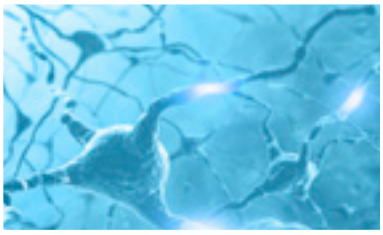

"With our research we have shown that the deeper parts of the brain are much more flexible than previously assumed - and that we can use this flexibility to improve the quality of life for a lot of people"

Michael Kjærsgaard

2024-2025 Documentation

including the independent validation report.

DANSK CENTER FOR NEUROCOACHING

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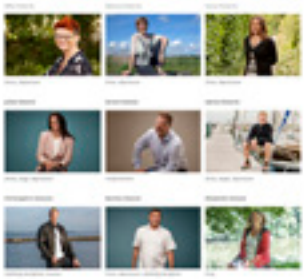

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DANSK CENTER FOR NEUROCOACHING

THE VALIDATION REPORT – BRIEF

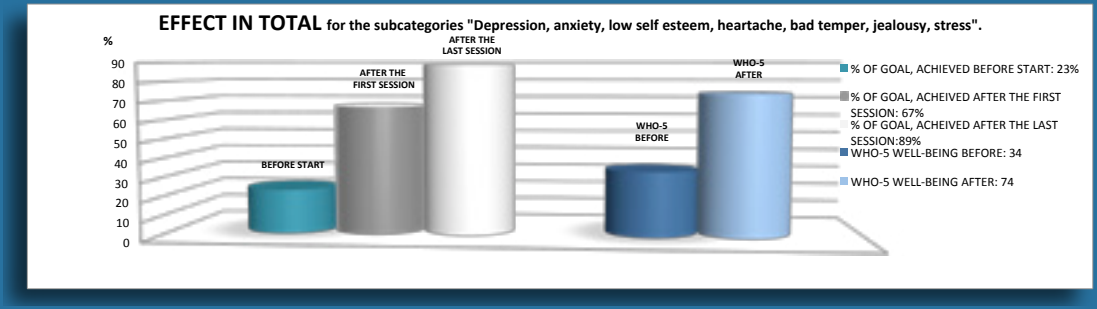
Tapfreelance

Tapfreelance, a company specializing in quality management and quality control, confirms in their report the results obtained with Neurocoaching (1) in Denmark in a number of mental areas in the period 2013-16.

Quote from the report's conclusion:

"Overall, the validation study demonstrated that one can have confidence in the data that The Danish Centre for Neurocoaching presents. There are minor deviations, but these affect only the observations to a very small degree. All surveyed clients have confirmed the data. "

The study shows that in the 296 cases, the average Neurocoaching customer has improved from 23% to 67% of his or her goal already after the first session. And after the last session, the average customer has achieved stunning 89% of his/her goal (2).



The study also shows that in the 296 cases, the average Neurocoaching client has gone from 34 to 74 on the International WHO5 well-being-scale. Ie from a level of depression to well above the Danish average (which is already the second highest in the world).

THE VALIDATION

The review and verification of the Danish Center for Neurocoachings statistic material was conducted by Svend Alsted Petersen and Dorte Rasmussen from the quality assurance institute Tapfreelance under the direction of the companys CEO, lic.techn. Torben Abildgaard Pedersen.

Torben Abildgaard Pedersen is recognized as one of Denmarks leading quality assurance capabilities with a past as quality manager at both the Danish Technological Institute and Danish Standard, as well as a minister-appointed representative of the Nordtest Board of Directors under the Nordic Council of Ministers.

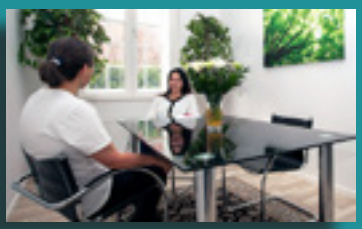
Further information and CV on the 3 above can be seen at Tapfreelance.dk.

The actual validation of the Danish Center for Neurocoachings statistical material consisted of a random selection of 50 out of 300 cases whose number material with customer acceptance was verified - also through 20 telephone interviews. The conclusion of the validation can be found here on the page and the full Tapfreelance validation is inserted at the end of the report.

Torben Abildgaard Pedersen

WHAT IS NEUROCOACHING

Neurocoaching is a Danish training program for improving the communication between the different parts of the brain and for improving the individuals communication to the outer world.



Applied Neuropsychology

Neurocoaching is a new, Danish developed, direction in applied neuropsychology. The starting point is therefore, how the nervous systems electrochemical processes create our thoughts, feelings and behavior. And the focus is on how we can change these electrochemical processes by changing our thoughts, feelings and behavior.

Neurocoaching is primarily based on the international development since 1990 in cell biology, evolutionary biology, bioneurology and human behavioral biology. (1). Therefore you could also call Neurocoaching a biological psychology.

Mental disorders are often poor communication

The newer cell biology has established that all multicellular organisms, ie also humans, are communities of cells. It is therefore essential for the understanding of the nervous system to recognize that the brain consists of a wide variety of structures with apparently different interests - but with broad, shared devotion towards the protection and growth of the whole organism. And that the different parts of the brain – having evolved in different periods of evolution - communicate with different “languages” (2) Therefore we do not see socalled, mental disorders such as anxiety, sadness, aggression and stress (and deriving from that, depression) as problems by themselves, but simply as poor communication between these different brain centers. A communication that can be trained in typically 4-5 sessions.

Neurocoaching is a training program for the brain

Virtually all learning in the brain is a chemical process in the synapses (3) that is reinforced through repetition. During the sessions we therefore construct individual tools together with our customers that are both understood by the conscious mind in the frontal lobes and the deeper structures (the mammalian brain and the reptilian brain). And these tools must then be trained on a daily basis - both mentally and in practice – so that the result is a continual learning, coordination and integration, involving all relevant parts of the brain.

We go for the root instead of the symptoms

Our scientific approach means that we do not get lost in individual symptoms such as anxiety disorders, phobias, stress, anger, etc. Instead, we focus on why the brain centers, for example the anxiety center amygdala, in general are hyperactive or send error messages.

At the heart of most problems seems to be the body’s stress response due to bad thinking habits and negative beliefs, especially negative identity beliefs and negative beliefs about the outside world. Both types are formed in early childhood. Also other therapeutic directions regard beliefs as vital, but because we work in the brains alpha wave area (4) we have, unlike ordinary therapy, the possibility to change the fundamental, unconscious beliefs - and thus create plasticity even in the brain’s deep structures.brain’s deep structures.

We have been trying to rethink psychology

Although our working methods are basically psychotherapeutic, we practice them following coaching principles. This has been found to move the focus of the nervous system from the problem to the solution. And moving people from a passive, stress-creating patient role to an active, resourceful role. Research has shown that makes a difference in the chemistry of the stress response – and that this reduces the risk of depression (5)

We also focus on sociological mechanisms and the customers' communication to the outer world, as they again are crucial for the internal chemical processes.

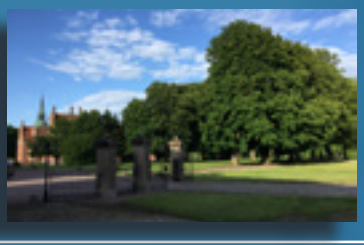
Our focus is on two areas: Increase awareness of resources and "overwrite" inappropriate belief patterns in the deeper brain structures, mainly obtained via social heritage (especially the early parent-child relationship) and traumas. Central to our methods is the plasticity of the brains organization of time and memory.

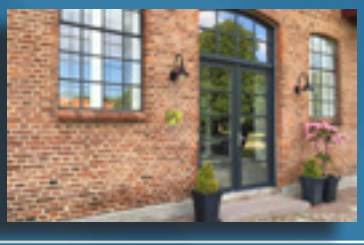
In order to establish communication between the various parts of the brain a great deal of the Neurocoaching process is performed in a quite easy, introverted state in which the brain operates with alpha-waves.

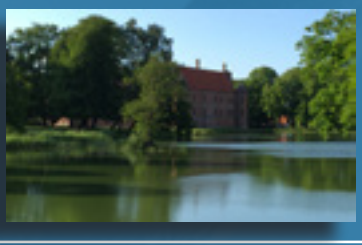
Our starting point: Our customers are healthy

In our experience, the passive patient role and the diagnosing system in itself can create limiting beliefs and expectations, called the nocebo effect, which can cause disease or illnesses by themselves.
We therefore as a starting point consider all clients as basically healthy. And experience has shown that this approach makes the therapeutic work dramatically easier because we in that way avoid the nocebo problem.

An important part of our training program is psychoeducation, so that both problems and solutions make sense to the customers, thus creating supportive beliefs. Our partner-oriented approach is also the reason why we call our customers "customers" and not "clients" or "patients".







NOTES

((1) As it is argued by – among others - cell biologist Bruce Lipton, professor Robert Sapolsky at Stanford University, neuroscientist Paul D. Maclean and the Danish psychologist Susan Hart with her neuroaffective development theory. This new research seems to confirm a number of basic assumptions put forward by the people behind the psychological thory NLP in the 1970s and 1980s. Among other things the idea of cooperation between the different parts of the brain.

