A Phenomenological Study of Sensory Defensiveness in Adults

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This article describes the experiences of five adults who are defensive toward sensations of touch, movement, vision, smell, sound, and taste that most people consider harmless. It also describes the strategies that they use when they perceive environmental stimuli to be aversive. These coping strategies are avoidance, predictability, mental preparation, talking through, counteraction, and confrontation. A conceptual framework is presented to enhance understanding and guide further study of sensory defensiveness in adults.

Sensory defensiveness has been described as a "tendency to react negatively or with alarm to sensory input which is generally considered harmless or non-irritating. Common symptoms may include over sensitivity to unexpected or light touch, sudden movement or over reaction to unstable surfaces, high frequency noises, excesses of noise or visual stimuli and certain smells." (Wilbarger & Wilbarger, 1991, p. 3)

Sensory defensiveness can result in stress and anxiety as well as behavioral patterns that develop around avoiding certain sensory stimuli or coping with stimuli that are perceived as irritating. Persons with sensory defensiveness initially believe that everyone perceives stimuli as they do. As they determine that this belief is not true, they may doubt their perceptions or the appropriateness of their reactions to stimuli, withdraw socially, and believe that they are crazy (Oliver, 1990). Coping strategies can emerge that may not be socially acceptable.

Sensory defensiveness may affect as many as 15% of the population (Wilbarger & Wilbarger, 1991). No formal research on adults with sensory defensiveness has been reported in the literature, although anecdotal records and case descriptions have been published in newsletters on this topic (David, 1990). The purpose of this study is to describe sensory defensiveness in adults and to develop a conceptual framework for further study.

Method

Subjects

Fifteen adults with possible sensory defensiveness were initially recruited for the study. Some were self-referred or referred by friends who had heard a lecture about sensory defensiveness and believed that they fit the description. Others, who were self-referred, had family members who were being treated for sensory defensiveness and believed that they had similar problems.

In the absence of a published tool to identify sensory defensiveness in adults, we developed the Adult Sensory History Interview (see Instrumentation below). With this instrument, we interviewed each of the adults in their homes or at the university (if the adult was a student). The interviews were videotaped and later reviewed independently by the first two authors to determine whether the adult could be described as sensory defensive. Of the 15 adults, 10 were identified as sensory defensive and 5 were not. There was 100% concurrence between the two researchers' ratings of these adults.

To verify the researchers' identification of sensory defensiveness in the adults, the videotapes were reviewed by five experts (faculty emeriti of Sensory Integration International). Each expert viewed three videotapes—two of adults who were sensory defensive and one of an adult who was not sensory defensive—and was asked to identify which adults were sensory defensive and which were not. The experts identified the same 10 adults...
whom the first two authors had identified as sensory defensive and the same 5 adults whom the first two authors had identified as nonsensory defensive. There was 100% concurrence among these experts.

The videotapes of 5 of the 10 adults identified as sensory defensive were selected for analysis in this study because of these persons' ability to describe their experiences. Of these five subjects, four were women, two of whom were married and had children. The fifth subject was a man who was single. All were either working or going to school. Their ages ranged from 22 years to 45 years. Their histories were free from physical or sexual abuse, and none had been hospitalized for emotional or psychological difficulties.

Instrumentation

The Adult Sensory History Interview uses a semistructured, open-ended format to explore the history of the subjects' responses to various stimuli. Questions were compiled on the basis of the literature of sensory defensiveness and related areas and were expanded through item identification sessions with expert clinicians who had experience with sensory defensive adults. The questions were organized in chronological order, proceeding from childhood to adolescence to adulthood.

Interview questions addressed the subjects' perceptions of stimuli in six sensory areas: tactile, vestibular, auditory, visual, olfactory, and oral. The term oral was substituted for the terms gustatory and taste when it became clear through the interviews that oral experiences with a tactile basis, not gustatory or taste experiences, were being described. Subjects were asked to explain and describe their responses to sensory perceptions (e.g., Can you describe how it feels to be barefoot?); self-care (e.g., Does it bother you to have someone cut your hair?); environmental sensory distractions such as noise, light, or movement; sensory-based interpersonal issues such as tolerance of breast-feeding and hugging; and coping strategies related to sensory perceptions (e.g., What do you do to help yourself when you anticipate or encounter an uncomfortable experience such as entering a crowded room?).

