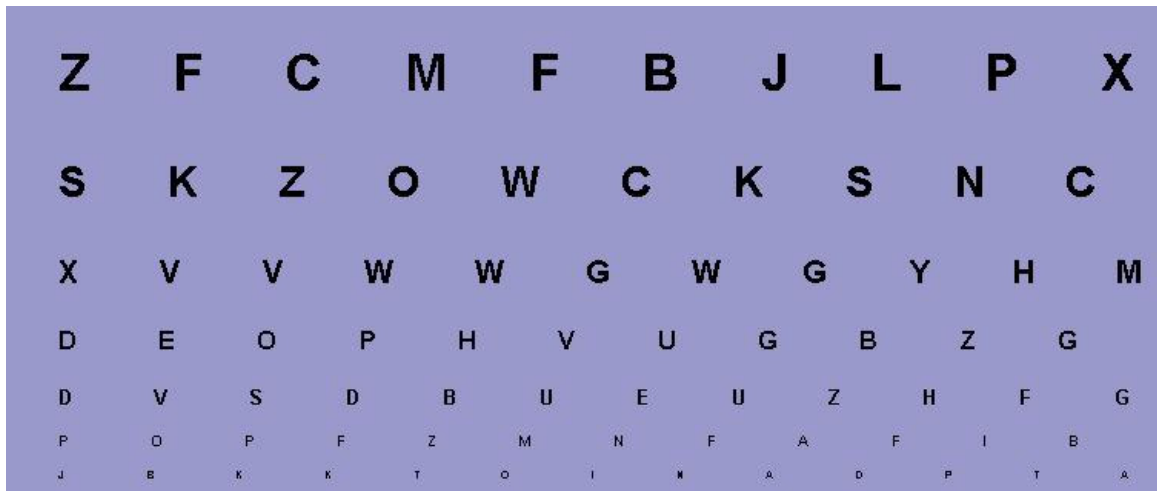
<http://www.seeing.org/intro/techniqs/palming.htm>

Worrall R. S., Nevyas J. & Barrett S. (2002). *Eye-Related Quackery*. Retrieved May 19, 2004 from

<http://www.quackwatch.org/01QuackeryRelatedTopics/eyequack.html>

Appendix

A. Example of chart used to test eyesight.



B. Sample of ten days of recordings log.

Date	Palming Session Time	Palming Session Length (Minutes)	A Time	A Chart Score	B Time	B Chart Score	Vision Score	Valid	Notes
05/03/2004			11:00:00	5.50	22:00:00	5.80	5.65	1	
06/03/2004	21:00:00	40	17:15:00	6.60	22:00:00	5.80	6.20	1	
07/03/2004	22:30:00	30	13:40:00	6.60	23:45:00	6.70	6.65	1	
08/03/2004	22:00:00	85	15:00:00	6.30	23:40:00	6.25	6.28	1	
09/03/2004	22:00:00	40	11:30:00	6.30	23:00:00	6.05	6.18	1	Chlorine irritation in eyes
10/03/2004	22:30:00	30	20:00:00	6.90	23:15:00	6.70	6.80	1	
11/03/2004	23:00:00	30	11:15:00	6.75	23:45:00	6.60	6.68	1	
12/03/2004			11:50:00	6.75		6.45*	6.60*	0	
13/03/2004			16:15:00	6.95		6.45*	6.70*	0	
14/03/2004			16:00:00	6.85		6.45*	6.65*	0	

\* Score contains missing value replaced by average

C. Detailed statistics on distribution of vision scores.

		Statistic	Std. Error
Average Score	Mean	6.7489	.01683
	Median	6.7625	
	Std. Deviation	.14959	
	Minimum	6.18	
	Maximum	7.03	
	Range	.85	
	Skewness	-2.349	.271
	Kurtosis	7.252	.535