(2) Paul D. Maclean's theory of the triude brain suggests, that the reptilian part of the brain is about 400 million years old, the mammalian brain (the limbic system) is about 200 million years old and that the human brain (cortex) has evolved in the last 5-7 million years. While the cortex 'communications is primarily linguistic (using words), the limbic system seems largely to communicate by using images and symbols - and the reptilian brain by using physical sensations (for example: When you feel stress or anxiety, you also get a physical sensation in for example your chest or in your stomach). And these different "languages" provide the basis for misunderstandings between the different parts of the brain.

3) The Spanish doctor Santiago Ramón y Cajal in the early 1900s found out that our brain cells do not stick together, but that there exist small distances between them, the so-called synaptic gaps, where neurons communicate chemically with each other with the so-called neurotransmitters . Cajal was in 1906 awarded the Nobel Prize for his work.

(4) The frequency of brain waves is a rough measure of neuronal activity in the central nervous system.

(5) In a passive approach to stressors there is released more cortisol, which is the main cause of the cell death in the hippocampus, which characterizes depression. In contrast, with an active approach to stressors , more adrenaline and noradrenaline is released, which sharpens concentration and improves preparedness

TO WHAT EXTENT DO OUR CUSTOMERS REACH THEIR GOALS?

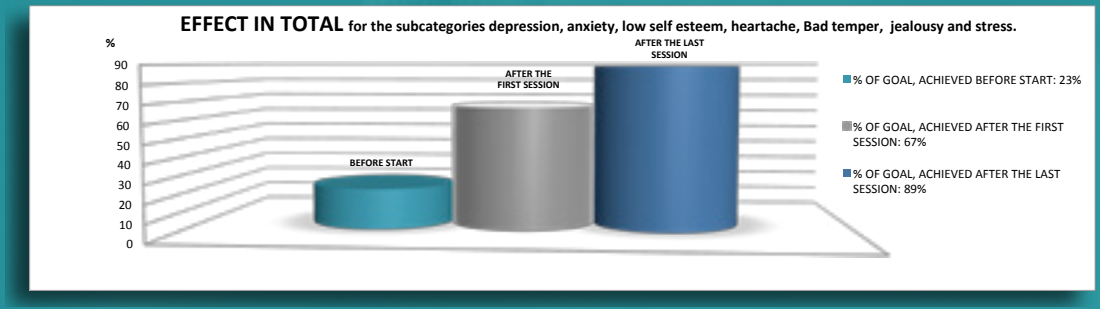
The most important thing for any customer seeking help is of course to reach his og her goal. But mental processes in our opinion can quickly become a little “fluffy” to validate. Therefore it has been a natural choice for us to measure our clients’ progress. Then everybody can see, what he og she has been spent his og her money on.

For all 7 examined issues (see below), the average Neurocoaching customer has progressed from 23% to 67% of his or her goal already in the first session.
After the last session, the average customer has reached 89% of his or her goal.

In a Neurocoaching process we always use “heavy” goals at the identity level (for example: ”Belief in yourself”). That ensures that the process will have the widest possible impact on the client’s life.

The average number of hours invoiced in the investigated cases have been 12.5 hours. These 12,5 hours have been spread out on in average 3,9 sessions (plus a smaller pre-session – however also contained in the 12.5 hours).

TO WHAT EXTENT DO OUR CUSTOMERS REACH THEIR GOALS WITH NEUROCOACHING			
	% goal at start	% goal after the first session	% goal after last sessionon
ALL CUSTOMERS	23	67	89
Low self esteem	22	66	89
Heartache	19	65	91
Anxiety	25	68	89
Bad temper/ aggression	25	68	87
Jealousy	23	72	89
Depression	21	64	89
Stress	21	68	88



WHAT HAPPENS WITH THE CUSTOMERS' GENERAL WELL-BEING?

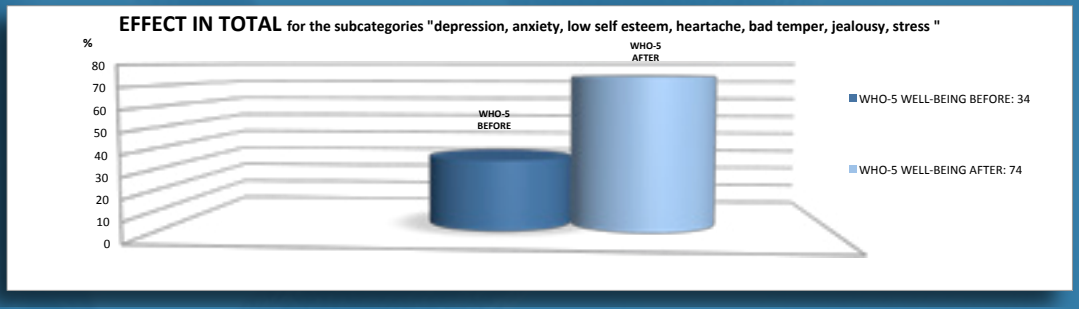
Of course it is important for any customer to reach his or her goal. But does this also affect the customers' general well-being? We have measured this with the so called WHO5 scale.

The WHO5 scale is an international measure of well-being developed by the World Health Organization, which is part of the United Nations. It goes from 0 to 100 - and the higher the WHO5-rating, the better the customers well-being. The Danish average is at 68. A score below 50 indicates, that the person has a problem, he or she should deal with. At a score below 35 there is a real risk that he or she is suffering from depression or prolonged stress.

You can see the entire Danish Board of Health's guide to WHO5 on page 17-19 of this report

For all issues, mentioned in this report, the average Neurocoaching customer progresses from 34 to a stunning 74 on the WHO5 scale. Ie from the level of depression to well above the Danish average. And just to put that in perspective: The Danes are already in most surveys listed as the second most happy people on the entire planet!

WHAT HAPPENS WITH THE CUSTOMERS GENERAL WELL-BEING WITH NEUROCOACHING		
	WHO5 before	WHO5 after
ALL CUSTOMERS	34	74
Low self esteem	34	75
Heartache	26	78
Anxiety	39	72
Bad temper/ aggression	33	75
Jealousy	37	79
Depression	29	71
Stress	34	74



LONG TERM EFFECT

Neurocoaching is not a miracle pill, but a training of the brain, using concrete tools to ensure that the customers get and maintain control over those parts of the brain that produce their feelings. However, the downside of all training tools is that they only work when you use them. Being used repetitively they turn into new, automatic habits, but if you stop the training too early, you risk falling back into the old, bad habits.
To get an idea of the long term effect, we have from 2016 and onwards systematically measured the effect 3 months after the last session (the customers had to provide feedback 6 times in this period), and we also have dispersed long-term data from 2013-2016. The overall picture is that the customers, who keep using their tools often even progress further, while those customers, who stop using their new tools, risk a set back. The sooner they stop using their tools, the greater the risk of a set back.
One contributing factor to the long term effect is that in a system as complex as the brain – with up to 100 billion neurons – there will inevitably continuously be communication errors between the different parts of the brain, which must be corrected. And does the customer not intervene with his or her new tools, these communication errors can spread and form new negative beliefs and trauma, which in turn may develop into new stress, anxiety and depression.

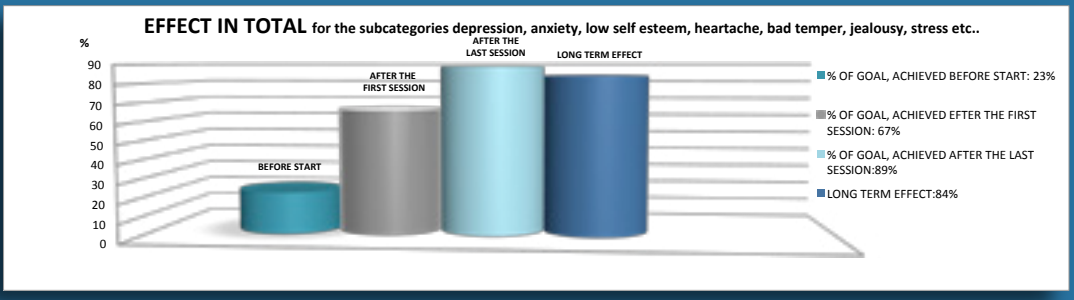
So like the overweight guy, who has lost 50 kilograms, can not just lay back and begin eating vigorously again, the Neurocoaching tools have to still be used on a continuous basis to secure a life long effect.
The reward, in turn, is a fantastic, continued control over your feelings and a continued high quality of life.

RESULTS – LONG TERM
As of the 1. of february 17 we have 43 measurements collected 3 months after the last session with the question: "How much of your goal (we mention the goal specified by the customer) have you here, 3 months after the last session, reached?"

The results show that the average customer 3 months after the last session is still on **83%** of his og her goal (compared to **89%** after the last session).

In addition, we have further 45 cases where data was collected later than 3 months after the last session - averaging 5.3 months after the last session. Here the level is **82%** (compared to **89%** after the last session).