Analysis

The first two authors independently analyzed the transcript data from each of the five subjects with the Ethnograph (Seidel, 1988), a program for computer-assisted analysis of text-based data. Analysis consisted of identifying emerging patterns of subjects' descriptive responses about stimuli or coping strategies. Descriptions were coded as examples of 1 of 12 categories (i.e., perceptions of one of the six stimuli or descriptions of one of the six coping strategies). Interrater reliability of text coding was established through the percent of agreement on interpretation of 10 pages of text—two pages of interview transcripts from each subject. Interrater reliability was 90.

Results

Two major categories of responses emerged. These categories were identified independently by the two researchers with 100% concurrence. The first category consisted of subjects' descriptions of perceptions, reactions, or feelings in response to stimuli in the six sensory areas. The second category consisted of the coping mechanisms used by the subjects, including descriptions of how they dealt with situations involving sensory stimuli that were perceived as aversive in order to diminish the occurrence or impact of or reaction to these stimuli. The six coping strategies were

- Avoidance: Not placing oneself in a situation in which he or she would be exposed to the stimuli.
- Predictability: Organizing or controlling situations.
- Mental preparation: Planning and getting ready for stimuli that are expected to be uncomfortable but unavoidable.
- Talking through: Making rationalizations for the stimuli or reassuring oneself as the stimuli are occurring that they can be handled or endured.
- Counteraction: Engaging in activities to reduce or negate the effect of the disturbing input or stimulation. (These are frequently proprioceptive activities.)
- Confrontation: Identifying a problematic response to stimuli and developing a plan to overcome the negative reaction.

Sensory Defensive Response Descriptions

Tactile Defensiveness

Tactile defensiveness is believed to have the potential to negatively affect many aspects of a person's life across the life span, particularly in the affective and social-interactive domains (Ayres, 1964; Ayres, 1972; Ayres, 1979; Royeen & Lane, 1991). The defensive response to touch as described by the five subjects has manifested itself in many ways throughout their lives, including reactions to materials such as clothing, jewelry, skin care products, and makeup; primary physical social contacts such as being hugged or holding hands in childhood; and adult intimacy such as hugging or being caressed. Tactile defensiveness also influenced choices of leisure and work activities. The following are descriptions of perception of touch.

Sears in pants, like in snow pants, used to drive me crazy. We'd wear boots over our shoes, and if they were higher than your socks, oohh. I didn't like coats. I liked it better when the weather was such that you could wear a sweater or just your street clothes. Something was always hurting, a hat with the eyes...
When asked about using lotions, Subject 4 reported the following: "I didn’t think and feel the same way that I did. It was a very strange feeling. . . . I wondered about it. . . . because it really was a shock. ‘What are you talking about?’ ‘You know the way your mittens hurt where the cuff goes over your coat and it hurts?’ ‘They don’t hurt.’ For a while I guess I didn’t bring it up again. I didn’t often express things because I was starting to sense that other people didn’t do things the same way as I did. I didn’t want to let on that that was true. (Subject 5)

Clothing choices were still important to the subjects in adulthood. Skin care, makeup, hair care, and jewelry also were influenced by aversive responses. Subject 5, who reported that she rarely wore makeup, also reported the following:

For special occasions, I wear a high neck turtleneck. I have a necklace that’s a little gold girl and boy with my children’s names and birthdays engraved on it, and it’s the most precious thing I own. I wear a turtleneck so I can wear that. Other people wear a necklace in the shower or to bed, like dog tags, and it drives me crazy, and I will not do that. Even my wedding ring. I have not worn either ring for years.

The feeling of going barefoot was described by Subject 5 as follows:

I don’t go barefoot . . . except when I go to sleep. . . . You’ll always see me in socks or shoes. My mom can’t understand it because she loves to be barefoot. Outside she does the gardening, everything barefoot, and I’ll be like, ‘How can you do that?’ I’ll always have socks on. I don’t like to walk around without my socks on.

Subject 1 talked about feeling grass on bare feet.

I can almost feel it shoot right up my leg like a tingling sensation, and I can feel each blade of grass, each little green thing, not an overall thing, like each separate grain. That’s what it feels like.

When asked about using lotions, Subject 4 reported the following:

One other thing . . . that makes me uncomfortable. As long as I can remember I’ve always had and still do have a very hard time with things on my lips. I do not like things on my lips. . . . Being a climber, outdoors, a skier, and [doing] winter things my lips get chapped. I’d rather have them chapped than put something on them. I feel that I cannot seriously date someone who wears lipstick, and that’s a fact of my life.

