Linda Geerligs wins BCN dissertation prize
Prof. Robert Schoevers is the Head of the Psychiatry department at the UMCG. Last year he rose to prominence in national media as the co-host of “Doe Even Normaal”, a TV show aired on NTR/NPO. We talk with him about what it’s like to put together a programme for primetime television, discuss science communication, and reflect on the challenges of both.

What’s your favorite TV show of all time?
Monty Python. I like the humor, of course, but also how it shows the absurdity of many things in life.

As great as a reflection on life it is, it couldn’t be more different to what you’ve done recently. How did “Doe Even Normaal” come about?
The show was my own idea. Some 20 years ago, before I started med school, I did a lot of theater just for fun, and I worked as an actor trainer to make some money on the side. Through the years I wrote and directed a number of videos about medical issues: documentaries, clips for patient organizations, educational films. I stopped when things got too busy with my career. Then three years ago the Dutch government decided that patients with psychiatric disorders would have to pay an extra fee on top of their deductible health insurance for medical consultation. It’s the only area of medicine where people were asked to pay extra to see a doctor and get help. The minister who advocated for this even stated publicly that mental disorders are not real disorders, and your neighbor’s wife with a cup of tea could help solve many cases. We thought it was ridiculous, and a reflection of the mistaken idea of what a mental disorder is.

Having become a professor around the same time, Schoevers was thinking hard about what he could do to have a positive influence on how people see mental disorders and the patients that suffer from them. He drafted an idea for a TV show and applied for funding at two Dutch organizations whose goal is to inform the public about mental health issues. Both backed the project and offered to finance a majority of the production costs. Soon after, they found a TV network interested in broadcasting the programme.

The format went relatively unchanged from the original idea: Schoevers originally wanted to provide more information on what happens when one is affected by a disorder, what goes wrong with brain functioning, and how treatment works, but given that an episode would clock in at 24 minutes, that idea was scrapped in favor of a more personal look at each patient’s story. Fittingly, for the remainder of our conversation about science communication, Schoevers asked one of the sponsors of the show to build a website that would host all episodes and provide additional information. (They were happy to do that and the programme remains available to view online).

To ensure the show wouldn’t be overly highbrow to the general audience, a second presenter was added to look at each case from the perspective of the viewer.

So, the producers asked to simplify the show. Was it a challenge to translate these complex ideas into more general explanations, without diluting them?
It was my main hangup that the information was sparse... It took effort to explain these things on TV in simple terms. On the other hand I see multiple patients a
week, so I know what it takes to explain psychiatric disorders to someone without background education.

**Do you use these skills when you teach?**

Definitely. One of the patients in the series is a person I often give lectures with at the UMCG. These talks are always very inspiring, and actually made me realize it would be worthwhile doing this TV show. It’s very powerful to have a patient tell his or her story, I believe that’s the best education a student can get.

**There are aspects of the show you didn’t compromise on. Can you tell me more about the (creative) process?**

Yes, there are a number of things that I’m very happy with. We invested a lot of time and effort in finding patients that were able and willing to tell their story, and representative of their disorder. We were very careful in the sense that TV is very intrusive, so we had a whole team to help with the selection based on the patient’s personal history. We were very considerate, and for each episode, everyone was shown the final cut BEFORE it was sent to the TV station. We also had a meeting after the run of the whole season, to see what the show has done for the featured patients. It was 99% positive. And that was also quite interesting. I asked everybody to tell about the reactions they got; they heard from people who had never understood what it’s like to go through these problems, and now they did. We managed to find people the audience could relate to.

**Your approach is very scientific, very proper. There are people that have done media work somewhat similar to yours, but less mindful. A prime example would be Dr. Phil. What’s your take on this?**

I’m really fond of the BBC approach, that is also what inspired the idea of me being the presenter. They’re expensive programmes with lots of experts and a lot of proper science, that is different to Dr. Phil who just sits in a studio and talks.

**Are scientists equipped with the skills to do what you’ve done?**

No, that’s where collaboration comes in. Many scientists teach and know how to tell a story, yet they’re not television makers, so they need to adapt to the medium. There is a lot of interest in science communication, and we should see this as part of our jobs.

It becomes clear this is so when Schoevers tells me that, due to demand, they are in talks about a possible second season, as well as considering a DVD series. Riding on the wave of the success of the show, Schoevers also has a new book coming out on February 18, 2015: A crossover between patient and doctor perspectives, “Diagnose Depressie” (Balans publishing), is co-authored by the patient featured on the show, Selma Parmentier.

**Any life changes now that you’re famous?**

(Laughs) Not really. I have some patients who contact me and ask if I could fix their problems, I answer all emails, and usually direct them to a local practitioner that can provide the expertise they need!

**PHOTOS: WWW.TELEVISIER.NL & WWW.DEPRESSIEVERENIGING.NL**
Virtual reality as a promising treatment for psychoses: An interview with Dr. Wim Veling

Virtual reality has shown to be of therapeutic value for people with anxiety disorders, such as a fear of flying or fear of heights. The UMCG has recently started treating psychotic patients experiencing paranoia and social anxiety with virtual reality, too. Dr. Veling, psychiatrist and head of the programme for psychotic disorders at the UMCG, let psychotic patients walk around in a virtual café and found that they responded in a similar way to the virtual world as to real life situations.

How did you get involved in virtual reality?
My dissertation consisted of an epidemiological investigation about psychotic disorders in ethnic minorities in the Netherlands. That research showed that the social environment of people is very important in the development of psychoses. However, it is not easy to investigate the social environment of subjects. In addition, the experience in the clinic is that treatments do not work optimally. For example, with cognitive behavioural therapy, a patient may have to practice before they can be out for longer periods of time on the street, but might fail because he or she became afraid. There is a need to look for new methods that bring the social environment into the consulting-room, and virtual reality seems to be the ideal solution.

The virtual café looks quite realistic, but you can see clearly it is not real. Why do people feel as if it is real, despite the fact that we know it is not the real world that we see?
That has to do with the feeling of being somewhere and the interaction with the environment, which is called immersion. With 3D glasses you can turn your head in every direction and the world will adjust. This can make you feel like you are actually in that world. Once I took a ride in a virtual roller coaster, and despite the fact I knew it wasn’t real, I couldn’t prevent grasping my chair at the moment I went through a turn. Apparently there is little necessary to elicit those feelings.

Earlier this year in the newspaper De Telegraaf, there was a small article about your research and one of the questions was: ‘Is it ethically justified to make people with tendencies for psychoses scared?’ What is your response to the question and why do you think people ask this question?
We know that we can only treat phobias (fears) by exposing people to the thing they fear and letting them get used to it. Psychoses are commonly considered scarier or more intense than other psychiatric disorders. I don’t agree with such a distinction, because it has led to the situation that effective treatments are withheld from patients with psychotic disorders. We focus on a specific part of psychoses, namely paranoia and social anxiety. What subjects do in the virtual world is not so different from the real world, namely encountering other people. The virtual worlds we have now are a café, a shopping street, a bus and a supermarket, which are all very common environments. Of course, we can make it more intense and scarier, for example, by increasing...
There is a need to look for new methods that bring the social environment into the consulting-room, and virtual reality seems to be the ideal solution.