The 3-month results are the statistically most accurate because everybody was asked.



RESULT - LONG TERM WITH NEUROCOACHING				
	% goal at start	% goal after the first session	% goal after last sessionon	Long term
ALL CUSTOMERS	23	67	89	83
Low self esteem	22	66	89	83
Heartache	19	65	91	84
Anxiety	25	68	89	83
Bad temper/ aggression	25	68	87	72
Jealousy	23	72	89	85
Depression	21	64	89	80
Stress	21	68	88	80

THE CUSTOMERS' PRIOR USE OF OTHER PSYCHOLOGICAL TREATMENTS

We, as a small, privately funded company , have not had the opportunity to make specially designed experiments with control groups (1).

However, we have since 1.1. 2013 asked all new customers on previous treatments. This gives a fair picture of what treatments have had little or no effect on those customers who subsequently have benefited from Neurocoaching.

If customers have had the effect of Neurocoaching, but no or little effect of other, previous treatments, it may indicate that Neurocoaching is more effective to these customers than these other treatments.

Covering the 296 cases in the validation study, data show the following:

176 persons - that is **63%** - have before starting with Neurocoaching been under the care of one or more psychologists.

27 persons - that is **10%** - have before starting with Neurocoaching been under the care of one or more psychiatrists.

43 persons - that is **16%** - have before starting with Neurocoaching been under the care of one or more psychotherapists.

43 persons - that is **16%** - have before starting with Neurocoaching been under the care of one or more hypnotherapists.

In total, 226 - ie **74%** of the 296 customers in the Neurocoaching study – have been treated with one or more of the above types of treatment prior to the Neurocoaching process.

NOTES

(1) However, we have a design lying ready for a single-blind trial, if we find a suitable, independent partner

DATA

The following data have not been part of the validation process at TAPFREELANCE:
1. Number of hours and sessions, since this would require a disproportionate amount of resources from the respondents having to verify these figures. And the greater demands on respondents, the lower the participation rate typically is.
2. The dropout rate. We judged it unethical to contact customers who had not completed the program and who might have seen this as a defeat.
3. What treatments customers had tried out before their start at The Danish Centre for Neurocoach. The reason for that is that we didn´t become aware of the importance of these data until after the validation process.

Approximately **62%** of the customers appear in several sub-categories, for example in both "self-esteem" and "anxiety".

HOW MANY CUSTOMERS COMPLETE THE TRAINING PROCESS?

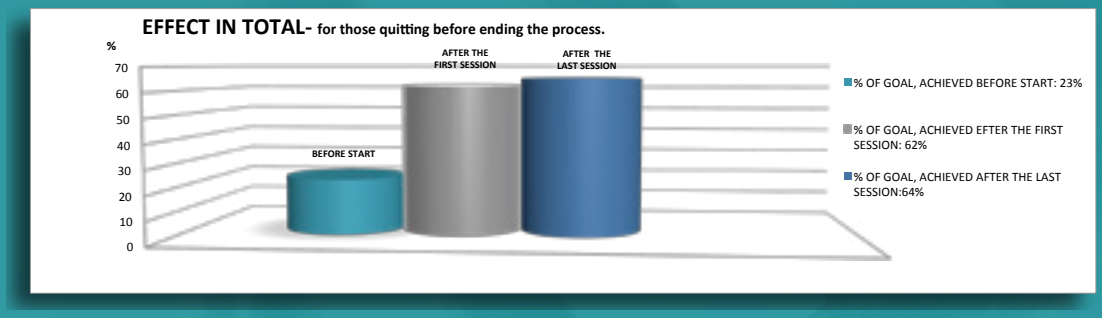
There are numerous mechanisms that keep us from changing bad habits. Among them so-called ”secondary gains” in the present or in the past, because a part of our nervous system is afraid of loosing something by agreeing to a change (for example protection, love or pity). And then there is the force of habit. The brain absorbs up to **25%** of the body’s total energy. Therefore the brain is evolutionarily programmed to hold on to habits as habits save energy. Finally, some customers are just satisfied with a little change and early in the process lose motivation to progress further. All of these conditions are no problem if the client is willing to take them into consideration. But this is unfortunately not always the case. And therefore we - like the rest of the industry and like the rest of all training systems – also experience people quitting the process before they have reached thir goal.

The pattern of quitting follows the experienced Austrian psychiatrist Helmuth Jelems categorization of his clients *

The report from TAPFREELANCE includes only data from those customers who have completed the Neurocoaching training program. In the same period as the 296 examined cases we had 95 customers who did not comply with the training, and where the process was therefore stopped. That means a dropout rate of **24%**

In the same period 22 customers had to stop the process due to unforeseen economic circumstances such as tax arrears and loss of job.

Among these 117 cases, the average, quitting customer still rose from **23% to 62%** of his or her goal at the first session. And after the last session, the average, quitting customer had still achieved **64%** of his or her goal. We have not been doing WHO-measurements on quitting customers.



NOTES

(1) The experienced Austrian psychiatrist Helmuth Jelem realized that some patients - despite the fact that they all said they wanted change - yet did nothing to achieve this change. Sometimes they even resisted the change. Based on his experience, he therefore divided his patients into 3 groups, which he called “The Visitors,” “The Complainants” and “The Customers”.

”The Visitors” he described as persons who were out walking, suddenly it was raining, and so they just popped by because they had forgotten their umbrella. They were all tired of their symptoms such as anxiety or depression, but they had no desire to create the profound change that was needed. So as soon as the worst rain was over - or when they found out that there was no quick-fix …..the visitors left again.

The second group Dr. Jemel called “The Complainants”. They were not interested in any change, but only interested in telling about how terribly they felt -and why they couldn’t do anything about it.

The third group Jelem labelled ”The Customers”. These people were genuinely interested in change - and they were willing to make the effort needed.

EFFECT IN NUMBERS - THE 7 SUBCATEGORIES

The 296 cases we divided into the 7 most common issues put forward by the customers:

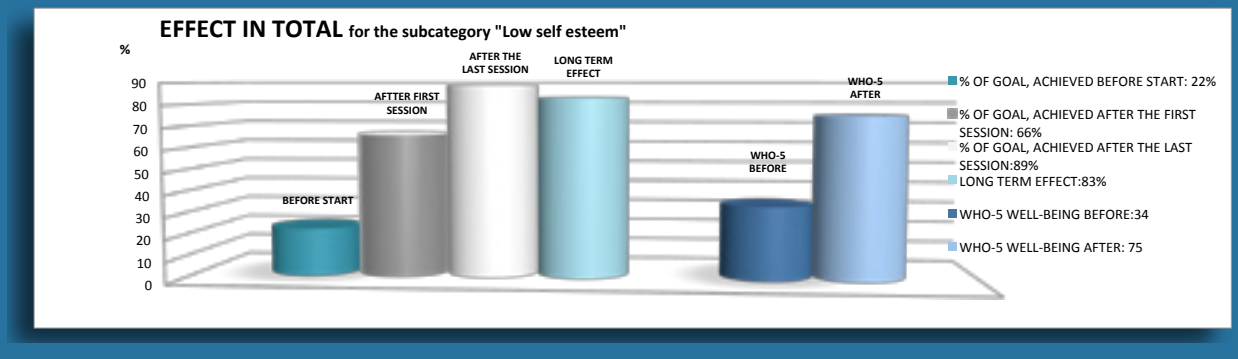
1. Low self esteem
2. Heartache
3. Anxiety
4. Bad temper/aggression
5. Jealousy
6. Depression
7. Stress

Approximately **62%** of the customers appear in several subcategories at the same time, for example in both ”Low self-esteem” and ”Anxiety”. This is
the reason for the summation of the individual subcategories ending up to 497 and not the 296.

1. Low self esteem

For all cases where customers with poor self esteem have followed our program, the average customer in the first session has progressed from **22% to 66%** of his or her goal (214 cases). And she/he has during on average 4 sessions with a total number of 13.5 hours progressed from **22% to 89%** of his or her goal.
After 3 months, the average customer is still hitting **83%** of his og her goal.

