TREATMENT OF MULTIPLE PHOBIAS AND AGORAPHOBIA IN A MAN WITH DOWN SYNDROME

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This is the first report of agoraphobia with panic attacks in an adult with Down syndrome. He was a 34-year-old man with mild intellectual disability and since early childhood had a fear of heights. This generalized in adulthood to fear of elevators, bridges, and agoraphobia with panic attacks. Cognitive behavioral treatment using graded exposure with homework assignments yielded significant improvements.

Keywords: agoraphobia, anxiety, cognitive behavior psychotherapy, developmental disability, Down, Down's syndrome, graded exposure, intellectual disability, mental retardation, phobia, psychiatric disorder

People with Down syndrome may have a behavioral phenotype involving sociability and adaptability. Nonetheless, like intellectually normal individuals, they may develop mental health problems in life. Individuals with Down syndrome may, compared to others with intellectual disability, be more prone to develop depression and anxiety disorders. 17,18 A particularly rare and severe form of depression with associated anxiety, “obsessional slowness,” may be seen among those with Down syndrome with some frequency. 3,4,16 A recent research report using the S-100ß mouse model suggested that abnormalities in the serotonergic neural system may be responsible in part for anxiety responses in people with Down syndrome. 1

Published reports of adults with Down syndrome suffering from phobias are rare. Waranch and colleagues 24 reported on the successful treatment of a 21-year-old man with Down syndrome and a fear of mannequins using in vivo desensitization and shaping behavioral approach. Freeman 9 reported the successful treatment of a dog phobia in a 31-year-old man with Down syndrome using systematic desensitization and behavioral modeling of approach to the dog.

Adults with intellectual disability report more fears than age-matched controls and it is thought that this may be due to developmental delay. 20, 21 A number of published reports of treatment were located, and all used either cognitive-behavioral therapy or behavioral exposure/response prevention treatment alone or in combination. Guralnick 9 treated height phobia in an adult using systematic desensitization. Successful treatment of dog phobias were reported using contact desensitization in two males. 1 Lindsay and colleagues 13 treated a dog phobia in two adult women using anxiety management, exposure, and modeling. Moderate success was reported in a 32-year-old female with dog phobia. 11 Spencer and Conrad 22 treated a 34-year-old woman with moderate intellectual disability, psychosis, and fear of heights using exposure with limited success in treatment. Biswas and colleagues 5 reported on treatment of a 34-year-old man with moderate intellectual disability and epilepsy, who had skalaphobia (fear of stairs). He responded to popranolol combined with behavior therapy, exposure treatment, and the use of a multidisciplinary team. Fear of cars in a 35-year-old woman with mild intellectual disability was treated with systematic desensitization combined with operant techniques of a token reward. 14 Hagopian 10 reported the treatment of a blood-injury-injection phobia in a 19-year-old man with moderate intellectual disability. This treatment included fading by graduated exposure, modeling, noncontingent and differential reinforcement, and use of anxiolytic medication and analgesic cream.

Treatment of agoraphobia was reported in two females, one 43-years-old with severe intellectual disability and the other 29-years-old, both with generalized anxiety disorder, panic attacks and agoraphobia over a five year period. 6 The women were treated with compliance training reinforcement schedules and “behavioral momentum” procedures. The multidisciplinary team was enlisted to assist in treatment generalization in other settings.
Waisbren and Levy\textsuperscript{23} reported an association between phenylketonuria (PKU) and agoraphobia. They followed five patients, four of whom had intellectual disability. Fifty women in a PKU clinic were examined and were paired with 47 acquaintances and 49 women with diabetes. All those with PKU were more prone to social withdrawal and fear of leaving home, and 20% of these were in the agoraphobic range on a Mobility Inventory. Those who maintained the PKU diet and those with non-PKU hyperphenylalaninemia reported less avoidance behavior than those who terminated the diet in childhood. The authors suggested a possible link to reduction in dopamine and serotonin activity in the brain for untreated or incompletely treated PKU. Thus, PKU, which is associated with intellectual disability, may also have a link to anxiety and phobic behavior.\textsuperscript{12}

There is an association between Williams syndrome and anxiety. The most noted are fears and anxiety associated with loud noises that may be the result of the hyperacusis in Williams syndrome. In addition, individuals with this condition are also known to appear “anxious.” In a study of children with Williams syndrome, Dykens\textsuperscript{5} found a high degree of generalized and anticipatory anxiety, and additional specific phobias with marked fear and avoidance.