The discomfort with touch also affected interpersonal behavior, as reflected in the comments of Subjects 2, 3, and 4.

I think . . . good, firm hug or handshake I can handle it. [If not] I’d say ‘it tickles.’ I think that’s my way of reacting to it. Like laughing when my boyfriend touches me or something. I’ll laugh, but I really don’t think it’s funny and it doesn’t feel good. That’s my way of expressing ‘stop.’ (Subject 2)

I’m very sensitive around my neck, the back of my ears, the inside of my ears. I told a friend of mine yesterday. We were sitting around talking about this interview and I said to her it drives me nuts to have anybody touch my ears. . . . My father would come up behind me and touch the back of my neck, and I would just cringe, and I would catch him back there. One time I elbowed him, not realizing, just a reflex reaction. I got him right in the ribs. We were doing goniometry in class the other day and . . . my partner . . . had to do the flexion of my knee. I was lying on the mat, and I had on baggy pants so she couldn’t tell where my knee was, so she went like this and felt it, and I nearly kicked her. (Subject 3)

Subject 4 responded to a question about being hugged and kissed by relatives as a child.

I was annoyed and frustrated and [had a] “Get me out of here” sort of feeling. I knew I was supposed to do that, but I didn’t like it very much. . . . I didn’t mind the imposition. There were relatives that I liked. It wasn’t that I didn’t like them or want to interact with them. I guess it was the closeness or the feel.

Tactile perception affected subjects’ choice of activities as well as the pleasure that they gleaned from these activities.

I hate the feeling of the sand on my feet. Finger painting—I don’t ever remember finger painting. . . . Working in the garden I have to have gloves on. It really always me. My dad and I fish a lot, and we’ll go and dig night crawlers. . . . I have to have gloves on to pick them up. . . . but to this day I cannot pick them up because they’re slimy and squirty. (Subject 5)

[Dirty hands] bother me terribly. I think that’s what bothers me most is to have my hands dirty or in anything. I just can’t stand it. . . . I also don’t like textures of things . . . . that are kind of moist: meatballs, pie dough, anything that I actually have to touch or get my hands into, I can’t stand, and I literally talk myself through it. “OK, it’s homemade, you’re going to eat it, so what’s the difference?” If anything gets on my hands, if a little bit of milk spills on my hands, I have to get rid of it. . . . If I’m going to put powder on my daughter I cannot rub it in. I hate the feel of the powder and the way it leaves my hands feeling afterward, very slippery. I do not like it if my hands get at all dirty, that’s why I said put hand lotion on at least four times a day. (Subject 1)

**Vestibular Defensiveness**

Defensiveness in the sense of balance, or vestibular system, affected three of the five subjects. Subject 5 reported the following:

1. . . . I felt dizzy. I was afraid that I’d sort of go out there. I was afraid so I’d stay on the blanket. . . . I used to like and I still do like to look up at the sky. But I have to be lying down on the ground to do it because if I look up I get dizzy right away. If I’m in a field or a yard, it’s unsettling. You feel like you’re going to fall over, pass out or faint or whatever. That insecure feeling is that you don’t know what may follow it.

I didn’t feel safe on the playground. The teacher would say, “Go and play.” I didn’t see anything that I wanted to play with because I was afraid. I tried a couple of times, and I didn’t really get hurt by the equipment, but more by the other kids scrambling who who were much faster than I was. . . . I just didn’t feel safe. I used to just hang around the teacher and play or just stand there.

Subjects 2 and 5 spoke about entertainment parks.

I spent a lot of time in boats in the summer, and if we rocked too long I got a weak stomach. I’ve never flown before, but amusement park rides bother me. The ones that are close to the ground and not going fast are fine; roller coasters, forget it. I went on a roller coaster once and never again. (Subject 2)

I remember when I was in the fun house with friends, I couldn’t take the air jets and those kinds of things, and I remember thinking the whole time I was in there, ‘This is fun?’ I didn’t like it at all.
but I tolerated even the turning barrel that you have to get through. I stood there for a while thinking ’I'll never be able to get through this" and people are piling up behind me getting angrier and angrier. Finally, somehow on all fours I got through and hated it and thought it was an indignity at my age to have to do it. Worst of all was I had a. I guess it would be called a panic attack of some kind in the fun house with those mirrors, and I just fell apart. They were everywhere you looked and you're supposed to remember what direction is straight ahead to get out and everything was spinning. People came in and tried to get me out and no one could make me move. I just sat down and cried. I never went in the fun house again. (Subject 5)

Visual Defensiveness

Four subjects described defensive responses to visual stimuli, as illustrated in the following descriptions by Subjects 3 and 5. It appears from these comments that visual sensitivity includes brightness, contrasts, and movement of objects near the face.