What is the task participants have to perform in the virtual world?
We wanted the task to be simple, but it had to stimulate participants to walk around in the virtual café, which was the only virtual environment available at the time. In the virtual café, five avatars had a number on their clothes. In the pilot study, participants had to walk around in the virtual world, find all the numbers and remember them. In this way, we were sure participants were going to approach the avatars. Recently, we have done a comparable study with 175 participants for which we are now analyzing the data. We made the task a bit simpler, because we noticed that patients did find it quite stressful to remember five numbers. In this study, they had to remember which of the five numbers was the highest and whether the corresponding avatar was male or female.

And you are currently working on a third study?
Yes, currently we are working on a randomized controlled trial using an exposure therapy to teach people to cope with their own paranoid thoughts and stress responses. A big problem with a lot of patients is that they keep experiencing more paranoia and fear than the average individual, and as a consequence are not able to function normally in daily life. For example, when patients have an appointment with me, some of them will rather walk an hour than take the bus, because they are too afraid to take the bus. With the virtual reality exposure therapy, we teach these patients strategies to cope with the feelings and thoughts they experience. The first anecdotes of patients that I hear are positive. A boy said to me that virtual reality did increase his confidence because he could practice certain situations he had trouble with. And with normal therapies, he had to wait and see whether that particular situation would occur the next day or next month. With virtual reality, you can structurally practice the situation. I notice that clinicians, researchers and patients get excited when I start talking about virtual reality, and have heard a lot of ideas for different uses of virtual reality.

Could you give an example?
We just received a grant to develop an aggression regulation training method for people who are in detention in a forensic psychiatric hospital. A big problem is that these individuals often cannot deal very well with their own aggression or the aggression of others. It is very difficult to treat them, because they often cannot reflect upon themselves or are not very motivated to participate in treatments. Another problem is the lack of practice, because you cannot send these individuals outside to practice. With virtual reality, it would be possible to expose them to confrontational but virtual situations, and let them practice controlling their own aggression and deescalating the aggression of others.

Could virtual reality also be used to diagnose patients?
Yes, I think that could be possible. These days, with psychiatric disorders, we do interviews, we use questionnaires and sometimes neuropsychological tests. We do have some ideas about how to use virtual reality in combination with other methods for diagnostic purposes. For example, we could use it in combination with a diary-app on your mobile phone, in which people have to fill in short questionnaires about their feelings and thoughts at random moments during the day. I think if you combine these kinds of tools with virtual reality, it will provide you with a lot of useful information about how people are responding to their environment.

Could virtual reality also be a treatment method that patients could use at home?
Yes, that will probably be the future. It is possible that in a few years, a lot of people will have such glasses at home, because they already use it for games. I think virtual reality offers great opportunities for patients to do these kinds of therapies online in their own homes. We are not there yet, but I’m confident we will get there.

In a presentation about virtual reality, you used as the title a famous quote from the movie Back to the Future (1985): “Roads? Where we are going we don’t need roads.” What did you mean with this quote?
Our department celebrated its 25th anniversary this year, so we organized a symposium with the theme Back to the Future. I thought it was very applicable to my presentation, because in my field we are used to thinking in a very traditional way and about solutions that we are familiar with. This quote challenges people to think out of the box. Not only in the way you treat patients, but also about the ways the health care system is organized. For example, it is possible that patients could do a virtual reality treatment at home. In some cases, a therapist might not even be necessary. These developments may lead to changes in the health care system. So I’m thinking, “where we are going, we don’t need roads.”

By Manon Van Asselt
VR Pictures by Clevr, the company which made the virtual environment
Afterthoughts:
Interactive double interview between
BCN PhDs Anouk van der Hoorn and Stefan Wierda

One of the main reasons students choose to do a PhD is because they enjoy doing research. Both Stefan Wierda and Anouk van der Hoorn did not experience major issues during their PhDs. They talk about what is crucial to make a PhD a success and show that aside from a postdoc, there are plenty of options to integrate research in a job.

Anouk
Hi, haven’t talked to you in a while.

Stefan
No indeed! Shall we begin?

Anouk
Yes. What are you doing at the moment?

Stefan
At this moment I am still working as a postdoc in the Department of Artificial Intelligence, but I will change jobs soon. And you?

Anouk
I am currently a radiology resident at the UMCG, which is very nice. What are you going to do?

Stefan
I am going to Fugro in The Hague. Maybe you have heard of the company, they were actually in the news today. They are searching for the airplane MH370 that lies somewhere on the bottom of the ocean in Australia. Radiology? Does that have something to do with your research? You were working with Parkinson’s disease right?

Anouk
Yes, that is correct. My research was about ‘freezing of gait’ in Parkinson’s patients. Freezing of gait means the patients block during walking and cannot walk further. In my research, I looked at the underlying mechanism and involved brain areas with fMRI. Additionally, I used DTI in my research. These MRI techniques are involved in radiology. I always found radiology attractive and I really like the combination of logic reasoning, technique, and problem solving. If I am correct, you were doing research on the attentional blink, tell me about it.

Stefan
Yes, my research was about the individual differences of the attentional blink with EEG measurements and pupil dilation. We found that when your attention is focused on something, your pupil will dilate. We have applied this phenomenon to the attentional blink. Do you do research aside from your specialization as radiologist?
Anouk
Yes, I am combining my studies as a radiologist with research, which I also did during my MDPhD trajectory. I think research is really exciting and I will continue to do research.

Stefan
In what kind of research are you currently involved?

Anouk
I am doing research into the area of tumor response in patients with high-grade glioma. During the treatment trajectory, it is currently not possible to distinguish changes on MRI due to tumor growth and changes due to treatment. I am investigating advanced MRI sequences and PET tracers to improve this situation. Do you think you are going to miss research in your new job?

Stefan
I don’t think so. I have enjoyed scientific research in the past years, but I notice that I like to do research that is more applicable. In my new job I will be more focused on Research & Development, with the emphasis on development. Instead of thinking about new questions and problems, the questions arise from practical problems from society.

Anouk
What do you feel were the fun and less fun aspects of your PhD?

Stefan
The nice thing was the team in which I was working and the fact that the collaboration between me and my supervisors was very good, despite the fact they were very different from each other. I did not really have any troubles or conflicts with my supervisors during my PhD, which is a situation you sometimes hear from others. And you?

Anouk
No, me neither. I think good supervision is essential and I certainly had good supervision. I also like planning and organising. Another thing I learned is that if you want to accomplish something, you will have to arrange it yourself. I think you need to be pro-active. And I also do like a challenge.

Stefan
Did you experience a high workload during your MD PhD trajectory?

Anouk
No, not really. Also, I think supervision again plays an important role. But maybe even more important is good planning. First do the things that in prospect could become a bottleneck. That is how you prevent problems.

Stefan
I completely agree. I think you have to create your own opportunities and learn to interact in a flexible manner with your working environment. Combine that with a good planning and everything will be alright.

Anouk
Yes, that is nice advice. Our wise life-lesson for other PhD students.
The Wandering Mind

“How many scientists does it take to replace a lightbulb?” A familiar way to start a joke. Assuming that the light-emitting technology that is sold nowadays can still be called a lightbulb, you wouldn’t expect more than one scientist to be required to replace something as simple as that, would you? However, suppose we would really like to empirically test the hypothesis that one is enough... As soon as we realise that this constitutes an experiment involving human participants, we can reject the initial hypothesis that one scientist suffices!