Two controlled studies of treatment for individuals with intellectual disability and phobias were located. Matson\textsuperscript{15} conducted a controlled study of 24 adults with mild and moderate intellectual disability who had fear of public places/community activities. Using in vivo exposure, coping rehearsal statements, and participant modeling, Matson reported significant improvement. Peck\textsuperscript{19} conducted a controlled study of 20 adults with mild intellectual disability and fear of rats. She found that these adults were able to use a modified form of systematic desensitization successfully.

In this case report, a man with Down syndrome and multiple phobias, agoraphobia, and panic attacks was treated with cognitive-behavioral techniques. It is the first case report in the English language literature on agoraphobia and panic attacks associated with Down syndrome.

**Case Report**

Mr. A, a 34-year-old man with Down syndrome and mild intellectual disability, was brought to treatment by his parents because his multiple phobias and agoraphobia had become a major barrier to his life. He lived with his parents who operated a very successful business together.

During his childhood, Mr. A attended special education programs and enjoyed a varied and integrated life in his community. He was affable, polite, and had a calm temperament. In addition, he was very motivated and responsible. After finishing his education, he worked in several competitive jobs in the community. He had friends and socialized independently, as well as participating on occasion in sports organized by local disability groups. He functioned in the mild level of intellectual disability, had excellent basic skills in all areas, and communicated relatively well verbally.

In childhood, he was a bit “anxious” and developed a significant phobia of heights. He was uncomfortable in high buildings near windows. During his 20s, his phobias grew to avoidance of many buildings, bridges, walkways, open spaces, atriums, and large indoor malls. He avoided more and more situations where there was great openness. This affected his work and personal life. Finally, he was afraid to be in much of his house, due to heights viewed from the windows including his own bedroom. Most airport terminals were extremely frightening to him, limiting family visits. Mr. A became very anxious during these situations, and also reported panic attacks in conjunction with feared situations. He did not, however, have panic disorder as he had no fear of the panic attack itself, but he reported them and experienced them when in situations confronting his phobic objects. Previously, Mr. A’s primary care physician prescribed lorazepam (Ativan) 1 mg./day to reduce his fears, but this was ineffective.

Assessment found him to be an otherwise happy and well-adjusted person. Mr. A had hypothyroidism and was treated with Synthroid. He was healthy, active, and had a normal weight. There was no evidence of depression or generalized anxiety. A medication consultation was obtained, and Mr A was started on fluoxetine (Prozac) 20 mg. daily which began to cause agitation and sleeplessness. This was discontinued and the next month he began a trial of paroxetine (Paxil) up to 20 mg. daily. He and his parents agreed that this did not seem to affect his specific phobic behavior and so was discontinued at the end of treatment.
TREATMENT

Cognitive Coping Statements

Mr. A was assessed for his beliefs about his fears, for example, any evidence that he believed he was unsafe near a window. He was educated about the nature of his phobias, and he was educated that he was not in any real danger during the feared situations. He denied such fears, and to support this, he was taught coping statements:

“T am safe.”
“I will not fall.”
“I am OK.”

Mr. A also always wore a hat, and pulled it fully over his eyes if he might see something related to his phobias. This was quite dangerous, as he would walk blindly and cling to a wall. He was taught to keep his hat up, and finally take his hat off. He used coping statements such as, “I am safe, hat off.” Mr. A was taught relaxation, and also used the statements, “Relax,” accompanied by deep breathing when anxious.

Graded Exposure and Response Prevention

Mr. A was motivated to improve his situation. Unlike typical intellectually normal adults, however, he was not highly motivated by a pending loss of employment or marriage due to his phobias. His motivation came from wanting to return to a more normal functional level. He agreed to the exposure/response prevention treatment. Briefly, he was exposed to a variety of situations that encompassed his phobias, beginning at the least frightening level and progressing up to a higher level. During exposure, the therapist taught him to use a competing relaxation response (response prevention) that was incompatible with anxiety: an abbreviated form of progressive muscle relaxation. At the end of the muscle relaxation, he was taught to take four slow deep breaths in, and then release slowly at the count of four. This response was enacted when very anxious, with the cue, “Breath in and relax.” In addition, during exposure, he was taught to use his coping statements as well.

At the beginning of each exposure session, a collaborative plan was made for what would be covered during the session. Each session covered multiple exposure venues. Thus, the many venues increased the probability that progress would generalize to many different settings (see Table 1). The venues used were:

- exposure to a large open spaced atrium
- taking elevators in a tall building
- exposure to a glass-enclosed bridge
- exposure to a view from 3rd, 4th, and then 5th floor with large picture windows

The therapist accompanied Mr. A for each exposure session. Instructions to anticipate the event were given combined with instructions to “Relax,” “There is nothing to be afraid of,” and “Look down if you feel scared.”