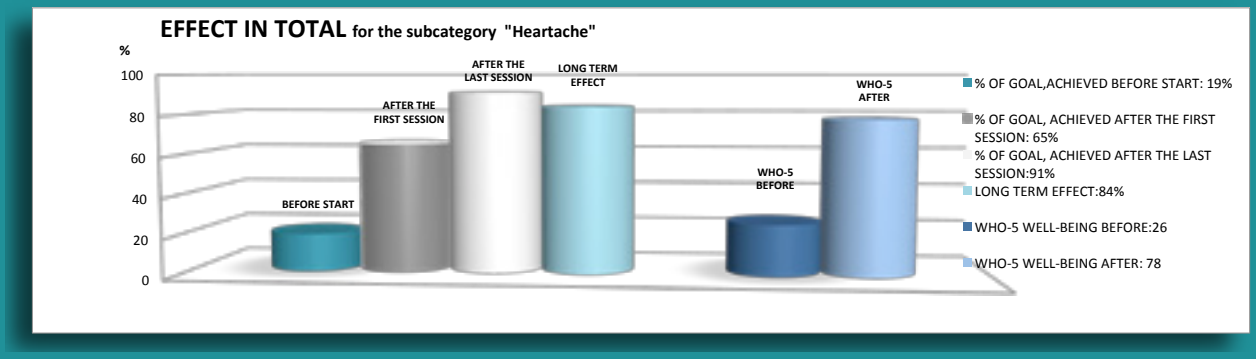
During the process the average customer with low self esteem has progressed from **34-75** on the international well-being scale, the WHO-5. The WHO5 goes from 0 to 100, where the depression limit is **35** and the Danish average is **68**.
See the description of the Danish Department of Health on page 17-19



2. Heartache

For all cases where the customer has followed our program, the average customer in the first session on average moved from **19% to 65%** of its target (46 cases). And she / he has on average 4.3 sessions with a total number of hours to 12.8 hours moved from **19% to 91%** of its target.
After 3 months, the average customer still been **84%** in Objective

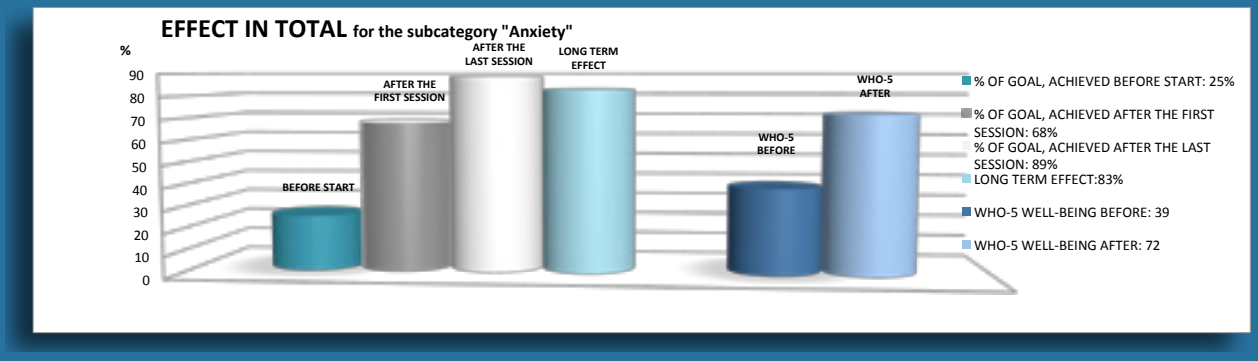
At the same time he / she has moved **26-78** well-being on the international scale, the WHO-5, going from 0 to 100, and wherein the depression limit is 35 and the Danish averaging 68th
See Health's description of the WHO-5 on page 17-19



3. Anxiety

For all cases where clients with anxiety have followed our program, the average customer in the first session on average moved from **25% to 68%** of its target (97 cases). And she / he has on average 4.5 sessions with a total number of hours to 14.3 hours moved from **25% to 89%** of its target.
After 3 months, the average customer still been **83%** in Objective

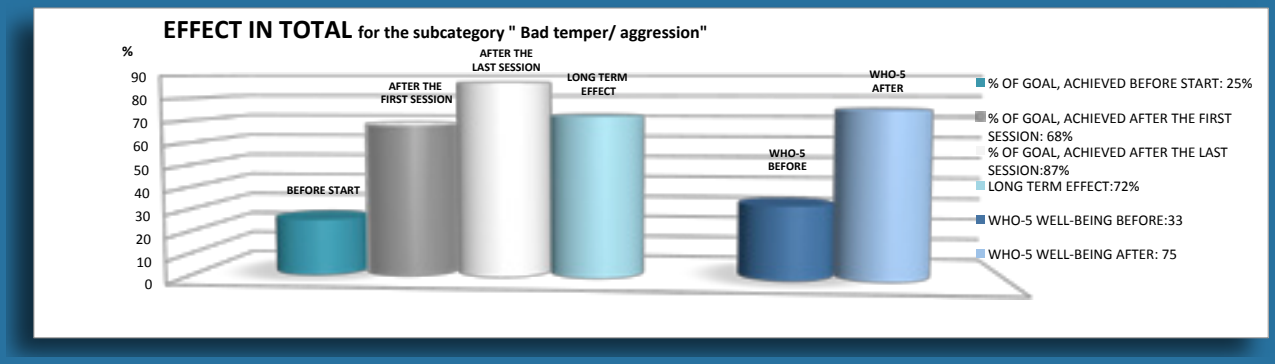
At the same time he / she has moved **39-72** well-being on the international scale, the WHO-5, going from 0 to 100, and wherein the depression limit is 35 and the Danish averaging 68th
See Health's description of the WHO-5 on page 17-19



4. Bad temper/ aggression

For all cases where customers temperament has followed our program, the average customer in the first session on average moved from **25% to 68%** of its target (22 cases). And she / he has on average 3.2 sessions with a total number of hours to 10.3 hours moved from **25% to 87%** of its target. After 3 months, the average customer still been **72%** in Objective

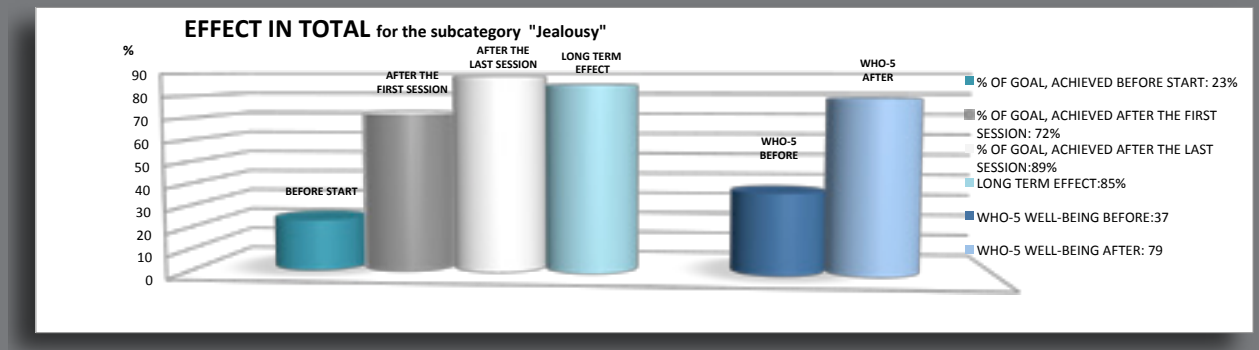
At the same time he / she moved **33-75** on the international well-being scale, WHO-5, which goes from 0 to 100, and the depression limit is 35 and the Danish average is 68th
See Health's description of the WHO-5 on page 17-19



5. Jealousy

For all cases where clients with jealousy have followed our program, the average customer in the first session on average moved from **23% to 72%** of its target (27 cases). And she / he has on average 3.0 sessions with a total number of hours to 11.6 hours moved from **23% to 89%** of its target. After 3 months, the average customer still been **85%** in Objective

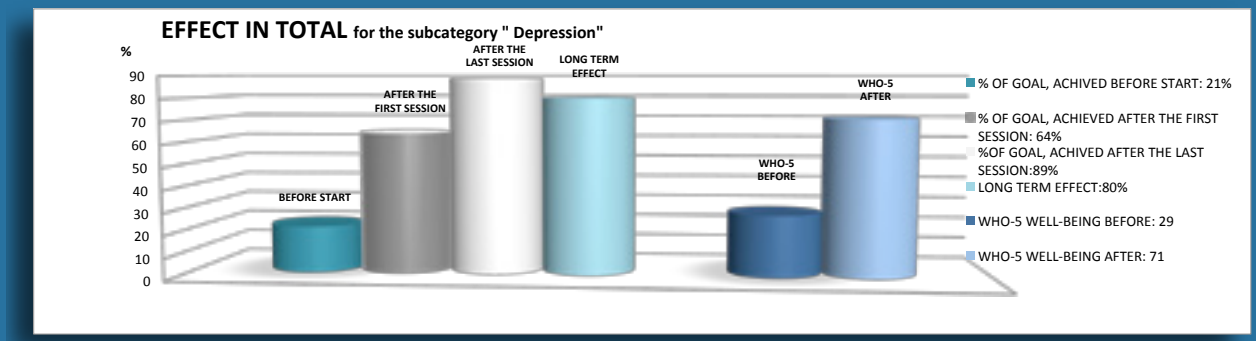
At the same time he / she moved **37-79** on the international well-being scale, WHO-5, which goes from 0 to 100, and the depression limit is 35 and the Danish average is 68th
See Health's description of the WHO-5 on page 17-20



6. Depression

For all cases where clients with depression have followed our program, the average customer in the first session on average moved from **21% to 64%** of its target (46 cases). And she / he has on average 3.3 sessions with a total number of hours to 10.2 hours moved from **21% to 89%** of its target.
After 3 months, the average customer still been **80%** in Objective