Nowadays, you need a lot more than one scientist to carry out research involving humans. I guess countries have different rules and regulations, and I have long lost track of what is required where exactly. But you might at least need a sponsor, a chief investigator, and a principal investigator. Then some support staff, including a data manager, a public engagement officer, and some more positions I never knew existed until a few years ago. Then you need a whole organisation to be embedded in, including an ethics committee to assess your research protocol. And that is not the end of an ever growing list.

In the latest revision of the Declaration of Helsinki, a new requirement was introduced that every study on humans should be pre-registered. That is to say that the exact research protocol, including analysis procedures and outcome measures, should be determined in advance and deposited in some public database. I consider that a great practice for confirmatory research. Otherwise, one could do numerous tests, cherry-pick the most interesting and significant ones, and publish only those. However, some research has a more exploratory character, more like pilot studies if you will. Surely, it should be possible to “play around” in those? As long as it remains clear that the results of such explorations only serve to inspire appropriate hypotheses and procedures for follow-up work, rather than forming statistical proof themselves, all is fine. The scientific community hasn’t yet arrived at an interpretation of the new declaration, so I hope it will turn out alright, but the thumbscrews are being tightened.

I became frustratingly aware of the numerous regulations when my department head found it necessary that all employees became well-versed in the intricacies of the ISO-14155 standard. The reason was that some colleagues had been involved in a clinical trial to assess the efficacy of a particular commercial hearing device. When the outcome of the trial proved to be that the device had only some marginal effect that did not exceed placebo, you may imagine that the producer of the device wasn’t altogether happy about the conclusion. They requested an audit to be performed. I had never encountered one of those, and hopefully you haven’t either, but basically that means that an external agency pays the lab a visit to certify that the research has been carried out in compliance with the forest of applicable rules and regulations. Our department was fairly small, young, and had limited experience with clinical trials, so suffice it to say that some omissions were identified. None of them were serious in the sense that the science had been done wrong, but a list of things concerned a lack of documented record-keeping. As an example, at some point the supplier ran out of test devices and my colleagues used their own clinical stock. The devices were the same, but serial numbers were different. Our department was reprimanded for this impromptu course of action: the research protocol should have included procedures for how to act when the supplier ran out. Of course, no one had ever foreseen such a thing. Still, the final result of all this is that the study outcome shan’t be published. A nice example of how procedures that are ideally meant to protect the interests of participants and scientists can achieve the exact opposite.

This debacle of course was not to be repeated. So for the last half year I have been inundated with lectures about how to properly conduct trials on clinical devices: a series of BROK courses on steroids. We even received a standard operating procedure just about how to sign a form. Personally, I am not involved in trials, nor do I have much desire to move in that direction. Ernest Rutherford once said that all science is either physics or stamp collecting; that is a bit narrow and blunt, but I dare qualify clinical trials as a (rather useful) form of stamp collecting, in the sense that their outcomes are poorly generalisable in the context of a theoretical scientific framework. So these standards went in one ear, and out the other, I fear. I decided not to hang around and stay. Perhaps it is time to head back towards Rutherford’s domain? Hopefully, one physicist can still replace a lightbulb!

By Dave Langers
Photo by Dave Langers
What’s on the horizon?

As the smoke lifts from the battlefields from the first round of competition for Horizon 2020 funds, now is a good time to take a closer look at the first experiences with ‘the world’s largest research programme’ and make some predictions about future developments. Our conclusion? The programme had a somewhat rocky start, but things might be sweetening up!

Looking back
Looking back at the first round of competition for Horizon 2020 funds, the incredible popularity of the programme stands out. With the start of Horizon 2020 more researchers than ever before have applied for European funding. This led to a very high quality of funded proposals, but unfortunately also resulted in lower success rates across the board.

There are several reasons for Horizon 2020’s popularity. One reason is that a certain ‘hype’ has surrounded the launch of the programme. Horizon 2020 was marketed as having more money available, and containing broader topics than ever.

In short, there would be room for almost everybody. Another reason why many researchers flocked towards Horizon 2020 is the financial crisis. The past years have led to substantial budget cuts on research in many of the European member states. Faced with fewer possibilities for funding in their own country, many European researchers decided to try their luck in Brussels.

And, they had good reason to do so. Overall, Horizon 2020 has seen a substantial increase in budget compared to its predecessor, Framework Programme 7 (FP7), and the topics have indeed been quite broad in scope. There is a catch, however. For political reasons the framework programmes work with increasing budget tranches, meaning that the last year of FP7 was the biggest year of that programme, while the first year of Horizon 2020 started with a relatively small budget, actually resulting in less available funding than FP7’s final year. The annual budget will increase significantly over the coming years, but it will be 2018 before the annual Horizon 2020 budget surpasses the last year of FP7.

> With topic titles like Understanding ageing and disease, it’s hard to find groups within the UMC who could not fit their research into the programme.
The broad topics have also turned out to be both a blessing and a curse. Yes, more research fit into the programme, but this also meant that more researchers than ever had to compete for the same piece of the pie. With topic titles like Understanding ageing and disease, it’s hard to find groups within the UMC who could not fit their research into the programme. The result, an expected success rate of around 3% for the most popular topics, seems quite discouraging.

**Looking ahead**

Fortunately, there are also some positive notes. As we are about to see the publication of a new Work Programme covering 2016 and 2017, the European Commission will make an effort to correct certain flaws that came to light in the first round of open competition. Already a move towards slightly less broad topics is noticeable. 2015 has seen success rates that were slightly higher than those of 2014, and there is reason to expect that the Commission will tweak the current two-stage evaluation system in which too many proposals were sent through to the second stage, which resulted in barely raising the chances of success.

As mentioned, the budget for 2016 and 2017 will also be higher than the current budget. Combined with the expectation that a substantial amount of researchers - daunted by the incredible competition of the first round - will turn away from Horizon 2020, may lead to an increase in success rates in the coming years.

For BCN, there are interesting opportunities ahead. Next to the always interesting ERC and Marie Curie Grants, there are indications that the next Health Work Programme will contain interesting topics, such as the mental health of young people and its consequences for healthy ageing.

At the UMCG we made a successful start with a Horizon 2020 support group, and we will build on this in the coming period, analyzing the results of the first round to further tailor our advice to the Horizon 2020 requirements. Moreover, we will continue to offer extensive support in virtually every aspect of preparing a potentially successful proposal. Do not hesitate to contact us if you are thinking about submitting to Horizon 2020. We will do everything we can to help you find the right tools to claim your piece of the pie!

**BY GOVERT BUIJS, EU LIAISON OFFICER**
**RUG/UMCG FOR HEALTHY AGEING, ENERGY, SUSTAINABLE SOCIETY**

**PHOTOS BY MICHIEL HOOIVELD**

> For BCN, there are interesting opportunities ahead. <
### Facts and figures

#### PHC-2014-two-stage

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**Source:** Swiss State Secretariat for Education, Research and Innovation (SERI)
Mindwise: Let’s talk about light

At 53 degrees latitude, the days in Groningen can vary in length by up to 9½ hours between winter and summer. This means there are large seasonal changes in the capacity of the sun to give us light and warmth. Some of the coldest days on record have occurred around the winter’s midpoint, even though this day (February 3) will be nearly one hour longer than the shortest day (December 22). Clearly this increase in day length is not enough to increase the temperature.

However, provided the day is clear, each additional hour in the day also means an extra hour of sunshine. This can have a significant impact on one’s mental state. Evidence for this comes from light therapy studies in individuals diagnosed with winter depression (Golden et al., 2005). Light therapy usually involves daily sessions of at least 30 minutes of exposure to white light of at least 2,500 lux. This level of brightness is very difficult to obtain at eye level when you work inside, unless you manage to look out of a window for long periods of time on sunny days.