Light if it's very bright kind of hurts my eyes. It makes them sore. If I drive at night, I have to constantly flick the mirror because the light in the mirror bothers me. I have specially prescribed glasses with the dark tinted frames strictly for night driving, I told him it's not night blindness. I have no trouble seeing at night, it's the lights that bother me. [Also, just yesterday my friend was behind me with her pencil next to my shoulder, and it was right there. It really bothers me to have things in my face.] (Subject 5)

I have to have the light in the room consistent with the T.V. brightness. I can't be in a dark room and watch T.V., and I don't enjoy the movies. (Subject 5)

Auditory Defensiveness

Three subjects described defensive responses to auditory stimuli that most people do not find noxious, such as the sound of electric lights or running water.

I think that the worst kind of irritation comes from sound. I can tolerate doing everyday things with a lot of activity going on, but if there's too much noise, it makes me crazy. It makes me angry. I don't like the noisiness. I have no trouble sleeping at night, it's the lights that bother me. [Also, just yesterday my friend was behind me with her pencil next to my shoulder, and it was right there. It really bothers me to have things in my face.] (Subject 5)

It bothers me when I go to church. It really aggravates me when people are talking. It totally distracts me from what's going on. In class when somebody's talking, I just can't follow [the lecture] at all because I tune right into them. My friend's always saying, "You're so nosy" and I say, "I'm not nosy, I just cannot help listening." At the movies, forget it, because I hear other people talking. We always sit in the row with two seats. (Subject 2)

Olfactory Defensiveness

Two subjects described their response to smells (olfactory sense). It was not clear from the descriptions whether these smells were perceived as noxious and the responses were truly defensive, or if the responses were only a sensitivity.

I react to smells pretty strongly. A lot of smells in those days you don't notice too much anymore. Windows were always cleaned with ammonia. Smells were always in the house. Remember ladies' home perms? I used to get sick from those smells. There were always strong smells. (Subject 5)

My husband says that he's unaware of things that I complain about. I'll say, "What is that musty odor in here?" He'll say, "Nothing, I don't know what you're talking about." Unpleasant odors bother me tremendously and apparently they don't have to be very strong. (Subject 5)

Oral Defensiveness

Oral defensiveness, as experienced by three subjects, seemed to be a response to tactile stimuli rather than a response to flavors.

I think I did a lot of finding something I liked to eat and sticking with it. I did that for 5 to 10 years. Hot dogs and cereal were big on the list. I still eat hot dogs and cereal. (Subject 4)

Don't ever give me baby food. Some people like to eat baby food. I have anything that's squishy. I can't eat peas, applesauce, baby foods, farina. I can't stand the feeling of having that in my mouth. [Let me give an example. I was on a diet about a year ago where for lunch you had to have a container of cottage cheese and crackers. For a container of cottage cheese it took me an hour to eat because it would just sit in my mouth, and I couldn't get it down. I'd have to swallow and then drink some water right after. The diet did not last long. I have a tough time with that.] (Subject 3)

I don't like my teeth cleaned. My teeth get the chills kind of, very sensitive. I get lots of novocaine when I go to the dentist. I do get more I think because of his fingers in my mouth. (Subject 2)

Coping Mechanisms

The subjects' defensiveness to sensory stimuli spawned other behavioral strategies that they used to cope with the discomfort. Strategies identified by the subjects included avoiding situations and maintaining predictability in routines that included both controlling situations and organizational strategies. If the aversive stimulus could not be avoided or controlled, subjects used mental preparation or talked themselves through the situation. Subjects also found a variety of ways to counteract the effects of the sensory input or to calm themselves after over-stimulation. In several instances, subjects tried to confront and work through their fears and reactions and experienced varying degrees of success. The following descriptions are examples of these coping mechanisms.