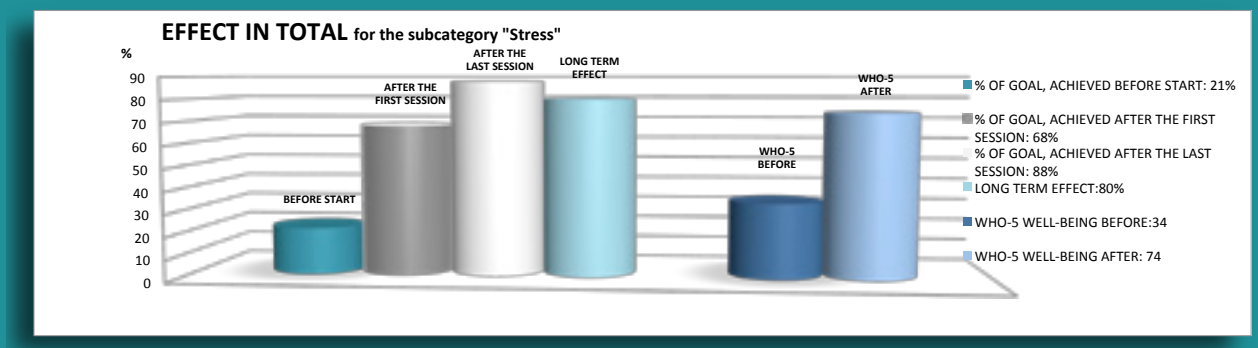
At the same time he / she has moved **29-71** well-being on the international scale, the WHO-5, going from 0 to 100, and wherein the depression limit is 35 and the Danish averaging 68th
See Health's description of the WHO-5 on page 17-19



7. Stress

For all cases where clients with stress have followed our program, the average customer in the first session on average moved from **21% to 68%** of its target (27 cases). And she / he has an average of 4.1 sessions with a total number of hours to 13.5 hours moved from **21% to 88%** of its target.
After 3 months, the average customer still been **80%** in Objective

At the same time he / she has moved **34-74** well-being on the international scale, the WHO-5, going from 0 to 100, and wherein the depression limit is 35 and the Danish averaging 68th
See Health's description of the WHO-5 on page 17-19



METHODOLOGY

Can personal change be measured? The answer is both yes - and no.

You can not just take a thermometer or voltmeter and get an independent value. Nevertheless, it has been found that each client is fully able to assess, where on a scale he or she is with respect to his or her goal. In the process customers are continually asked by us how close they are to their goal. Besides that they are also asked to describe their development in their own words.

If a customer has put an approximate value on his or her achievement, for example **15-20%**, we have rounded to our disadvantage, that is to respectively 17% or 18% depending on whether it is the initial state or final state, the customer is asked to describe.

Neurocoaching deals only rarely with diagnoses, as in our opinion they often end up being self-fulfilling. We have therefore chosen to use very broad problem categories. For example “Anxiety” instead of “phobia of elevators”.

The sessions have been conducted with about **20%** in person and **80%** on skype or Facetime.
We have not been able to detect any difference in outcomes in adults. With anxiety issues Skype/Face-time has even seemed to provide better results than in person meetings.

Quantitative results with children under 12 are not included, as we have assessed that they are not in full able to evaluate their progress on a percentage scale. But the qualitative data show not only good results in children - they even show that children are generally much faster than adults to change their patterns of thinking, feeling and behavior.

The number of spent hours also includes the time we have spent on creating reports and individual exercises and treat feedback. In other words, the numbers of spent hours represent the total invoiced time.

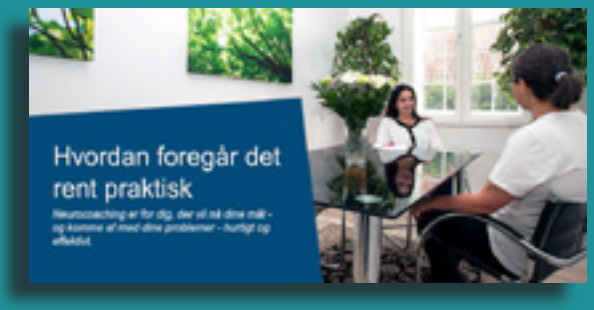
Have customers mentioned a negative number as a starting point, it has been set as 0, and has the customer mentioned an effect of above 100%, we have only classified it as 100%. Some older cases have operated with a scale of 1-10. They have been converted into a % -scale by multiplying the num-bers by 10.

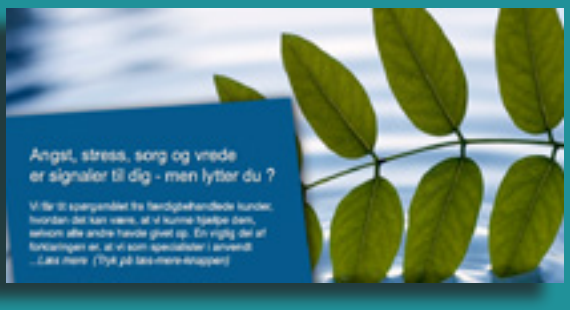
What we have measured
Neurocoaching is very focused on results. Since 1.7.2012 we have therefore at the end of each session asked every customer how much he or she assesses his or her own progress towards his or her goal. Only these cases have been included.

From mid January 2013, we have also used the internationally recognized well-being barometer WHO5. Both at the beginning of the process and 2 weeks after the last session as prescribed by The Danish Board of Health.

WHEN IS NEUROCOACHING MOST EFFECTIVE?

Neurocoaching is most effective when symptoms are caused by bad thinking habits and negative beliefs, but where the brain has no physical damage or defect. Therefore Neurocoaching is most effective in dealing with all forms of anxiety, OCD and phobias, stress, depression, low self esteem, lack of motivation, sadness, grief, heartache, traumas, temper/aggression, jealousy and eating disorders.





Where does Neurocoaching have a limited or no effect?

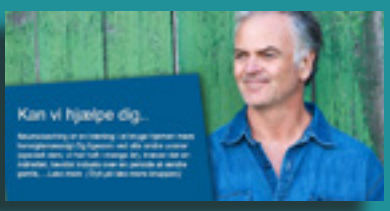
Neurocoaching is not tested on a properly diagnosed schizophrenia or on people with actual brain injuries. In our view, Neurocoaching is not particularly suitable for those issues.

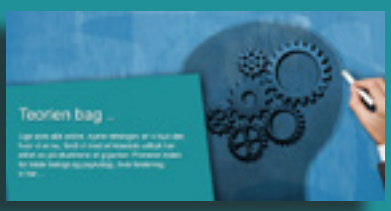
Helping customers with an abuse of alcohol and cannabis have been shown to work in the short term, but after the process some customers seem to fall back into their old habits. With these issues there seems to be a need for a considerably longer process.

For people with few resources (for example fasting or people with a lack of time) we recommend to postpone the process until the customers have these ressources. For people who do not have the financial means to complete a full course, we also recommend them to wait until this is possible.

Customers, who for one reason or another do not respect the mutual training agreements, are not expected to get a satisfactory long term effect. In those cases, we choose to stop the process, until there is a mutual understanding of what has to be done.

Persons who are not committed to change, or who are not willing to discuss their real problems, are not suitable for treatment with Neurocoaching.

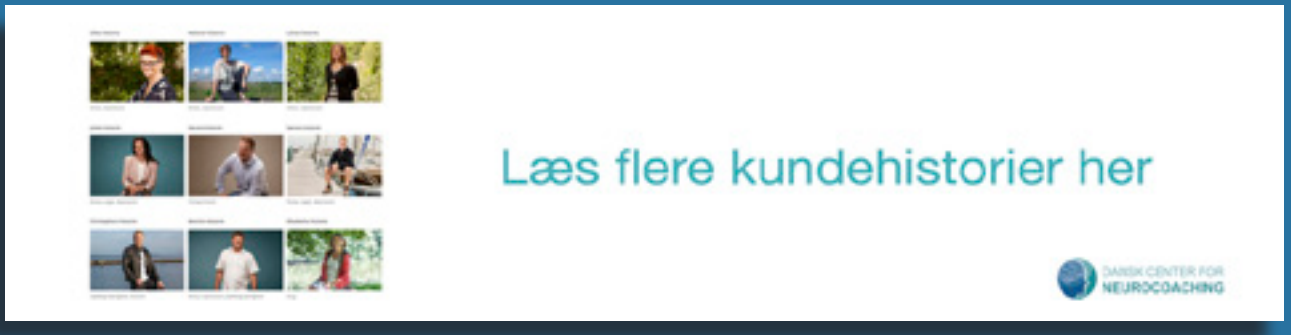




DOCUMENTATION ON TV - DR1 AND CHANNEL 4

In 2012 Michael Kjærsgaard got a special challenge from The Danish Broadcast (DR): In five hours he should create a profound change in a chef who after a tough divorce had ended up in depression. The dramatic result was shown in an episode of the popular television show “So f *** Special” in September 2012. The change in both the chef’s self esteem and in his communication was after the 5 hours so extreme that he this same evening found a new girlfriend with whom he is still together to this day. The neurocoaching methods were awarded 2 times 5 stars (max rating) by television host Christine Feldthaus.