The University Medical Centre Groningen has an outpatient clinic for winter depression that offers light therapy. About 3% of adults living in Groningen may be diagnosed with winter depression (Mersch, Middendorp, Bouhuys, Beersma, & van den Hoofdakker, 1999) and an additional 8.5% are thought to experience the milder “winter blues.” This amounts to more than 23,000 inhabitants of the city of Groningen, including over 3,000 university students, with significant seasonality in mood.

“Over 3,000 students at the University of Groningen may be diagnosed with winter depression or the winter blues”

Should you start inquiring about light therapy if you are the seasonal type? (Check here to find out if you are, using a questionnaire by Norman Rosenthal, the first person to formally describe winter depression in the 1980s.) The data suggest that light therapy improves mood, in fact it may do so even if you are not the seasonal type (Tuunainen, Kripke, & Endo, 2004) and if you are not depressed (Partonen & Lonnqvist, 2000). However, it is worth noting that the benefit of light therapy may not exceed that of the natural increase in sunlight exposure that comes with the lengthening of days in spring (Postolache et al., 1998). So while I would advise you to seek help if you are suffering from your seasonality in mood, it might be that you also help yourself a little if you seek out the sunshine more during the winter.

“Last year, in the 3 months around the shortest day, Groningen had an average of more than 2 hours of sunshine per day”

I can already hear you saying: “But Groningen in winter is grey all the time!” In fact, according to the Royal Netherlands Meteorological Institute, last year Groningen had close to 200 hours of sunshine in the 3 months around the shortest day, or an average of more than 2 hours of sunshine per day. If only you could be outside then, wrapped up in a warm winter coat… but you have work or school to go to, so you miss out on a lot. Modern life includes many “adaptations” that have
reduced sunlight exposure to less than 30 minutes per day in winter (Hebert, Dumont, & Paquet, 1998); we live indoors, use dim artificial lighting, wear dark glasses, and so on. This extreme avoidance of one of the most salient stimuli in the environment may have contributed to the rise in a variety of diseases (Wehr, 2001).

Few studies have used ambulant monitoring to measure actual light exposure in people across the seasons and fewer still have also measured mood, but from these studies it appears that increases in natural bright light levels may also have a positive effect on mood (Espiritu et al., 1994; Grandner, Kripke, & Langer, 2006). Additionally, it may improve interactions with others (aan het Rot, Moskowitz, & Young, 2008). Notably, it is thought that these effects can occur independently of the season and over short time periods. Importantly, if natural variation in bright light exposure can be associated with variation in everyday mood, then it can be argued that most people in everyday life are exposed to insufficient levels of bright light for optimal functioning.

“Maybe the Department could start assigning staff to offices according to their level of seasonality and opportunities for light exposure during the workday”

Are there alternatives to going outside or purchasing a light therapy lamp for alleviating our bright light deficiency? Studies on workplace architecture suggest that higher light exposure levels can be achieved without interference to work-related tasks due to for example glare (Aries, Aarts, & van Hoof, 2015). Seasonal people in particular prefer to be in well-lit rooms and choose higher levels of indoor lighting (Heerwagen, 1990). This may help reduce stress and fatigue (Alimoglu & Donmez, 2005), symptoms that featured prominently in a survey conducted among the Groningen Psychology staff in 2013. If modifications to existing indoor lighting cannot be implemented, then maybe the Department could start assigning staff to offices according to their level of seasonality and opportunities for light exposure during the workday. When the mood of the staff is better during their interactions with others, students may also benefit.

References


How to pick the right journal?

Probably already experienced by many of us, the period from submission of a manuscript to final acceptance/publication usually takes months – and can even take over a year. This period seems to be filled with all kinds of feelings, such as excitement when finishing the submission, frustration after receiving a rejection letter (…several times) and joy and relief after finally being accepted. One important factor of determining the length of this submission-acceptance period is journal selection. Therefore we offer you, our readers, a brief introduction on journal selection based on two papers which share their submission story and suggestions of journal selection.

The story of Van Teijlingen and Hundley
In their story, Van Teijlingen and Hundley managed to get their academic paper published after trying six journals, costing almost a year (Table 1). Among those decision letters, their paper was rejected for different reasons, including incompatibility between their submission and the journal’s scope, originality (or lack thereof), not attractive enough for potential readers, or even without clear reasons.

<table>
<thead>
<tr>
<th>Journal</th>
<th>Time between submission and journal’s initial reply</th>
<th>Paper reviewed?</th>
<th>Impact factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Science and Medicine</td>
<td>4 weeks</td>
<td>No</td>
<td>1.691</td>
</tr>
<tr>
<td>The Lancet</td>
<td>2 weeks</td>
<td>No</td>
<td>10.232</td>
</tr>
<tr>
<td>British Medical Journal</td>
<td>2 weeks</td>
<td>No</td>
<td>5.331</td>
</tr>
<tr>
<td>Journal of Epidemiology and Community Health</td>
<td>6 weeks</td>
<td>No</td>
<td>1.827</td>
</tr>
<tr>
<td>Journal of Public Health Medicine</td>
<td>2 weeks</td>
<td>No</td>
<td>1.015</td>
</tr>
<tr>
<td>Journal of Advanced Nursing</td>
<td>19 weeks</td>
<td>Yes</td>
<td>0.769</td>
</tr>
</tbody>
</table>

Welch’s Suggestions
Van Teijlingen and Hundley’s submission experience is not uncommon. In 2012, Welch published a paper in the Journal of Thoracic Disease about how to select the right journal, in which several specific suggestions are mentioned.

Identifying a list of potential journals. In the opinion of Welch, it would be good to have backup journals in case a paper is rejected by the first journal. For doing this, PubMed search and Journal Citation Reports are good resources.
Topic Match. According to Welch, when selecting journals, it is helpful to consider questions such as whether the journal and your article cover similar topics, whether the journal has a particular section (e.g. on particular methodologies, participants, etc.) which would make a good home for your manuscript, and the number of papers on your topic which the journal publishes each year.

Acceptance/rejection rate of the journal. Although we all would like to publish our papers in top journals, such journals have a high rejection rate (e.g. more than 90%). Welch thus suggests being realistic about the possibility of a given submission being accepted. Therefore, it is always good to check the journals’ website for information about rejection rates, number of publications, etc.

Speed of peer review, decisions, and publication. Time matters a lot for research work, which can have influence on effective, timely communication of your research within your field. As Welch suggests in the paper, it is important to find out the time taken from submission to final publication for your journal candidates.

Distribution of and access to journal. For effective communication of your research, it is also important to consider the degree to which other people could reach your research (e.g. print/online version, indexed databases, and accessibility, such as paywalls or open access).

Impact factor. Another factor which is difficult to ignore during journal selection is the journal’s impact factor. Nowadays, the impact factor is regarded as an important factor when judging whether a certain journal is good or not (although, of course, debate exists about the use of this factor). However, Welch mentioned in the paper that “it is important to have some historical perspective on the trend of the journals you are considering”.

Parting thoughts. Last but not least, Welch says: “Don’t take the rejection personally, simply consider it as an opportunity to improve the paper”.

Hope these suggestions can be helpful for you! But remember, these are not golden rules, but rather rules of thumb for you to think about and incorporate into your own submission process!