Avoidance

Avoiding situations was a common thread in the interview data, as depicted in the following descriptions:

I didn't dance a lot. I think I danced one slow dance apiece at my junior and senior proms. Crowded dance floors I won't go out on. I don't like people bumping into me constantly. Malls at Christmas time—I hate them. I don't even want to get near them. You've got people walking into you, you're trying to get...
around them. Big parties I'll try to avoid them totally. I did go to a party at Christmas time, and there were a lot of people in a very small room, very crowded. On the perimeter was the kitchen and a friend of mine and myself stood in the kitchen all night and kind of looked in. (Subject 3)

Before I met my husband and got married, I thought it was very easy to avoid any type of intimacy. I guess some people don't avoid it because they're drawn to it. I wasn't. I really didn't care for it. It was fine to do without it for me. That wasn't a big problem. I just avoided it. I wouldn't go to any extremes to avoid it, but as much as possible I would suggest alternatives [such as] "I have to be home. Sorry, gotta go." (Subject 1)

[As a child] people said that I was serene and that was all a mask because I was very upset all of the time. I remember feeling agitated a lot of the time. I was little, and I remember people always picking me up and holding me on their knee, and I hated it. My mother [told me] that I would tolerate my very first hug because I was very upset all of the time, I remember feeling when relatives would visit but then disappear in my room because they would always be doing that. I think that the serenity that they described was an attempt to become invisible so they wouldn't notice me because it was the happy, articulate children that got picked up. It was not really withdrawing but (I tried) to become noninteresting. (Subject 5)

**Predictability: Organization and Control**

Organization and control may be seen as aspects of predictability. Three subjects described such use of organization and control. When asked what makes things anxiety provoking, Subject 5 responded:

A lot of it falls under the category of unpredictability, but I think of it in terms of my own comfort. If we go somewhere and have to ride in someone's car, will be squished in the back seat? If we stay in a motel, will the towels be scratchy? Will the shower freeze me or scald me? I don't like to travel because I don't like making all those adjustments which other people think are worth it because the trip is fun. I avoid the trip altogether. You find that the setup is wrong, and the towels are wrong, and the bed is wrong. It doesn't feel right. It's not the right height off the floor, it's not the right direction from the window, it's not anything right. It has to be in the same place I sleep every night.

Subject 3 stated:

I'm a very neat person, extremely neat. I like to follow patterns. I like gross motor activities and open spaces. That and my reading to settle down to sleep. I try to get myself into a routine where the first thing I'll do is wash my face, brush my teeth, get changed, make sure all the doors are locked, [a] specific pattern every time. It's the order of the routine I do it in. If I do it out of order, it's like "Oh, did I lock the door?"

I like my space. Even with Martha, my roommate, I say that to her all the time. "Stay out of my space." Like in the bathroom we have a big mirror. There's three of us in the apartment, and I'll wait until everybody gets out of the bathroom because I don't want anyone else in there with me. I don't want them too close to me or standing behind me. (Subject 2)

Control over the sensory input helped subjects to cope. In reference to being touched by her infant daughter, Subject 1 reported:

I know I've had to say, "Mommy doesn't like that sort of thing" to her before because I'll jump away from her and she looks at me like, "What have I done?" And I'll say, "Oh, you're a good girl." She doesn't really understand the concept that I have a reason for it. so I just tell her she's a good girl. I hug her to straighten it out. I feel as if I could hug her all day long and brush her hair, touch her little face... but if she does it to me I have to control the urge to jump away.

Subject 5 spoke of shaking hands.

When you're little it's close to you, and you don't have a choice but then as a grownup you're expected to know how to do it. Avoided it as often as I could and thought this is absurd, you can't go through life doing this. You have to find a way and accidentally I figured it out. It was easier for me if I initiated it. The odd thing is that you think that if I can just do this once it's like easier from now on and for a lot of things that just isn't true.

Subjects apparently believed that when they initiate the touching it allows them to be in control of the situation and, consequently, the sensation is more tolerable.

**Mental Preparation**

Examples of the mental preparation coping strategy are described by Subjects 1 and 3.

If I anticipate it [referring to touch], I would kind of psych myself up for it a little bit. I think about it happening and maybe get defensive. I don't even know, but I do know that if I do expect it I think about it. (Subject 1)

Normally I don't try to make up things. If he [boyfriend] wants to get close to me, it's not that I don't want to get close to him, it's just that I have to mentally prepare myself and tell myself to accept this. "Here it comes and don't be nervous about it." (Subject 3)

I can prepare myself for it, so if there's time for preparation I can say, "Okay, go ahead." [If touch is unexpected] I'd probably say "Don't do that!" I've done that if I'm not expecting it. I've kind of squirmed out of it and said "Don't do that." If I'm expecting it, that's fine. If you catch me off guard, I'm going to be like that. (Subject 5)

**Talking Through**

Subjects 1 and 5 offered examples of talking themselves through the experience as a coping strategy. In referring to her infant daughter touching her, Subject 1 reported:

I think when she first touches me it bothers me, but with her I can overlook it. When I look at her little hands and her little face, I can tolerate it because I know she's exploring, and I just love her so much that I can. But when she first does it I like, "Oh, don't do that," but then I try to psych myself up again and say, "That's hair" and whatver.