In 2013 Michael Kjærsgaard also starred in an episode of the popular television series ”Single life” on Channel 4, where he in under 2 hours removed a longstanding trauma from a wellknown reality star while straightening up her self esteem.



THE BROADER PERSPECTIVE

Neurocoaching is more than just a therapy. It is basically a more modern view of the nervous system and the relationship between the nervous system and the rest of the body. So besides being a help to people with mental disorders, Neurocoaching also offers possible solutions to much broader areas.

Prevention

Most scientists agree that the basis for almost all mental disorders such as anxiety, stress, depression, etc. is formed in the parent-child relationship - primarily in the child's first 7 years of life (1). And here Neurocoaching offers concrete tools to help disadvantaged parents and prospective parents in a way so that they too have the opportunity to be the good parents, they want to be. Benefitting the child, benefitting the parents - and benefitting society.

Breaking social heritage

According to a report by the Danish Labour Union social heritage has accelerated from 2003 to 2013 (2). If a child has parents belonging to the so-called underclass, the risk is now 5 times greater for the child ending up right here, than if it was born into the so-called upper class.

An integral part of neurocoaching is therefore the removal of those deep belief patterns we call social heritage, which today leave behind the young people who, unfortunately, have been born on the wrong address. With Neurocoaching, Danish decision makers now have a choice of making a change which they have not had before.

Improved efficiency of psychic and somatic treatment

We regularly experience how careless diagnoses have induced negative beliefs in our customers - the so-called nocebo effect that activates the body's stress response and thus impairs the immune system. Neurocoaching can be helpful for therapists, psychologists and psychiatrists to be even more attentive to avoid the nocebo effect and instead exploit the placebo effect – ie the induction of positive beliefs and expectations). In oppsition to the nocebo effect the placebo effect strengthens the immune system and creates positive not only psychological but also physiological changes in both the brains receptors and the production of a wide range of beneficial neurotransmitters and hormones (3). As an example, the placebo effect has been shown to be more than 4 times more effective than the components of antidepressants / SSRI. (4).

Physical health

The American Medical Association estimates that over 60% of all diseases are basically caused by stress (5).
Herbert Benson, associate professor, Harvard Medical School estimates that 60-90% of all doctor visits are to some degree due to stress (6).
The close link between the human stress response and the immune system is demonstrated by Professor Robert Sapolsky, Stanford University (7). So a better utilization of the placebo effect will automatically provide a spill over effect on the somatic field. Not only on the directly stress related diseases (8), but also on general health, including diabetes 1 and 2 as well as cardiovascular diseases (7).

At the same time, reducing stress will naturally reduce the need for "self-medication" through nicotine, alcohol, marijuana, eating disorders and so forth - the so-called "bad choices".

Finally, a limitation of the human stress response – according to cell biologist Bruce Lipton – might prevent part of the cell changes that end up as cancer (9).

Life Expectancy

According to a survey, led by professor Becca Levy at the Yale University (10), our outlook, ie. our beliefs about ourselves, the world and our future, results in a difference of 7,5 years in life expectancy.
This can be explained by the fact that the telomeres of our cells (a form of protection cap, protecting the DNA of the cell) is worn down up to 6 times faster during stress (11).
With the Neurocoaching tools our customers learn to change these fundamental beliefs – and thereby at the same probably also change their life expectancy.

A better understanding of the nervous system - and an increased plasticity in the brain

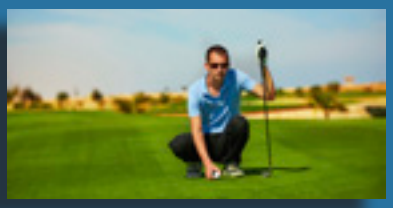
For both the trained personnel and for patients Neurocoaching offers a simpler understanding of both the nervous system and of the relationship between the nervous system and the rest of the body. At the same time Neurocoaching shows how to create plasticity in the deep parts of the brain - a plasticity that has not until now been regarded as possible.

A better inclusion

In Neurocoaching unfortunate thought patterns, negative beliefs and poor communication between brain centers are seen as just as physical as a broken leg. Therefore Neurocoaching can help to remove the taboo on the mental health field, which many patients find - and which unfortunately just reinforces their negative, pathogenic beliefs.

We show the way to a better use of the brain

Neurocoaching is not just for people with medical conditions. We also ongoing help ordinary people to increase their potential in learning, concentration and motivation in both education, career, life and sports.



NOTES

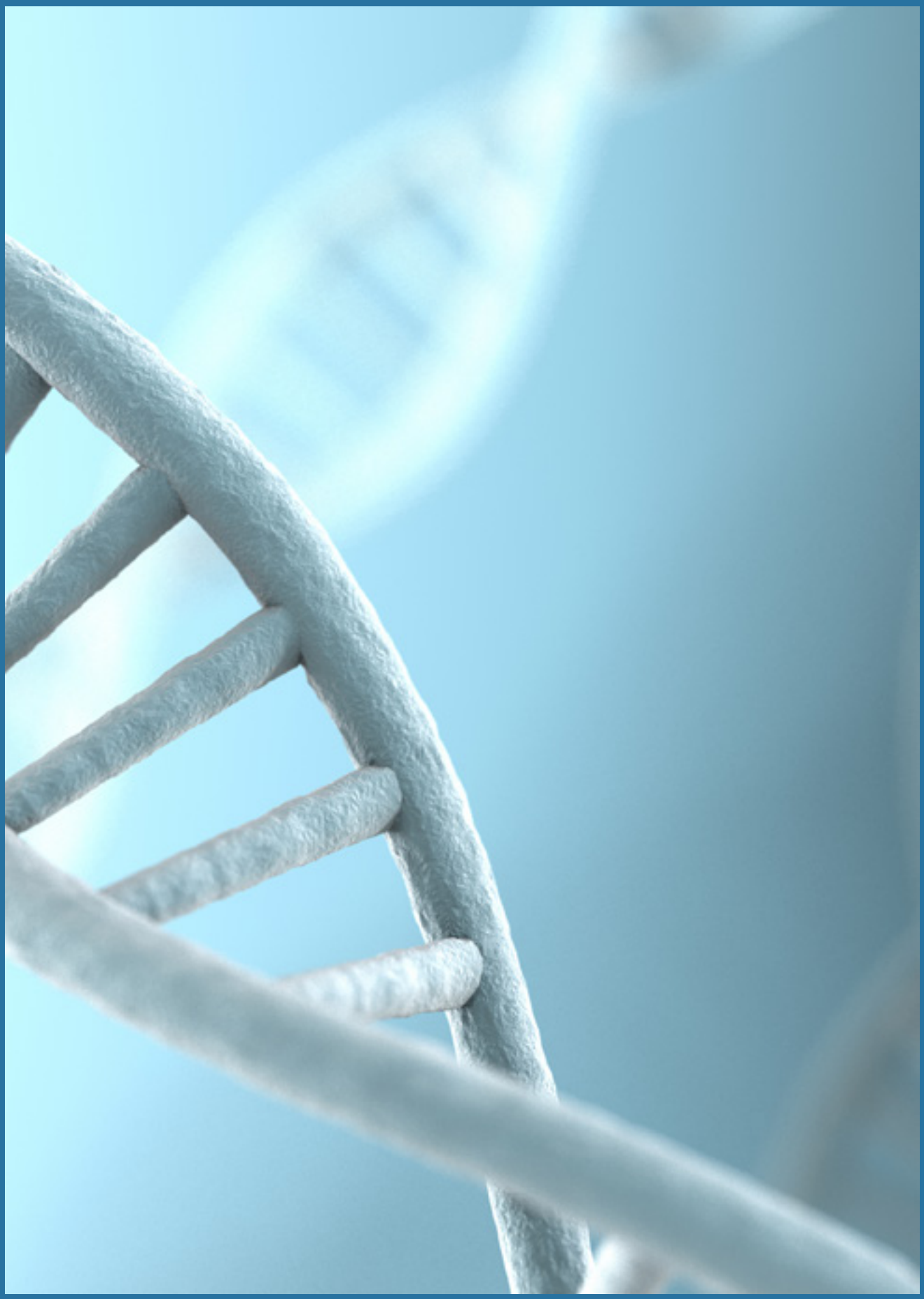
(1) In particular, psychologist Susan Hart in her book “The Sensitive Brain”
(2) Www.ae.dk, February 29, 2016 - analysis by Jonas Schytz Juul and Emilie Agner Damm.
(3) In particular works by Fabrizio Benedetti (professor of clinical psychology at the University of Turin) and Professor Cynthia Mcrae (University of Iowa. But also from Denmark Lene Vase, MSc Psychology, PH.D. , Danish Center for Pain Research at the University of Aarhus.
(4) Professor in psychology Irving Kirsch at The University of Hull, 2012
(5) Huffington Post 01/10/2013 “How Stress Affects the Body” - available on youtube.
(6) Interview in the DR broadcast “Sjæl og Videnskab”
(7) Robert Sapolskys book”Why Zebras Do Not Get Ulcers”
(8) The so-called functional diseases, affecting approximately 6% of all Danes.
(9 The Bruce Lipton seminar “The Biology of Belief” from 2012 - available on youtube.
(10) Becca Levy et al 2002 ‘Longitudinal Benefit of Positive Self-Perceptions of Aging on Functioning Health “
(11) Dr. Elizabeth Blackburn of The University of San Francisco, Nobel Prize winner in Medicine 2009, and psychologist Elissa Epel.