For more detailed information, please check out the full text:
1) Van Teijlingen and Hundley, 2002 (http://www.ncbi.nlm.nih.gov/pubmed/11879414);

By Liwen Zhang
An important part of being a scientist is to be able to convey your thoughts to others and convince your peers (including reviewers and editors) and the general public about your views (backed by data, of course!). We invited two professors from our very own university to provide us with some advice on this topic.

Our first speaker was John Hoeks, Professor at the Faculty of Arts. His research is about the neural basis of communication, with a special focus on persuasive communication and social rules in language. John opened his talk by using logical arguments to try to make us all become vegan showed that this type of persuasion fails miserably. Apparently we are not as rational as we think we are, which makes us highly sensitive to other types of communication – we can blame (or thank) our limbic structures for this. When multiple sources of information clash and we experience discomfort because of the conflict between beliefs and behaviour, it is called cognitive dissonance. One of the solutions to correct this conflict is to add some extra cognition and to change our minds – easier to do than changing our behaviour (if you need help with this, the integrative model of Fishbein could be very helpful). John Hoeks concluded his talk with some promising information about students and therefore we give the following advice: if you start persuading, start with students, apparently we are easy targets due to our openness to experience and need for cognitive engagement.

Our second speaker was Tom Postmes, Professor of Social Psychology at the University of Groningen and University of Exeter. His research and teaching is concerned with communication on the internet, group processes within and between groups, and social identity. He held an open discussion on how to convince fellow scientists about your opinions without alienating them.

First of all it is important to realize that the people that are the most influential are not those that are the tallest, most handsome, or sitting at the head of the table, but rather those that bridge networks. Although you can be an expert within your own network (which of course is comfortable) it is very beneficial to increase your influence and communicate with some networks outside of your comfort zone (risky!). In order to persuade others, you need to create your own community with its common tongue, with a sense of ‘we’ and importantly; with a division of labor. By standing and talking alone your community will not last, so give everyone a voice!

Overall we can conclude that the inspiring and lively talks of both speakers, and welcoming atmosphere of the Goudkantoor (new location! Nice!) made us aware of our task to share information and to realize that we need some support besides our perfect data and rational minds.

Please join our next BCN Lunch meeting with a totally different topic and two more great speakers!

BY THE BCN PHD COUNCIL
PHOTO BY SHANKAR TUMATI
BCN New Year’s Meeting

On February 12th the BCN New Year’s meeting was held. A lively forum was organized, and the New Year’s Lecture was given by Grazia Mancini on the development of the cerebral cortex. Following tradition, several prizes were won, as mentioned on the next page.

PHOTOS BY SANDER MARTENS & MICHIEL HOOIVELD
Winner of the BCN Dissertation Award
The winner of the BCN Dissertation Award 2013-2014 is Linda Geerligs (see issue 95 for an interview with her). Her dissertation, entitled “Images of healthy aging. Functional brain networks and selective attention” was chosen as the best of the 8 nominations. Linda was a PhD student at the Experimental Psychology and is currently a postdoc at the MRC Cognition and Brain Sciences Unit in Cambridge (UK). The committee considered that, in addition to the winner, the theses of Anselm Fuermaier, Odilia Laceulle, and Stefan Wierda were the best BCN dissertations defended during Academic Year 2013/2014.

Winner of the BCN Summary Award
Stefan Wierda, former PhD student at the Neuroimaging Center and currently working as a vision engineer at Fugro, is the winner of the BCN Summary Award 2013-2014. His summary was chosen as the best of the submitted summaries. The title of his dissertation is “Less is more. Strategic restrictions in temporal attention”. All nominations are printed in the booklet “To the Point”. Please contact Diana Koopmans (d.h.koopmans@umcg.nl) if you would like to receive a copy.

Winners of the BCN Poster Awards
Claire Kos, Jenke Gorter, and Florian Sense won the BCN Poster Awards. Their posters were selected as the best during the BCN Poster Afternoon.
What is consciousness?

What is consciousness? This is probably one of the most pervasive and notorious, as well as cliché, questions in neuroscience, if not in all of science. It usually comes in different flavors and subquestions, such as: “What is the relation between the mind and physical reality?”, “Can we artificially create awareness?” and “Why should we care about consciousness?”. And indeed, it is exactly these questions that drive me to pursue a career in science. Especially the latter of these - although rarely addressed in mainstream neuroscience - pertains to how my interest in the brain was first sparked.

During my first years as a psychology student, I gradually became more interested in philosophical and ethical questions. I realized that many of these issues would ultimately boil down to the mind-body problem. The physical reality as described by the natural sciences doesn’t encompass concepts such as purpose and morality (yet). It is in subjective minds where meaning and feelings arise - where qualia arise. So in order to tackle these questions, we have to take on the problem of consciousness first. At around the same time, I learned about the brain and ultimately, how complex behavior emerges from mere biophysical mechanism. I was instantly intrigued by how relatively minor changes at the biological level could result in bizarre effects at the cognitive level. Although I’m not claiming that we need the biological wetness of the brain in order to understand consciousness, it definitely seemed like a good place to start.

In 2011 I was admitted to the master’s programme Behavioral and Cognitive Neurosciences. This gave me the opportunity to focus on the things that I was most interested in. Under supervision of Jacob Jolij, I got my hands dirty for the first time on some actual neuroimaging data, obtained using EEG. We were interested in a possible link between dopamine levels and the processing speed of visual information. I believe that it is especially the notion of information that is important in order to understand the brain. Rather than looking for what particular brain areas are associated with some specific cognitive state, I am mostly interested in the informational content that is represented in these areas.

Although I did a bachelor’s in psychology, I have a strong affinity with mathematics and the natural sciences. This led me to the field of computational neuroscience - computational neuroscience aims to understand the brain by simulating (parts of) it. Rather than relying on reductionism alone, computational neuroscientists reason that once we have disintegrated the brain into parts, we should re-assimilate again, because the whole cannot be understood in terms of its parts alone. Put a little more concretely: by simulating networks of interconnected neurons, we can systematically investigate how information is processed in the brain and ultimately, how complex behavior emerges from mere biophysical mechanism.

As soon as I learned about this exciting field, I realized that this was the next step I wanted to take.

In 2013, I had the great opportunity to conduct my master’s internship in the lab of Gustavo Deco, one of the world’s leading computational neuroscientists. The project focused on the origin of coherent spatiotemporal structures that are exhibited by spontaneous neural activity in early visual cortex. Using neural simulations, we found that these structures could be understood as noise-driven fluctuations over intrinsic states when the system operates at the brink of a bifurcation. Besides many new insights into the functioning of the brain, this internship also uncovered a new personal appreciation in the cultural domain. It just so happened that Deco’s lab is situated in Barcelona, and my visit to Antoni Gaudí’s Sagrada Familia turned out to be one of those rare occasions in which I actually sincerely enjoyed architecture.

Since December 2013 I have been pursuing a PhD position at the Donders Institute in Nijmegen, under the supervision of Floris de Lange. We investigate ongoing neural fluctuations in humans and, using MEG in combination with multivariate analyses techniques, we aim to unveil a possible functional role of these in visual perception.