In referring to being in a crowd, Subject 5 reported:

In any way, I can get out of it. I do. I don't want to wear a dress. I don't want to wear makeup. If it's a social event, it has to be someone very close to me and a very large event like a funeral or a wedding. Beyond that, if it's just a casual social event, I'll just avoid it. It's not quite the same for my children. I want them to have all the important traditional things such as the show of lights downtown at the big department store. I know every single show will be mobbed and we'll be bumped and jostled and cramped, but you just steel yourself before you go and you say, "We'll go, we'll see this, we'll get through this, and then we'll go out for ice cream" because we don't want the children to miss these things.
Counteracting

Counteracting negative sensory input was described in many ways, including seclusion, sleep, rocking, and using various sensory experiences.

It's kind of a mixed thing. When there's a lot of people around and it's very close and crowded, [it is] between being excited at that much interaction and being frustrated from being claustrophobic. There were a couple years where I sought out slam dancing. I don't know how much you know about slam dancing, but it's very hard, very fast music where the interaction with the people is to bounce off and slam into each other. I liked it. (Subject 5)

(In childhood) a lot of things that I did back then like baseball I'm still very involved in. It's just the outdoors where you're free, you can move around. Whenever I want to get away from the stresses here, I'll always go to the park, or I'll go out to the lake so I'm in an open area and I'm outside and everything's off me. (Subject 5)

Just touching the spot myself takes care of it. If someone touches the back of my neck, I'll hold my neck and squeeze it. Just the thought of it bothers me. I'm very tense right now. I feel like I could go home and go to sleep. (Subject 2)

These descriptions are consistent with therapy techniques that provide deep pressure and proprioceptive input to counteract the effects of light touch.

Confrontation

Several of the subjects had attempted to confront various fears and behaviors themselves with varying results. Subject 5 described vestibular-related fears and was unsuccessful in working through them.

Crossing the bridge—I was afraid to walk across the bridge that's just a street. It's an overpass above another street, and I could never cross it. I would take my children for rides in a stroller when they were babies, and I could never cross that bridge. I would have to turn around and go the other way. One day when my husband had the children at home, I went for a walk and said, "This is ridiculous. It's like being afraid of a spider that isn't poisonous. You have to just do this." I thought about crossing across it so I wouldn't see the road below and I wouldn't be so scared. I couldn't run; I walked and I walked very unsteadily. I must've looked Intoxicated. I was just so frightened. When I got to the other side, I was very sick. I couldn't breathe well and my stomach had pains and I just collapsed. I was conscious, but I had to sit down with my back against a tree and force myself to breathe slowly to calm down because I knew that home was on the other side of that bridge. I had to go back and it was very, very hard. And I never crossed that bridge again except in a car.

Subject 4 described his efforts to neutralize his fear of inoculations. In contrast to Subject 5, Subject 4 was eventually able to control his response to some extent.

As long as I can remember I had a very strong aversion to going to the doctor's and getting stuck with needles. I remember when I was 10 or maybe earlier that there was a real problem when I was at the doctor's. I would either pass out or throw up if I knew I was going to the doctor to have them take blood or have a vaccine. At the beginning of college, I decided it was time to get over this. The way I got over it was by signing up as a paid subject for metabolic studies at college. I did a series of those, and was very lucky in the way they worked out. Each [injection] I had was a little more invasive. All of it was just a couple tubes and that was it. Of course I threw up. It progressed and by the end it was a full 10-inch catheter and a nasogastric tube. By the end it was no big deal. I feel pretty cured although I have gotten queasy since.

