

## **Mindfulness in adults with autism spectrum disorders**

### Introduction

Autism is a lifelong developmental disorder that affects functioning in multiple areas. Recent studies show that autism is often accompanied by other psychiatric problems, including depression, anxiety, hyperactivity, inattention and distress. Evidence points to depression being the most common psychiatric disorder seen in autism (Ghaziuddin et al., 2002). Especially adults with a relatively high cognitive ability tend to develop symptoms of depression, possibly because they are more aware of expectations of the outside world and their inability to meet those expectations.

Symptoms of depression in adults with autism differ to those in other individuals, and range from an increase in difficulty with change to an increased sensitivity for sensory stimuli (Ghaziuddin et al., 2002). An important aspect related to depression and distress in people with autism is the tendency to ruminate. This can be described as having repetitive thoughts, a process which is very difficult to stop. Adults with autism, for instance, often lay awake at night, pondering about the events of the day, analyzing them in detail. The tendency of people with autism to ruminate appears related to the detailed information processing style that characterizes autism.

### Treatment in autism

Various interventions have been devised to alleviate distress and co morbid symptoms in autism, although evidence of their efficacy is still limited. Most of these interventions are aimed at adapting the environment to meet the needs of the person with autism. Notwithstanding the importance of such interventions, it has become increasingly clear that there is a need for therapies that offer tools that people with autism can use themselves to actively tackle problem situations and reduce distress. Especially the adults with high functioning autism may be able to acquire and use self-help techniques they can utilize in daily life.

Recently, cognitive behavioral therapy (CBT) and mindfulness-based stress reduction (MBSR) were modified for the benefit of high-functioning individuals with autism. Both therapies aim to reduce co morbid symptoms in autism and alleviate distress in general. In CBT, dysfunctional thoughts and emotions are analyzed and modified into more functional thoughts and emotions. Recent preliminary studies in autism show promising results, especially for symptoms of anxiety and depression (Weiss & Lunskey, 2010). However, generalizability of the CBT skills seems limited.

Furthermore, CBT appears challenging for individuals with autism because it requires analyzing and talking about thoughts and feelings, which calls upon communication and theory of mind skills that are usually impaired in people with autism. This stresses the need to develop and examine more interventions for people with autism.

In MBSR, a person learns to focus their attention on the present moment, which impedes ruminative thoughts and emotions. MBSR has recently been modified for people with autism, taking into account their information processing characteristics. A clear merit of this intervention is that it requires few theory of mind and communication skills, since thoughts and emotions are not analyzed. During the MBSR training, meditation skills are taught, which the individual can utilize in their everyday life, in order to reduce rumination and symptoms of distress. The skills can be applied in any situation a person encounters in their life. A drawback of MBSR is the time involved; participants need to practice at home for half an hour to an hour a day during the training. For the individuals with ASD who do the training, MBSR seems an effective treatment to reduce symptoms of anxiety, depression and rumination (Spek et al., submitted).

In the following passages we will elaborate on the theoretical and practical aspects of an MBSR group intervention for high functioning adults with ASD. We will end with a discussion about the effects of MBSR in this group, as recorded from a randomized controlled trial and from clinical practice.

#### Theoretical aspects of MBSR in adults with ASD

In the MBSR training module, the concepts 'doing-mode' and 'being-mode' are central. Both modes are described as conditions of the brain: When the brain is in a doing-mode, it is thinking and actively seeking solutions for problems. The brain is then focused on achievement and outcome. However, when there is nothing you can do or say to solve the problem, it is not useful and often even frustrating and counterproductive to keep searching for solutions (ruminating). In these situations it would be better to stop searching and accept the situation as it is. This state of mind can be described as a being-mode: not wishing to change, not worrying about goals in the future, but experiencing what is present at that moment and accepting the way it is.

Often, participants in the MBSR group ask if it is possible to *do* something when you are in the being-mode. We then explain that you can ride a bike in the being-mode if you concentrate on the present, on, for example, the wind in your hair or feeling your muscles. If you ride the bike in the doing-mode, you are not aware of the present moment, but instead thinking about work or other things that are in the past or future.

While the doing-mode can be very useful when trying to achieve something, people with autism often remain in the doing-mode when this is not, or no longer, of benefit. When lying in bed, for instance, and wanting to go to sleep, or when there is a problem that cannot be solved, people with autism often keep pondering. In these situations they often feel the urge to 'stop thinking', but are unable to do so. For many people with autism, it is very difficult to create a peaceful or still mind. During the MBSR training, the participants learn to gain more control over the focus of the mind, for instance by actively directing attention to breathing or to certain parts of the body. When the

attention is thus focused, it can feel as if the mind is more at peace, because the attention is diverted away from thoughts and actions, towards a more peaceful focus and thus into the being-mode. This can help to stop the thought cycle and fall asleep. When people with ASD learn to influence the mode of the brain, it helps them to actively create a more peaceful mind, by shifting from the doing-mode to the being-mode.

Another key aspect of the MBSR training for people with ASD is acceptance of the situation as it is. Many people waste energy on trying to change things that can not be changed. Acceptance often requires less energy than keeping up the fight for something that cannot realistically be changed. This is always a theme of the MBSR training and it is one that is recognizable for many adults with ASD.