So what’s next? For the next couple of years, my focus will be on obtaining my PhD and taking full advantage of the outstanding facilities and stimulating atmosphere at the Donders Institute. In the meantime, I would like to gain a better understanding of mathematics and physics (so far, the MIT OpenCourseWare lectures have proven to be an interesting bedtime “read”). In the long-term, my goal will be to embed the study of cognition into the solidly-founded and quantitative body of the natural sciences. And ultimately, in doing so, I hope that we will be able to begin getting a grasp on that one eluding question: what is consciousness?
> New staff writers wanted!
Do you enjoy reading the Newsletter? If so, why not join our enthusiastic editorial team and make it even better? Regardless of whether you’re a master student or PhD student, it’s a great way to expand your network, improve your English writing skills, and be actively involved in BCN. Interested? Send an e-mail to Sander Martens, s.martens@umcg.nl!
BCN postdoc elected to the Dutch Young Academy

Every year, the Royal Academy of Science (KNAW) invites ten extremely talented young scientists to join the Dutch Young Academy. Martijn Wieling, who is currently working as a postdoc at the RUG, is one of them. He finished his PhD cum laude in 2012 as a member of BCN. His dissertation dealt with new quantitative methods to investigate dialect variation. Recently, he received a VENI grant for a four-year project on pronunciation in second language learning. His main aim is to evaluate how tongue and lip movements contribute to the production of certain speech sounds in peoples’ native language compared to a second language. He’s also a strong advocate of open access and the sharing of data and methods.

For more about Martijn, see our interview with him in BCN Newsletter Issue 93, pages 9-10

Source: https://www.knaw.nl/nl/actueel/nieuws/nieuwe-lichting-voor-de-jonge-akademie

1.5 million Euro for effect exercising on Alzheimer

Within the framework of the ‘Memorabel’ programme, ZonMw has awarded 1.5 million Euro to a research project for which the pre-clinical part will be led by Prof. Eddy van der Zee of the Centre for Behaviour and Neurosciences, University of Groningen. The four-year project is entitled ‘Train the sedentary brain: move smart to reduce the risk of dementia’. The research done by Van der Zee will focus on the effect of good exercising on the human brain by submitting mice with Alzheimer to various movement interventions. The clinical part of the project is led by Prof. Erik Scherder of the VU University Amsterdam. Other partners in the project are Radboud University Nijmegen (Geriatrics) and the University Medical Center Groningen (Center for Human Movement Sciences, and Neurology).

Memorabel programme ZonMw website

Anton Scheurink elected Lecturer of the Year

Prof. Anton Scheurink, Professor of Neuroendocrinology at the Groningen Institute for Evolutionary Life Sciences, has been elected University of Groningen Lecturer of the Year 2014. Scheurink won the Jury Award and the Audience Award and also received the most votes in the internet elections, making him the winner of the Web Award as well. Scheurink received a work of art, an e-reader and prize money of EUR 7,500. In addition, the new Lecturer of the Year gets to develop and teach a course unit in the Honours College.

900,000 Euro for developing and testing Alzheimer medicines

The Dutch health research funding organization ZonMw has awarded a 900,000 Euro grant to Prof. Ulrich Eisel of the Centre for Behaviour and Neurosciences, University of Groningen, for research on Alzheimer medicines. Eisel will develop and test potential medicines that can pass the blood-brain barrier by using nanocarriers and that work neuro-protective via TNF receptors. The potential medicines will be tested on both cell cultures and acute mouse models of Alzheimer’s disease. The research project, entitled “Exploring the potential of multi-target treatment for Alzheimer’s Disease: towards and integrated and transdisciplinary approach”, is interdisciplinary and combines biophysics, molecular neurobiology and neuropathology. Eisels partners in this project are the University of Twente (Nano-biophysics), the VU University Amsterdam (Neuropathology), and the biotechnology companies Baliopharm and Crossbeta.

Have you recently received any grants, prizes, or remarkable media coverage? Please let us know (E.T.Kuiper-Drenth@umcg.nl) and we will try to cover it here!
Snow in the Land of Eternal Sunshine

As a kid I always wished we would get snow in Egypt. I felt jealous of all those kids in European countries who would be building snowmen, enjoying snowball fights with their friends, or even have school canceled because of the snow! Little did I know that within one year of my relocation from Cairo to Europe, my wish would come true. Last winter, Cairo experienced what appears to be its first snowfall in roughly 100 years. While skiing down the pyramids seems like an intriguing endeavor, this phenomenon actually spells quite a few problems for the country of everlasting sunshine.

Summers in Egypt (and in Cairo, specifically) are quite long and rather intense. They typically begin in mid to late March and can last until about October or November – sometimes even until early December (oh yes!). Although the “official” summer season is from June to August, temperatures start increasing quite dramatically in late April and can remain quite high (compared to European standards) until the end of the year. For example, the average temperature in December 2013 as I recall it was a balmy 23-24 degrees C, coupled with plenty of sunshine and a clear blue sky. For this reason, the whole country is designed to withstand the prolonged durations of immense heat, and so air-cooling whether by fans or air conditioners is the standard. That’s why when temperatures fall so drastically, it becomes a severe problem because we have little or no central heating facilities in buildings and transportation vehicles. To get an idea of what it might feel like in Cairo during winter, try turning off the heating in your house or office here in Groningen for 24 hours. Pretty cold, isn’t it?

Only lately though have the winters become quite extreme. As the summers grew longer and far more intense than they were when I was a child, the winters grew shorter but also severely colder, as if in retaliation against the ever-increasing durations of the scorching heat. A few weeks ago for example, Cairo experienced temperatures that were even lower than those in Groningen or Zürich, according to my weather app. Frequent episodes of sleet and rain showers overtook various parts of the country, setting the streets and consequently the traffic into a perpetual state of turmoil. Unsurprisingly, the streets are not built with an underground drainage system, and so the slightest downpour leads to precarious water levels that might threaten any car’s engine system. With the ever-increasing amount of traffic in Cairo, this spells disaster because cars need to go even slower to avoid getting their engines soaked. Consequently, if you’re unlucky enough to be on the street that day, you might expect to be stuck in a 2-3 hour long traffic jam (no exaggerations here)!

While all this seems to be foreboding, a lot of Egyptians nonetheless seem to be quite thrilled at the prospect of experiencing snowfall. The novelty of it, the thought of building exotic snowmen (yes there was a picture of a snowman smoking a hookah circulating around Facebook at some point), and the beauty of this mystic desert country enshrouded in white snow, are probably what make this an exhilarating experience, despite the accompanying problems.

■ BY NAWAL EL BOGHDADY-BCN PHD STUDENT, KNO DEPARTMENT, UMCG
Cool links

- Coursera is an education platform that partners with top universities and organizations worldwide, to offer courses online for anyone to take, for free. https://www.coursera.org/


> PhD AND OTHER NEWS

Hora Finita – Credits for BCN Lectures
Hora Finita doesn’t accept 2 decimal digits, therefore the EC’s for BCN Lectures has been reduced from 0.25 to 0.2 EC.

Agenda BCN Activities
March 26 & 27, 2015
BCN Retreat
May 29, 2015
BCN Symposium. Changed date!
June 24 & 25 and July 1 & 2
BCN Statistics Course.
Application: http://cursus.webhosting.rug.nl/gsms
Please check the website for detailed information.

DIANA KOOPMANS
(D.H.KOOPMANS@UMCG.NL)

NEW PHD COUNCIL MEMBERS WANTED
We, the BCN PhD council, represent the interests of BCN PhD candidates and organize various social activities. And we would love to have you on board! As a Board member, you will get in touch with other PhD candidates, help organize events, and MORE AWESOME THINGS. If you are interested, please get in touch: bcnphdcouncil@LIST.RUG.NL

OK, I NEED A PLAN FOR WRITING MY THESIS.

