

In a single-case experimental design study at a Swedish nursing home for people with dementia the Wellness Nordic Relax® Chair was evaluated for eight weeks.

After four weeks, mean, median and relative change measures indicated a therapeutic change for aberrant motor behavior (restlessness and wandering), agitation, apathy, depression, irritability and sleep disturbances. The reduction of these symptoms covaried with an increase in the quality of life.

This study is conducted by School of Health, Care and Social Welfare, Mälardalen University in Sweden.

Wellness Nordic Relax® Chair for dementia symptoms

– a single-case study



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ESKILSTUNA VÄSTERÅS**

The results show strong trends



The results show strong tendencies that the Wellness Nordic Relax® Chair reduced agitation, irritability, aberrant motor behavior (restlessness and wandering), depression/sadness and sleep disturbances for some of the people with dementia after approx. four weeks of usage. The reduction of these symptoms covaried with an increase in the quality of life.

Six people (women) with dementia and behavioral and psychological symptoms of dementia (BPSD) and seven caregivers, divided in three units, participated in the study. The people with dementia used the Wellness Nordic Relax®

Chair five times per week on average, for a period of eight weeks. The purpose was to evaluate the effects, value and benefits in the care and nursing of people with dementia, regarding BPSD and quality of life, as well as the caregivers' experiences of using the Wellness Nordic Relax® Chair.

The results show strong tendencies that people with dementia, particularly those with motor restlessness, so-called wandering behavior, get reduced symptoms and increased quality of life when using the Wellness Nordic Relax® Chair. The results also indicate that the Wellness Nordic Relax® Chair is not always effective and suitable for everyone.

BPSD is measured with the help of the NPI-NH instrument (Neuropsychiatric Inventory assessment of residents in long term care) (Cummings, 1997) and the quality of life is measured with the help of the QUALID instrument (the quality of life in late stage dementia) (Falk, Persson & Wijk, 2007; Weiner et al., 2000).

People's BPSD symptoms and quality of life were measured three times per week for three weeks before they started using the Wellness Nordic Relax® Chair, to obtain reliable baseline

values. The measurements took place every other week during the intervention period and one last measurement was conducted two weeks after the intervention was completed (discontinued use of the Wellness Nordic Relax® Chair). Additionally, data regarding drug usage, experiences from the caregivers as well as logbooks, which the caregivers kept while using the Wellness Nordic Relax® Chair, were collected.

Total number of times using, and declining use of, rocking chair per person with dementia

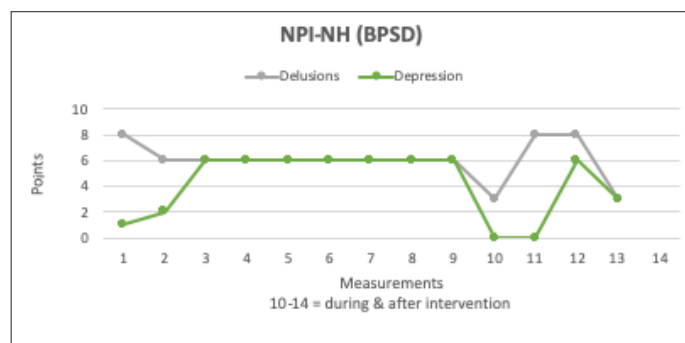
Persons with dementia	Total number of times using the rocking chair	Total number of times declining use of rocking chair
Person 1	24	13
Person 2	36	0
Person 3	41	8
Person 4	45	2
Person 5	43	0*
Person 6	35	0*

*Not included in this report

Example from person 1 who used the Wellness Nordic Relax® Chair 24 times in 8 weeks

The lower the score, the less frequent and severe the symptoms.

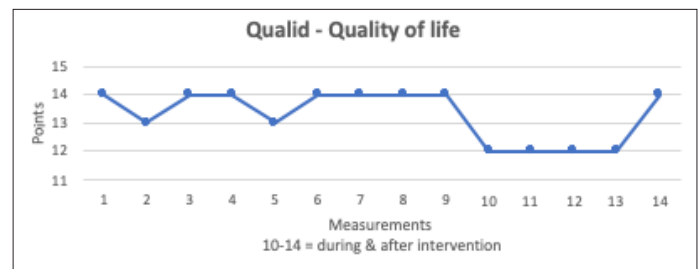
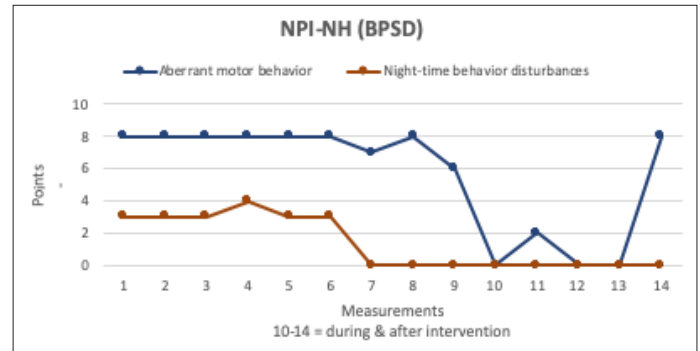
Mean, median and relative change measures indicated a therapeutic change for delusions and depression, and a contra-therapeutic change for hallucinations and quality of life from baseline to intervention (and postintervention for quality of life).