Conceptual Framework

This article presents examples of responses to sensory stimuli that provide evidence and support for the concept of sensory defensiveness in the adult population. By combining this evidence with Wilbarger & Wilbarger's (1991) clinical work, we propose a conceptual framework to enhance understanding and guide further research of the phenomenon of sensory defensiveness (see Figure 1). The proposed framework is meant to be dynamic and to provide a guide for initial exploration of sensory defensiveness in adults. It invites investigation into methods and tools to identify sensory defensiveness, precursors or etiologies that contribute to sensory defensiveness, responses of sensory defensive adults, and roles of these responses in health and illness. The questions of which sensory defensive adults can benefit from treatment and what treatment is effective also require study.

![Figure 1. Conceptual framework for sensory defensiveness.](image)


The precursors of sensory defensiveness as suggested by Als (1986), DeGangi (1991), and Wilbarger and Wilbarger (1991), as well as the experiences of clinicians, are inconclusive and varied. Sensory defensiveness could be influenced by a genetic predisposition. Fifty percent of children with sensory defensiveness are estimated to have family members with similar problems (Wilbarger & Wilbarger, 1991). Poor regulatory ability and hypersensitivity have been recognized in premature infants (Als, 1986), and early intervention has been recommended to prevent perceptual, language, sensory integration, and emotional problems in children of preschool years that could conceivably lead to sensory defensiveness in adults (DeGangi, 1991). Physical, sexual, and chemical abuse could influence the perception of sensation resulting in overreaction or underreaction to stimuli. All of these areas invite exploration.

We suggest that the coping strategies identified by the sensory defensive subjects in this study (i.e., avoidance, predictability, mental preparation, talking through, counteracting, and confrontation) help them with day-to-day survival but do not diminish their defensiveness. These strategies seem to be time and energy consuming and emotionally exhausting, but they do not impinge on the amount, type, and choice of a person’s life activities as well as the quality of life experiences. Most important, they seem to interfere with the quality and quantity of interpersonal experiences between the person with sensory defensiveness and his or her spouse, children, other relatives, and friends. A correlation between sensory defensiveness and more profound social-emotional problems has long been suspected by clinicians and warrants investigation.

Factors that may mitigate the effects of sensory defensiveness have been identified by Wilbarger and Wilbarger (1991). The effectiveness of these interventions have only begun to be tested (Levin-Snyder, 1992). These factors include insight into the problem, therapeutic intervention to reduce the aversive response, and an ongoing “sensory diet” (Wilbarger & Wilbarger, p. 6) that will maintain the balance of arousal and inhibition of sensory perception at a level that is tolerable. The concept of sensory diet is based on the idea that persons require a “certain amount of activity and sensation to be alert, adaptable, and skillful” (Wilbarger & Wilbarger, p. 6).

Insight into the effects of sensory defensiveness may help mitigate its effects and is also the first step of the therapeutic process. Many adults, before they realize they are sensory defensive, become aware that others do not perceive stimuli in the same way that they do (Oliver, 1990). They also may realize that the coping strategies they require to function are not used by others. Understanding that their perceptions, responses, coping styles, and life-style choices have been driven by sensory defensiveness is frequently a great relief and validation to them.

Therapeutic intervention may include persistent and regular tactile and proprioceptive stimulation as well as techniques to alter the person’s emotional response to touch and to movement (Cool, 1990; Wilbarger & Wilbarger, 1991). It may also include a sensory diet designed to fit the person’s sensory needs, interests, and life-style that can be incorporated into daily living routines.

Conclusion

The sensory defensiveness experienced by the five adults in this study was found in one or more sensory systems and varied in the degree to which it interfered with the subjects’ activities. Tactile defensiveness was identified by all five subjects and seemed to interfere with many aspects of life, including self-care, choice of activities, and patterns of intimacy. Descriptions of oral defensiveness seemed to be more related to tactile sensation than to the gustatory sense. Gustatory defensiveness may consist of sensitivity to both textures and smells and bear further exploration and definition. Of the vestibular, visual, and olfactory defensiveness described, vestibular, which was identified in three of the five subjects, seemed most apt to influence activity choices.

In addition to the subjects’ feeling of unpleasantness in sensory perception or experience, the coping mechanisms used by subjects also took a toll on their lives in terms of time, effort, and thought. The strategies of avoidance, counteraction, and confrontation influenced their choices of activities. In one case, a subject spent months attempting to overcome the reaction to inoculations. In contrast, the strategies of predictability, mental preparation, and talking through seemed to strongly influence the degree of spontaneity that the subject allowed himself or herself in a wide area of personal and interpersonal activities. The conceptual framework presented seeks to enhance the understanding of and guide further exploration of sensory defensiveness, including its causes, sequelae, and amelioration.

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