STEP 1: MAKE A PLAN.
STEP 2: SET A DEADLINE.
STEP 3: FREAK OUT.

http://www.phdcomics.com
**Urothelial cell carcinoma**

**PROMOVENDUS**

A.M. Leliveld-Kors

**PROEFSCHRIFT**

Urothelial cell carcinoma

**PROMOTORES**

Prof.dr. I.J. de Jong

Prof.dr. G.H. de Bock

Hoge leeftijd belangrijke reden om af te wijken van standaardbehandeling blaaskanker

De voornaamste redenen van urologen om patiënten niet de standaardbehandeling voor blaaskanker te geven zijn een hogere leeftijd van de patiënt of ernstige, bijkomende ziekten. Dat is één van de uitkomsten van het promotieonderzoek van Annemarie Leliveld-Kors. Verder deed zij onderzoek naar de waarde van het, in de praktijk weinig meer toegepaste, retrograde contrastonderzoek van de urineleiders om tumoren in de hoge urinewegen te kunnen opsporen.

Leliveld-Kors bestudeerde in het eerste deel van haar onderzoek onder andere een groep patiënten met spieringroeiende blaaskanker in Nederland die behandeld werden in de periode 1997-2009. In die periode gebruikten Nederlandse urologen, in afwezigheid van een Nederlandse richtlijn, Europese en Amerikaanse richtlijnen voor de behandeling van deze vorm van kanker. In de praktijk bleek maar een kleine groep patiënten volgens de richtlijn te worden behandeld.

De promotenda stelde vast dat een leeftijd boven de 75 jaar en ernstige bijkomende ziekten voor urologen de voornaamste redenen waren om af te zien van een cystectomie, een verwijdering van de blaas. Bij mensen met een hogere sociaal-economische status gingen artsen juist vaker over tot een cystectomie. Deze groep had ook een grotere kans op een betere overleving nadien. Onafhankelijk van leeftijd, bijkomende ziekten of sociaal-economische status bleken patiënten bij wie de blaas verwijderd werd, of die in- of uitwendige radiotherapie ondergingen langer te leven. Het onderzoek helpt om meer inzicht te geven in de invloed van arts-, patiënt- en ziektegerelateerde factoren op behandeling en behandelaftsluiten.


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**Daily functioning in children with developmental coordination disorder: Assessment of activities of daily functioning**

**PROMOVENDUS**

B.W. van der Linde

**PROEFSCHRIFT**

Daily functioning in children with developmental coordination disorder: Assessment of activities of daily functioning

**PROMOTORES**

Prof.dr E. Otten

Prof.dr. K. Postema

**CO-PROMOTORES**

Dr. M.M. Schoemaker

Dr. R.H. Geuze

Motorische test en vragenlijst voor snellere diagnose coördinatiestoornis

De ontwikkeling van een motorische test en een speciale vragenlijst voor ouders kunnen het stellen van de diagnose Developmental Coordination Disorder (DCD) gemakkelijker maken. Dat stelt Berdien van der Linde in haar promotieonderzoek. Zij ontwikkelde de test en vragenlijst en testte deze in de praktijk.

Kinderen met DCD hebben moeite met het coördineren van bewegingen. Dit levert vaak problemen op bij dagelijkse activiteiten: drinkbekers vallen om, schrijfwerk is onleesbaar en ‘onhandigheid’ verstoort het samenspelen met andere kinderen. Hoewel de stoornis relatief mild van aard is, kan de impact van DCD op het leven van kinderen groot zijn. Naast de motorische moeilijkheden kunnen andere problemen ontstaan, zoals verminderde fitheid en weinig zelfvertrouwen.
Om de dagelijkse activiteiten van kinderen met DCD goed te kunnen bestuderen, maakte Van der Linde twee nieuwe meetinstrumenten: een motorische test (DCDDaily) en een vragenlijst (DCDDaily-Q) voor de ouders van kinderen van vijf tot negen jaar. Door deze nieuwe instrumenten af te nemen bij 404 ‘normale’ kinderen en 55 kinderen met DCD bleek dat deze de problemen van de kinderen goed kunnen vastleggen. Kinderen met DCD kunnen dagelijkse activiteiten (bijvoorbeeld brood smeren, zichzelf aankleden, kleuren, lopen met een volle beker, hinkelen) minder goed uitvoeren, doen er langer over om de activiteiten onder de knie te krijgen, en participeren minder vaak in zulke activiteiten dan leeftijdgenoten.

De motorische test en vragenlijst kunnen volgens Van der Linde niet alleen helpen bij het sneller stellen van de juiste diagnose. Ook zijn de meetinstrumenten nuttig om passende fysio- en ergotherapie samen te stellen voor individuele kinderen, en om verder onderzoek te doen naar de stoornis.


Early motor development, early visual attention and functional outcome in children: Insights into functional brain development

PROMOVENDUS
M.M. Hitzert
PROEFSCHRIFT
Early motor development, early visual attention and functional outcome in children: Insights into functional brain development

PROMOTOR
Prof.dr. A.F. Bos
CO-PROMOTOR
Dr. K.N.J.A. van Braeckel

Ontwikkeling vroege motoriek en visuele aandacht voorspellen problemen bij schoolkinderen
De ontwikkeling van motoriek en visuele aandacht in de eerste maanden na de geboorte kunnen allebei het functioneren in de schoolperiode voorspellen. Dat concludeert UMCG-onderzoeker Marrit Hitzert. Zij deed
Placenta-afwijkingen hebben invloed op ziekte en ontwikkeling te vroeg geboren

Bij ongeveer 90% van de te vroeg geboren kinderen zijn een of meer afwijkingen in de placenta gevonden. Deze afwijkingen leiden er toe dat het kind meer ziek is kort na geboorte en hebben ook invloed op de ontwikkeling op kleuter- en schoolleeftijd. Dit blijkt uit onderzoek van Annemieke Roescher van het UMCG. Het is voor het eerst dat zo uitgebreid onderzoek is gedaan naar de relatie tussen placenta-afwijkingen en de gezondheid bij het kind. De uitkomsten van haar onderzoek kunnen er toe leiden dat de placenta snel na de geboorte een bron van informatie wordt die helpt de neonatale zorg te verbeteren. De placenta is de link tussen moeder en haar foetus tijdens de zwangerschap en speelt een cruciale rol in de groei en ontwikkeling van de foetus. Een vermindering in deze functie, als gevolg van placenta-afwijkingen, kan leiden tot problemen voor zowel moeder als foetus. Het is bekend dat placenta-afwijkingen een belangrijke rol spelen bij foetale sterfte. De relatie tussen placenta-afwijkingen en de uitkomst bij levend geboren kinderen is nog onduidelijk.

Roescher ging in haar onderzoek na wat de gevolgen op korte termijn zijn voor de gezondheid van de pasgeboren baby. Zij ging de mate van ziek zijn na tijdens de eerste 24 uur via de Score of Neonatal Acute Physiology Perinatal Extension (SNAPPE) en gedurende de eerste 2 weken na geboorte via het spontane bewegingspatroon van de kinderen. Uit haar onderzoek blijkt dat zowel placenta-afwijkingen als gevolg van trombose in de foetale circulatie, als tekenen van zuurstoftekort, invloed hebben op de mate van ziek zijn van het kind kort na geboorte. Ook lieten deze baby’s minder fraaie spontane bewegingen zien, wat voorspellend is voor de neurologische uitkomsten op latere leeftijd.