Example from person 2 who used the Wellness Nordic Relax® Chair 36 times in 8 weeks:

The lower the score, the less frequent and severe the symptoms.

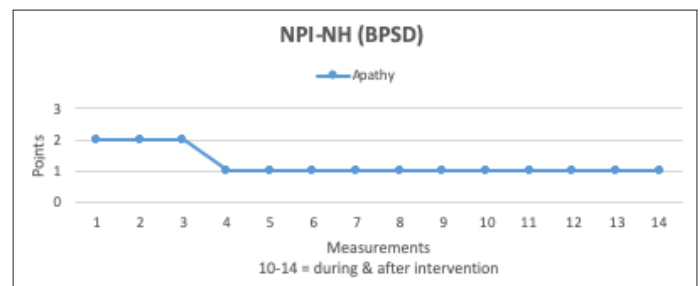
Mean, median and relative change measures indicated a therapeutic change for aberrant motor behavior, night-time behavior disturbances and quality of life, and a contra-therapeutic change for agitation, from baseline to postintervention.



Example from person 3 who used the Wellness Nordic Relax® Chair 41 times in 8 weeks:

The lower the score, the less frequent and severe the symptoms, as well as increased quality of life.

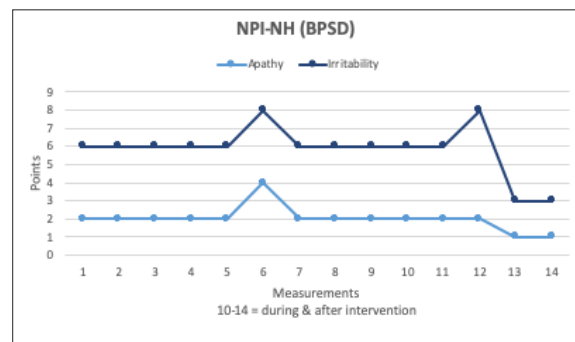
Mean, median and relative change measures indicated a therapeutic change for apathy, and a contra-therapeutic change for anxiety and quality of life, from baseline to postintervention.



Example from person 4 who used the Wellness Nordic Relax® Chair 45 times in 8 weeks:

The lower the score, the less frequent and severe the symptoms.

Mean, median and relative change measures indicated a therapeutic change for apathy and irritability, and a contra-therapeutic change for agitation, depression, anxiety, aberrant motor behavior and quality of life, from baseline to postintervention.



Results from interviews

Based on the interviews with the caregivers, and their logbooks, it was established that the Wellness Nordic Relax® Chair was not suitable for all people with dementia, and that the person's current state of mind determined whether the experience was positive or not. For others it was very relaxing and pleasant to lie in the rocking chair. The caregivers did also adapt the usage to when it was most appropriate for the different people.

- *She is restless after breakfast and is starting to become irritated. When she lies down in the rocking chair, she closes her eyes and enjoys it immediately. She falls asleep and wakes up on her own when the chair has finished rocking.*
- *... but ours was most anxious after lunch and we thought it was best for her at that time.*
- *She said that it was wonderful and that "I'm enjoying it, yes I do".*
- *We have a resident, she goes there, she goes straight there and wants it.*
- *If she is in a bad mood it doesn't work, but occasionally (even when she is in a bad mood) she goes to the chair and says, "This is my bed here" and we lay her down, "Oh, how nice", she would like to have a quilt on and afterwards she is in a better mood.*

Conducting the study was also easy for the caregivers and they saw the Wellness Nordic Relax® Chair as a medical device to reduce people's BPSD and increase their quality of life. The caregivers were positive towards continuing using the Wellness Nordic Relax® Chair in the future in their care and nursing of people with dementia.

- *... certainly, we should be able to continue using the Wellness Nordic Relax® Chair I think, try with some others and we are getting a new resident soon as well.*

Concluding reflections

As life of people with dementia has ups and downs, exactly like for all us others, it is a challenge to measure effects of interventions. It is difficult to say that it is just the intervention that causes the observed effects. In the present study we have attempted to control this by performing a thorough data collection prior to the intervention. i.e. before the Wellness Nordic Relax® Chair was put into use. However, a lot of things can happen that affect life, e.g. progression of dementia, employee turnover, disturbances in the surroundings etc. For this reason, we cannot say with certainty that the positive effects, which were measured, were solely dependent on the Wellness Nordic Relax® Chair, but we can state that the results show strong tendencies.

What reinforces the positive effects is that the results coincide between two different measuring instruments and the caregiver's experiences from the interview data. However, we could not observe any effects on drug usage, which could be explained with the units already having low usage and eight weeks is a short measurement period for people with dementia; effects on drug usage usually need to be monitored for a longer period of time.

We look forward to more research that will evaluate scientifically the effects of health and welfare technology products.

The results from this study are being prepared for publication in a scientific journal.

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