### Practical aspects

MBSR can be taught in a group or individually, using the book 'Mindfulness in adults with ASD'. This book has so far been published in Dutch and German; it has yet to be translated into English.

During the MBSR training, different meditation techniques are taught. These techniques are practiced in daily life situations (for instance at home or at work), accompanied by an audio file. The meditations have been adapted for the information processing style of autism. For example, words or sentences that are ambiguous or that require imagination skills were avoided. One example is that in regular mindfulness, participants are asked to breath in and direct the breath to the toes. In our try-out MBSR training, a man with autism remarked, while pointing to his stomach: 'I can't do that because my lungs end here'. Based on those and other experiences of the try-out group, we modified the instructions.

The meditation techniques can be practiced lying down, while sitting, walking or in any other way that feels comfortable. The length of the meditations vary between five and forty minutes, depending on what is convenient and what suits the individual's needs. During the MBSR training, the participants explore which meditation techniques they find helpful and in which situations they experience most benefit. After the nine-week mindfulness training, each individual draws up a schedule of meditations they want to integrate into their daily life including when and where to incorporate them. Often, they will ask someone close to them to help them keep practicing mindfulness.

It is important to also mention that in some situations, MBSR is not advisable. For instance when the person is experiencing any sort of upheaval in their life, they may not have the focus or the energy for the MBSR training, since it requires daily home practice.

Furthermore, acute psychiatric conditions (psychosis or severe depression) are

contraindications for following MBSR and require other interventions before MBSR should be considered.

### Training effects of MBSR in autism.

MBSR in ASD has been studied in adolescents and adults. Two studies were performed in adolescents with either high-functioning autism or Asperger syndrome and results were promising (Singh et al., 2011a,b). In these intervention studies, the adolescents were taught to shift their attention from their emotion (anger, frustration), to focus on the soles of their feet. The results showed a decrease in anger and aggression.

In our study, 42 adults with ASD were randomly assigned into a 9-week MBSR training or a wait-list control group. The results showed a significant reduction in depression, anxiety and rumination in the group who followed the MBSR training, as opposed to the control group. Furthermore, positive affect increased and negative affect decreased in the intervention group, but not in the control group. We concluded that adults with ASD can acquire meditation skills and apply these to their private life in a way that reduces distress and improves wellbeing (Spek et al., submitted). Outside of the study we also asked the participants in person if and how the MBSR group training helped them. Firstly, we noticed that on average, each group (with 10 to 12 participants) contained one person who reported no benefit from MBSR. Although more research is necessary to examine predictors of the benefits from MBSR in this group, one of adults with ASD who participated in an MBSR group offered an interesting suggestion. She hypothesized that treatment benefit might be related to the ability to 'feel the body'; if one cannot feel any bodily sensations, it may be difficult to focus on the body or breathing. This may impede the ability to benefit from MBSR.

When looking at the participants who did report positive effects from MBSR, the improvement mentioned the most, was the ability to fall asleep more easily, often by directing attention to the body (body scan) or to the act of breathing. Secondly, many participants mentioned that MBSR helped them to be less hindered by ruminative thoughts, by directing attention onto something else. Most of these participants practiced the thinking meditation (focusing on thoughts passing by) or the breathing meditation, mostly during the day, in order to stop ruminating and creating a moment of rest in their mind. This helped them to reduce distress in challenging situations, for instance at work. Thirdly, participants mentioned that MBSR enabled them to be gentler and more accepting toward themselves;

some realized that they set their sights too high, which inevitably leads to failure and distress.

Before going to the conclusions, I would like to add that I really enjoyed giving MBSR to adults with ASD. I especially enjoy and envy their drive and sense of humor. An example of this, which I will never forget, is that during one of the training sessions, a participant of the group asked: 'what is a mantra?' My colleague trainer explained that a mantra is a word or sentence that you can repeat in your mind, which makes you feel better. Then another participant remarked (smiling): 'when I feel down, I'd rather imagine an image', while with his hands, he outlined a woman's body. At that moment, the man sitting next to me lights up and says: 'Ooh, a *womantra*'.

In conclusion, MBSR seems an effective intervention for reducing co morbid symptoms of depression, anxiety and distress in high functioning adults with ASD. Furthermore, they are able to actively acquire techniques that can help them gain more control and positively influence their wellbeing.

#### **Literature:**

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Dr. Annelies Spek is clinical psychologist and senior researcher at the adult autism center in the south of the Netherlands (Eindhoven). Her PhD thesis was entitled: cognitive profiles of adults with high functioning autism (HFA) or Asperger syndrome. Now she examines the effects of treatment in adults with autism. She also gives lectures about diagnosis and treatment in adults with autism.

Furthermore, she gives mindfulness training to adults with autism and she developed a training program for clinicians (who work with adults with autism) on this subject. For more information about (mindfulness in) adults with autism: her e-mail address is [anneliesspek@hotmail.com](mailto:anneliesspek@hotmail.com)

The original book 'Mindfulness in adults with autism', has not been translated in English yet. If you would like to be informed about this in the future, send me an email. If you have any ideas that might help to have the book translated in English, please contact me!

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Kind regards,

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