In haar studie keek Roescher ook naar de gevolgen in de ontwikkeling van deze groep op 2-3 jarige leeftijd en 6-7 jarige leeftijd. Het overgrote deel van deze kinderen ontwikkelt zich zonder neurologische problemen. Alleen placenta-afwijkingen door opstijgende infecties vanuit het geboortekanaal hebben invloed op de ontwikkeling op kleuter- en schoolleeftijd. Het gaat hierbij zowel om cognitieve- als om motorische ontwikkeling.
Volgens Roescher biedt haar proefschrift inzicht in mogelijke oorzaken van ziekte van een pasgeborene. ‘Bij kinderartsen, obstetrisen en vroedvrouwen is de kennis over de betekenis van placenta bevindingen voor de neonatale zorg nog beperkt. Ik hoop hiermee meer bewustwording te creëren bij gezondheidswerkers in de geboortezorg over het belang van de placenta voor goede zorg bij de pasgeborene.’ Dit kan volgens haar leiden tot minder ernstige gevolgen van deze afwijkingen.


When the party is over…..: Investigating the effects of alcohol, THC and MDMA on simulator driving performance

PROMOVEDUS J.L. Veldstra
PROEFSCHRIFT
When the party is over…..: Investigating the effects of alcohol, THC and MDMA on simulator driving performance
PROMOTOR Prof.dr. K.A. Brookhuis
CO-PROMOTOR Dr. D. de Waard

Met cannabis of ecstasy in de rijsimulator
Is rijden onder invloed van drugs echt gevaarlijk?
Ben je niet juist weer helder als je een ecstasy pilletje neemt en je de gevolgen van alcohol niet zo voelt? Janet Veldstra onderzocht deze en andere vragen door mensen onder invloed van THC of MDMA, al dan niet in combinatie met alcohol, in de rijsimulator te laten rijden.

Veldstra concludeert dat MDMA (de werkzame stof in cannabis) de rijvaardigheid duidelijk negatief beïnvloedt. ‘Het geldt zowel voor frequent gebruik als voor mensen die slechts af en toe cannabis gebruiken, al presteerde de laatste groep wel wat slechter dan de eerste groep’, zegt Veldstra. Verder concludeert ze dat het algemeen heersende idee klopt dat mensen, naarmate ze zich meer high voelen door de THC, ook meer compenseren voor hun vermindere rijvaardigheid door snelheid te minderen. ‘Dat compensatiegedrag was echter onvoldoende om de effecten van het middel op de rijveiligheid op te heffen.’

Uit haar onderzoek blijkt verder dat THC (de werkzame stof van cannabis) de rijvaardigheid niet negatief beïnvloedt. ‘Dit geldt zowel voor frequent gebruik als voor mensen die slechts af en toe cannabis gebruiken, al presteerde de laatste groep wel wat slechter dan de eerste groep’, zegt Veldstra. Verder concludeert ze dat het algemeen heersende idee klopt dat mensen, naarmate ze zich meer high voelen door de THC, ook meer compenseren voor hun verminderde rijvaardigheid door snelheid te minderen. ‘Dat compensatiegedrag was echter onvoldoende om de effecten van het middel op de rijveiligheid op te heffen.’


Induced pluripotent stem cells: therapeutic potential for multiple sclerosis

PROMOVEDUS M.R. Czepiel
PROEFSCHRIFT
Induced pluripotent stem cells: therapeutic potential for multiple sclerosis
PROMOTOR Prof.dr. H.W.G.M. Boddeke
CO-PROMOTOR Dr. J.C.V.M. Copray

MS-patiënt in toekomst mogelijk met eigen cellen behandelen

Patiënten met Multiple Sclerose (MS) kunnen in de toekomst misschien behandeld worden door gebruik te maken van hun eigen zenuwcellen. Omdat patiënten daarvan nu juist geen grote aantallen hebben, wordt gewerkt met bindweefselementen uit de huid, die in een kweekbakje geherprogrammeerd worden tot een soort embryo- en embryonaal stamcellen (induced pluripotent stamcellen, iPS-cellen). Marcin Czepiel beschreef welke voor- en nadelen aan deze nu nog experimentele therapie verbonden zijn.

Ons centrale zenuwstelsel functioneert onder andere goed dankzij myeline, een

Looking on the bright side: The neural basis of emotion processing and regulation in groups at increased risk for psychosis

PROMOVENDUS
J. van der Velde
PROEFSCHRIFT
Looking on the bright side: The neural basis of emotion processing and regulation in groups at increased risk for psychosis

PROMOTORES
Prof.dr. A. Aleman
Prof.dr. D. Wiersma
CO-PROMOTOR
Dr. R. Bruggeman

Emotieverwerking verloopt minder goed bij mensen met risico op psychose

Mensen met een hoger risico op het krijgen van een psychose lijken vaker problemen te ervaren met emotieverwerking en –regulatie. Deze problemen zijn niet alleen een gevolg van, maar spelen mogelijk ook een rol bij het ontstaan van psychoses. Dat concludeert Jorien van der Velde. Om te onderzoeken of mensen met een verhoogd risico op het krijgen van een psychose, net als patiënten met schizofrenie, moeilijkheden ervaren met het verwerken en reguleren van emoties onderzocht ze de neurale processen die zich afspelen tijdens emotieverwerking en –regulatie in het brein.

Als we geconfronteerd worden met een situatie die negatieve emoties oproept (een naar krankzinniger, een lekke band) dan worden verschillende emotieverwerkingsgebieden in onze hersenen actief. Een van die gebieden is de amygdala, een emotie-identificatiegebied. Vervolgens worden andere hersengebieden zoals de prefrontale cortex actief. Deze zorgen voor het interpreteren en relativeren van emotionele situaties, en remmen de amygdala vervolgens af. Dit proces werkt bij patiënten met schizofrenie niet goed, waardoor zij mogelijk meer negatieve emoties ervaren. Van der Velde onderzocht hoe mensen met een verhoogd risico op het ontwikkelen van een psychose emoties verwerken en reguleren. Ze deed dat op basis van literatuuronderzoek en eigen onderzoek.

De promovenda concludeert dat een verhoogd risico op het krijgen van een psychose inderdaad samenhangt met emotieverwerkingsproblemen: een verminderde capaciteit om emoties onder woorden te brengen, te identificeren of analyseren. Daarnaast lieten de resultaten zien dat mensen met een extra verhoogd risico op het krijgen van een psychose een verminderde neurale capaciteit hebben om hun emoties te relativeren. Vervolgonderzoek moet uitwijken of een verminderde capaciteit om emoties te verwerken en reguleren ook de kans op het krijgen van een psychose kan voorspellen.

> CHEEKY PROPOSITIONS

“Buiten de lijntjes is het leven vaak veel leuker.”
> Berdien van der Linde

“Men moet niet alles zeggen wat men weet, maar wel alles weten wat men zegt” (Friese wijsheid door Theo Dijkstra, vrije vertaling).”
> Marrit Hitzert

“Een goede toepassing van emotieregulatie is een essentiële eigenschap voor promovendi.”
> Jorien van der Velde

“Het gebruik van uitgebreide beoordelingsschema’s in het hoger onderwijs heeft als risico dat de creativiteit en vindingrijkheid van zowel student als docent beknotted.”
> Jorien van der Velde

> COLophon

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