THE DANISH HEALTH AGENCY'S GUIDE TO THE WELL-BEING INDEX WHO5

The WHO-5 Well-Being Index is a questionnaire that measures current mental well-being

Link to a decription in English:
https://www.psykiatri-regionh.dk/who-5/about-the-who-5/Pages/default.aspx

APPENDIX 1



TAPFREELANCE

Validation of customer statements about treatment data

CUSTOMER

Danish Centre for Neurocoaching
Director, neurocoach Michael Kjærsgaard

VALIDATION REPORT

Compiled by

Dorte Rasmussen
Svend Alsted-Jensen
Torben Abildgaard Pedersen

TAPFREELANCE ApS

APPENDIX 2

TAPFREELANCE

Title	Validation of customer statements about treatment data
Project Manager	Torben Abildgaard Pedersen
Authors	Dorte Rasmussen and Svend Alsted-Jensen
Quality assurance	Dorte Rasmussen

Project number	15-136-1
Approved (date and name)	2017-01-04
Revision	2
Classification	Confidential

APPENDIX 2

TAPFREELANCE

1. Introduction

Danish Centre for Neuro Coaching has asked TAPFREELANCE Ltd. to conduct a validation of customers' statements about the treatment data.

The purpose of this validation was to ensure that original and processed data, which relates to clients who are engaged in or have completed a neuro coaching treatment, is characterized by validity, authenticity, integrity and representativeness.

2. Method

The procedure used, which is the basis for the preparation of this validation report, reproduced in Annex 1 to this report.

TAPFREELANCE Ltd. has received an overall result file from the Danish Center for Neuro-Coaching in the form of an Excel spreadsheet, which provides a list of 1,575 indications of results representing 315 cases. 19 of these cases were not completed and were therefore withdrawn from the validation study.

Finisher name the client specified problem and the client's goal of treatment is shown in the Excel file. The client goal achievement measured at baseline and after the first session and at the end of treatment. Furthermore measured overall well-being both before and after cycle, using WHO's barometer (WHO-5). These numbers are also included in the Excel worksheet. The following figures are validated:

- Attainment at start
- Meeting targets after first session
- Attainment at the end
- WHO-5 at the start
- WHO-5 on exit

50 of these 296 cases were selected to check the reported data in the Excel sheet (result file). These cases were randomly selected, subject to the constraint that the problem areas unrequited love, self-esteem, jealousy, stress, temperament, depression and anxiety should be represented by at least one of these cases, as all three therapists be included in the data set comprising the 50 cases. In addition to these cases were extracted a reserve list, which should be used where there may be problems finding data for one or more of the 50 selected cases. For these 50 cases were from the clients sought acceptance to the higher validation work.

As an additional control, 20 of the 50 persons after prior authorization by telephone contacted and interviewed with the objective of validating the client's statements about the treatment results. Clients were asked to relate their answer the above 5 targets. For this activity developed was an interview form - see Appendix 2 to this report - to hold the client's response.

APPENDIX 2

TAPFREELANCE

3. Results

3.1. Validation of mails

TAPFREELANCE received confidentially and with the clients' acceptance access to mail-korrespondancerne with 48 out of the first selected 50 people (2 customers were not returned). TAPFRELANCE checked, that was consistent with the numbers that were reported in the spreadsheet and the numbers that were indicated in mailkorrespondancerne. It lacked such data for 2 of the first 50 people. To compensate for this, the data for the next 3 persons on the reserve list submitted and used in the validation. The study therefore includes data for a total of 51 clients out of the 296 cases (17-18%).

Of the 51 clients showed minor correspondences between data in the result file, which TAPFREELANCE had access to, and the data could be found in mailkorrespondancerne. It was 2 discrepancies in favor of the Danish Center for Neurocoaching, 2 was to the disadvantage of Danish Center for Neurocoaching and in one case lacked only elements of data.

- Inconsistency between the final number after the first session reported in the result file (100%) and reported in mail correspondence (50%)
- Mismatch start number by the first session reported in the result file (40%) and reported in mail correspondence (30%). Here is the discrepancy that is to the disadvantage of Danish Center for NeuroCoaching.
- The achievement of the final goal in the result file (95%) differs from the number that can be found in mail correspondence (80%)
- In one case, which indicated a lower level of achievement in the result file (80%) than the level that could be read by mail correspondence (100%). Here is the discrepancy that is to the disadvantage of Danish Center for Neurocoaching.
- The individual partial results of initial WHO-5 measurement could not be verified via mail correspondence in a case. The total WHO figures may be verified.

Table 1 compares the degree of fulfillment (in percentage) before treatment, after the first session and after the last session. Also included improvement (difference between last session and before the first session). The figures are given as a mean ± standard deviation.

The table shows both the figures given in the result file and the figures, in which the few corrections are introduced. It appears quite clearly that the observed differences are very small (the differences are typically found at a level corresponding to the second decimal after the comma).

APPENDIX 2

TAPFREELANCE

Table 1 Degree of goal achievement – *296 cases*

Problem	Degree of goal achievement (%)							
	Data from the result file				"directed" data from the results file			
	Before	After first session	After last session	Improvement	Before	After first session	After Last session	improvement
All	22,8 ± 18,4	67,1 ± 20,2	88,7 ± 10,3	65,7 ± 19,9	22,8 ± 18,4	67,1 ± 20,2	88,7 ± 10,3	65,7 ± 19,9
Low self esteem	22,4 ± 17,7	65,5 ± 20,8	89,0 ± 9,5	66,2 ± 19,2	22,4 ± 17,7	65,5 ± 20,8	89,0 ± 9,5	66,2 ± 19,2
Heartache	18,9 ± 14,8	64,8 ± 19,2	91,4 ± 10,1	72,6 ± 16,1	18,9 ± 14,8	64,8 ± 19,2	91,4 ± 10,1	72,6 ± 16,1
Anxiety	24,5 ± 19,1	67,8 ± 21,0	88,5 ± 10,2	63,3 ± 21,5	24,5 ± 19,1	67,8 ± 21,0	88,5 ± 10,2	63,3 ± 21,5
Bad temper/ aggression	24,8 ± 17,9	68,1 ± 17,2	87,0 ± 9,8	62,2 ± 19,8	24,8 ± 17,9	68,1 ± 17,2	87,0 ± 9,8	62,2 ± 19,8
Jealousy	22,9 ± 20,7	72,4 ± 18,6	88,5 ± 11,2	65,7 ± 20,5	22,9 ± 20,7	72,4 ± 18,6	88,5 ± 11,2	65,7 ± 20,5
Depression	21,3 ± 19,9	63,8 ± 21,6	89,0 ± 11,4	67,8 ± 20,3	21,3 ± 19,9	63,8 ± 21,6	89,0 ± 11,4	67,8 ± 20,3
Stress	20,5 ± 14,6	68,0 ± 21,0	87,7 ± 11,0	67,2 ± 17,9	20,5 ± 14,6	68,0 ± 21,0	87,7 ± 11,0	67,2 ± 17,9

Table 2 compares the WHO-5 scores before treatment and after the course and the change in WHO-5 scores (difference between end-WHO-5 scores and start-WHO-5 scores). The figures are again listed as a mean ± standard deviation.

The table shows both the figures given in the result file and the figures, in which the few corrections are introduced. It appears quite clearly that the observed differences in the WHO-5 scores are very small (the difference is on the first or second decimal after the comma).

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APPENDIX 2

TAPFREELANCE

Table 2 *WHO-5-score – 296 cases*

Problem	WHO-5 score					
	Data from the result file			" directed " data from the results file		
	Before	After first session	Improvement	Before	After first session	Improvement
All	33,7 ± 17,8	74,4 ± 13,8	40,6 ± 19,7	33,9 ± 18,1	74,4 ± 13,8	40,5 ± 19,7
Low self esteem	33,6 ± 17,5	74,7 ± 13,3	41,0 ± 18,8	34,0 ± 17,8	74,8 ± 13,2	40,9 ± 18,9
Heartache	25,5 ± 19,5	78,3 ± 13,8	51,7 ± 21,2	25,5 ± 19,5	78,3 ± 13,8	51,7 ± 21,2
Anxiety	38,6 ± 16,4	71,9 ± 14,0	33,3 ± 17,3	39,1 ± 16,8	71,9 ± 13,9	33,3 ± 17,3
Bad temper/ aggression	32,9 ± 19,4	74,8 ± 6,6	41,9 ± 19,4	32,9 ± 19,4	74,8 ± 6,6	41,9 ± 19,4
Jealousy	36,8 ± 19,4	78,5 ± 14,2	41,7 ± 21,4	36,8 ± 19,4	78,5 ± 14,2	41,7 ± 21,4
Depression	28,8 ± 15,8	71,2 ± 13,8	42,3 ± 19,3	29,3 ± 16,6	71,5 ± 13,7	41,7 ± 19,4
Stress	34,2 ± 17,7	74,4 ± 11,4	40,2 ± 16,2	34,2 ± 17,7	74,4 ± 11,4	40,2 ± 16,2

Table 3 compares the degree of fulfillment (in percentage) before treatment, after the first session and after the last session. Also included improvement (difference between last session and before the first session). The figures are given as a mean ± standard deviation.