The patient did well with “relax,” and was able to use deep breathing combined with a simple muscle stretch. He was motivated to expose himself for longer and longer periods during these sessions. For example, he would look at the vista from the window, then look down and deep breathe for several minutes, then look up again, trying to maintain longer and longer times looking out while being relaxed.

When using elevators, he began with the first floor, progressing up to the 5th floor. Mr. A was not able to walk into and across a large open atrium or in a glass enclosed bridge from a third floor. He preferred to not conquer this, but understood that such a situation was like that presented in airline terminals. He was very motivated to travel to visit extended family and agreed to an alternate exposure plan. Mr. A was instructed to sit in a wheelchair and let the therapist push him across. With instruction to look down at this lap, he was able to do this in a relaxed manner.

Homework/Self-Therapy Assignments

Homework, or self-therapy, was assigned at the end of each session. The patient and therapist collaboratively agreed on the assignment, which included some form of graded exposure/response prevention in the community or in his house. He also used a book with pictures of vistas and heights combined with relaxation.

The first homework objective was to be able to go into his bedroom during the day with the windows uncovered. His parents had covered his windows and Mr. A agreed to remove these covers. Mr A. did the graded exposure, starting at the door, and tolerating more and more time in his room. He was also instructed to sit in the living room near windows that showed a long expansive vista from a considerable height.
Mr. A, with the aid of a close friend, worked on taking walks over pedestrian bridges. He also conquered walking over a pedestrian windowed bridge over a wide and expansive boulevard, as well as going to a local mall with large indoor spaces.

**Termination**

Mr. A was fully using his bedroom and was able to sit in his living room. He resumed going on his own to many outdoor places, including the open mall and pedestrian bridge near his home.

Mr. A had achieved many goals; however, he was not willing to work further on an atrium experience. To prepare him for an airline trip, lorazepam 1 mg was prescribed and he and his parents were instructed in how to use the medicine appropriately. He agreed to stay in a wheelchair at the airport, as he had done near the open atrium, and to look down during the airline trip when near large open spaces. The lorazepam was to be given preventatively, prior to seeing any vistas, and later if necessary according to the prescription plan.

**DISCUSSION**

This is the first report of a man with Down syndrome who had multiple phobias including agoraphobia with panic attacks. His treatment consisted of cognitive-behavior therapy using coping statements, relaxation, deep breathing, and graded exposure/response prevention. Through the use of cognitive behavioral treatment, he made great progress. At the termination of treatment, he achieved many goals, but was still not comfortable in very high places or in open spaces with large window views, such as most airline terminals. An alternate plan of coping with airline terminals was developed that included the use of lorazepam.

This report affirms the commonality between people with intellectual disability and intellectually normal people who suffer from anxiety disorders. Cognitive behavior therapy was used with only minor modification for his intellectual level. Mr. A was a motivated and cooperative patient. He collaborated fully in his treatment and independently completed homework assignments. He was able to use relaxation training, deep breathing, and coping statements. Thus, the design of his treatment plan differed little from that typically offered to intellectually normal adults.

Professionals must be alert to the existence of phobias among people with intellectual disability and not ascribe aberrant or resistant behavior to the disability itself. It is possible that many avoidance and refusal behaviors are phobic manifestations, although family and direct support staff may interpret the behavior as “manipulative” or being “uncooperative.” Further, people with mild intellectual disability are generally quite capable of benefiting from cognitive behavioral treatment with minor modification. The present case report, as well as the literature, finds substantial success using cognitive behavioral treatment, especially in vivo graded exposure methods. These techniques require little intellectual capacity and are appropriate for individuals with mild and moderate intellectual disability, as well as having promise for those with even more intellectual impairment.

<table>
<thead>
<tr>
<th><strong>Table 1. Summary of Graded Exposure Treatment</strong></th>
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<tr>
<td><strong>Setting</strong></td>
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<tr>
<td>large window, 3rd floor, building #1</td>
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<tr>
<td>large picture window, 4th floor, building #2</td>
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<tr>
<td>wall of vast picture windows, 5th floor, building #3</td>
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<td>elevator, building #4</td>
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<td>large, open, 8-floor atrium, building #5</td>
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<td>exposure to a glass-enclosed bridge, building #6</td>
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REFERENCES


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