The table shows both the figures given in the result file, for all clients of the 51 selected clients, and the numbers in which the few corrections are introduced for the 51 clients.

If one does not distinguish between different problems (ie areas of diagnosis), one can see that the selected 51 clients are representative of all clients, as only observed minor differences between the figures for all clients and for the 51 selected clients. Also observed also only very small differences between the data in the result file for the 51 selected clients and the corrected data.

It appears that 51 clients are not representative of an assessment on the problem level. Here is observed therefore a difference between all clients and individual problems.

Table 4 compares the WHO-5 scores before treatment and after the course, and the change in WHO-5 scores (difference between end-WHO-5 scores and start-WHO-5 scores). The figures are again listed as a mean ± standard deviation. The table shows both the figures given in the result file, for all clients of the 51 selected clients, and the numbers in which the few corrections are introduced for the 51 clients. As before, if one does not distinguish between different problems, one can see that the selected 51 clients are representative of all clients, as only observed minor differences between the figures for all clients and the 51 selected clients. Also observed also only very small differences between the data in the result file for the 51 selected clients and the corrected data.

It also appears, as before, to 51 clients are not representative of an assessment on the problem level. Here is observed therefore a difference between all clients and individual problems.

APPENDIX 2

TAPFREELANCE

Table 3 Degree of goal achievement

Problem	Problem Degree of goal achievement (%)											
	Data from the result file. All clients (296 cases)				Data from the result file for the selected 51 cases				"directed" data from the result file for the selected 51 cases			
	Before	After first session	After last session	Improvement	Before	After first session	After last session	Improvement	Before	After first session	After last session	Improvement
All	22,8 ± 18,4	67,1 ± 20,2	88,7 ± 10,3	65,7 ± 19,9	22,5 ± 21,1	64,1 ± 21,2	87,5 ± 10,3	65,0 ± 23,0	22,2 ± 20,6	64,1 ± 21,4	87,8 ± 10,4	65,5 ± 22,5
Low Self esteem	22,4 ± 17,7	65,5 ± 20,8	89,0 ± 9,5	66,2 ± 19,2	25,5 ± 21,6	64,6 ± 22,1	86,5 ± 10,7	61,0 ± 22,6	25,3 ± 21,1	64,6 ± 22,4	86,7 ± 10,9	61,5 ± 22,0
Heartache	18,9 ± 14,8	64,8 ± 19,2	91,4 ± 10,1	72,6 ± 16,1								
Anxiety	24,5 ± 19,1	67,8 ± 21,0	88,5 ± 10,2	63,3 ± 21,5	18,4 ± 21,8	69,9 ± 21,9	90,8 ± 7,3	72,4 ± 23,2	18,4 ± 21,8	69,9 ± 21,9	90,8 ± 7,3	72,4 ± 23,2
Bad temper/ aggression	24,8 ± 17,9	68,1 ± 17,2	87,0 ± 9,8	62,2 ± 19,8	27,0 ± 22,2	65,0 ± 18,0	88,2 ± 4,8	61,2 ± 26,3	18,8 ± 14,4	61,3 ± 18,4	89,8 ± 3,8	71,0 ± 16,9
Jealousy	22,9 ± 20,7	72,4 ± 18,6	88,5 ± 11,2	65,7 ± 20,5	37,0 ± 23,3	78,0 ± 9,7	86,0 ± 5,5	49,0 ± 19,5	37,0 ± 23,3	78,0 ± 9,7	86,0 ± 5,5	49,0 ± 19,5
Depression	21,3 ± 19,9	63,8 ± 21,6	89,0 ± 11,4	67,8 ± 20,3	11,9 ± 16,5	51,3 ± 25,6	90,0 ± 14,2	78,1 ± 19,4	11,9 ± 16,5	51,3 ± 25,6	90,0 ± 14,2	78,1 ± 19,4
Stress	20,5 ± 14,6	68,0 ± 21,0	87,7 ± 11,0	67,2 ± 17,9	11,3 ± 13,1	62,5 ± 18,5	93,0 ± 4,2	81,8 ± 15,8	11,3 ± 13,1	62,5 ± 18,5	93,0 ± 4,2	81,8 ± 15,8

APPENDIX 2

TAPFREELANCE

Table 4 *WHO-5-score*

Problem	WHO-5 score								
	Data from the result file. All clients (296 cases)			Data from the result file for the selected 51 cases			"directed" data from the result file for the selected 51 cases		
	Before	After first session	Improvement	Before	After first session	Improvement	Before	After first session	Improvement
All	33,7 ± 17,8	74,4 ± 13,8	40,6 ± 19,7	33,0 ± 15,1	72,1 ± 11,8	39,1 ± 19,7	34,3 ± 17,1	72,3 ± 11,8	38,3 ± 20,1
Low Self esteem	33,6 ± 17,5	74,7 ± 13,3	41,0 ± 18,8	34,5 ± 15,7	72,6 ± 10,7	38,1 ± 19,9	36,7 ± 17,6	72,8 ± 10,8	37,1 ± 20,4
Heartache	25,5 ± 19,5	78,3 ± 13,8	51,7 ± 21,2						
Anxiety	38,6 ± 16,4	71,9 ± 14,0	33,3 ± 17,3	36,0 ± 12,8	68,3 ± 13,2	32,3 ± 17,5	38,9 ± 16,3	68,3 ± 12,7	32,3 ± 17,5
Bad temper/ aggression	32,9 ± 19,4	74,8 ± 6,6	41,9 ± 19,4	40,0 ± 14,2	72,0 ± 5,7	32,0 ± 18,2	40,0 ± 14,2	72,0 ± 5,7	32,0 ± 18,2
Jealousy	36,8 ± 19,4	78,5 ± 14,2	41,7 ± 21,4	44,0 ± 18,3	68,0 ± 16,0	24,0 ± 20,0	44,0 ± 18,3	68,0 ± 16,0	24,0 ± 20,0
Depression	28,8 ± 15,8	71,2 ± 13,8	42,3 ± 19,3	22,0 ± 9,4	62,0 ± 16,7	40,0 ± 20,9	26,0 ± 17,6	65,1 ± 17,4	37,1 ± 20,5
Stress	34,2 ± 17,7	74,4 ± 11,4	40,2 ± 16,2	22,0 ± 6,9	73,0 ± 15,4	51,0 ± 19,7	22,0 ± 6,9	73,0 ± 15,4	51,0 ± 19,7

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APPENDIX 2

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3.2. Telehone Interviews

20 out of the 21 selected individuals were interviewed by telephone, where the interview form shown in Annex 2, was used. Clients' was thus presented to the figures disclosed in the result file, and should confirm / deny these figures.

Interviews were conducted in October 2016. The course of treatment for the 20 clients occurred in the period 2013-2016:

- 4 clients in 2016
- 7 clients in 2015
- 5 clients in 2014
- 4 clients in 2013

All respondents confirmed figures with: "Yes, it sounds very true; yes, I stand by; Yes, that's correct. "2 of respondents confirmed, however, some of the questions with:" In reality it was much better than that, but I'm always careful when I have to assess the kind. "None of the respondents rejected so the numbers as seen from the results file.

Forward got the interviewees the opportunity to comment on the course, and following comment appeared:

- Helped a lot
- Has been helped mega much of the course
- Very satisfied customer (2 clients made that comment)
- Satisfied customer (4 clients made that comment)
- The customer was keen to confirm the figures, although there could perhaps been the answer different (positive) in hindsight
- The customer is happy and satisfied, and hopes that her involvement can lead to others can be helped in the same way as the person in question
- A client reported that WHO issues not told him anything. He does not completing anything regarding. these. TAPFREELANCE comment: Danish Center for Neurocoaching has to TAPFREELANCE ApS documented transmission of WHO schedules, but also confirmed that the forms despite reminders have not been returned by the customer.
- Confirms data. Stressing that there have been fluctuations along the way
- We should like to call again if there are further questions

4. Conclusions and recommendations

Overall, the validation study demonstrated that one can have confidence in the data that the Danish Center for Neurocoaching presents. There are minor deviations, but these affect only the observations in very small degree. All surveyed clients have confirmed the figures.

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One of the clients, which was listed on the top 20 list, was not interviewed because the client did not want to participate. Mail correspondence from the same client was not used to the validation of the results stated in mails.

Neuro Coaching has done a lot to harmonize client data and information, but validation work has shown that there are some variations in the availability of data for individual clients.

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