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Work Accommodation for People With Multiple Chemical Sensitivity

In Press at Disability and Society

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Abstract

Multiple chemical sensitivity (MCS) is a term used to describe allergic-like reactions to chemicals that represent everyday exposures in industrialized countries. It is sometimes associated with electromagnetic sensitivity (EMS), and both conditions are most likely engendered by environmental exposures. Prevalence studies suggest that chemical sensitivity affects 12-15% of the U.S. population and that it crosses age, SES, and racial lines. Electromagnetic sensitivity is less understood, but affects a portion of those with chemical sensitivity. Persons with these environmental sensitivities often experience difficulties with health care, housing, and work. Workplace barriers result in significant disability, with ensuing financial loss and isolation for the worker. We examined work accommodations in 100 persons with self-reported MCS and its relation to life satisfaction. Results are discussed in terms of accommodating invisible disabilities that challenge industrial capitalism.

Work Accommodation for People with Multiple Chemical Sensitivity

Population studies with varying definitions of disability find that between 7.9% and 17.9% of persons between the ages of 18 and 64 report some disability (Wittenburg & Nelson, 2006). Employment rates for persons reporting disabilities range from 19.6% to 53.2% compared with 78.8% to 83.8% for those without disabilities. Consequently, people with disabilities have lower incomes and are more likely to experience poverty than persons without disabilities. Studies cite median family income for people without disabilities as ranging from \$60K to \$64K, and from \$34 to \$41 for those with disabilities (Burkhauser, Weathers, & Schroeder, 2006; Wittenburg & Nelson, 2006).

The social model of disability has transformed the way disability is perceived, defining disability as limitation resulting from barriers in the environment that prevent inclusion of persons with "impairments." This model has placed emphasis on contextual accommodations, reduction of barriers, and social integration of disabled persons with co-workers (Roulstone & Warren, 2005; Vanhala, 2006; Wehman, 2003).

Writers have advocated a change in the "disability climate" in the workplace, described as the sum total of policies, awareness, attitudes, and behaviors toward the worker and inclusion of disability awareness education (Matt & Butterfield, 2006). Disability management is seen as a process that can enhance workplace inclusion while minimizing the effect of the "impairment" on work capacity (Davis, 2005).

A parallel body of literature, however, has cited increasing problems for persons with disabilities, even in a time of increased disability legislation in both the U.S. and the U.K., i.e., the Americans with Disabilities Act (ADA) in the U.S. and the Disability Discrimination Act (DDA) of 2005 in the UK. A number of studies have documented an actual decline in employment levels for persons with disabilities. Roulstone and Warren (2006) cited statistics that in the UK only 31% of working age disabled people are employed

versus 85% of the non-disabled. Large demographic studies in the U.S., including the American Community Survey (ACS), the Census 2000, the March 2004 Current Population Survey (CPS), the 2002 National Health Interview Survey (NHIS), and the 2002 Survey of Income and Program Participation (SIPP), have reported employment rates for disabled persons to be between 19.6% to 53.2%, and for non-disabled between 78.8% and 83.8% (Burkhauser et al., 2006; Wittenburg & Nelson, 2006).

A growing number of reports address invisible emerging disabilities relevant to industrial capitalism, globalization, and increased use of and exposure to chemicals and electromagnetic fields in everyday life including the work context. Environmental sensitivities (ES) is a term that addresses both multiple chemical sensitivity (MCS), in which persons are exquisitely sensitive to and register symptomatic or allergic-like reactions to low levels of environmental chemicals, and electromagnetic sensitivity (EMS), where persons experience debilitating symptoms from electromagnetic fields. Considerably more research has addressed MCS than EMS, although a Swedish study reported that up to 2% of the country's population may be electrosensitive (Public Exposure, 2001). Prevalence studies in the U.S. suggest MCS to be fairly widespread, affecting 12.8% of the population, cutting across lines of gender, race, education, and socioeconomic status (Caress & Steinemann, 2003). However, MCS currently lacks inclusion in the research, advocacy, and accommodation afforded disability in general, and is consequently an unrecognized and frequently delegitimized condition, leaving individuals to cope with the physical and emotional impact of societal exclusion without adequate assistance or support. EMS is even less understood or accepted.

There are several definitions of MCS in the U.S., but all share the requirement that the person has become sensitized to low levels of incitants in ambient air, that disabling reactions then occur with subsequent exposures to the chemical to which the person has sensitized, that sensitivities exist to more than one chemical or class of chemicals, and that the reactions affect more than one organ system, e.g., respiratory and

digestive, or neurological and respiratory ("Multiple chemical sensitivity," 1999). Reactions can range from mild to life threatening and affect any bodily system, including respiratory, digestive, neurological, endocrinological, musculoskeletal, or cardiovascular. Common incitants include organic solvents, pesticides, cigarette smoke, cleaning products and fresh paint. Symptoms can last from hours to days and may include headache, fatigue, nausea, dizziness, confusion, irritability, muscle pain, asthma, and even a loss of consciousness (Gibson, Cheavens, & Warren, 1996). In what is described as the spreading phenomenon, the constellation of incitants often expands over time to include other chemicals, foods, medications, and natural substances such as molds and pollens, and/or electromagnetic exposure (Gibson, Placek, Lane, Brohimer, & Lovelace, 2005).

MCS has received some attention from medical and biochemical researchers and a number of mechanisms have been proposed to account for the acquired sensitivities. Probably the most respected current physiological theory is neural sensitization where neurological tissues are postulated to become oversensitive and overactivated as a result of continued chemical exposure, with resultant chemical intolerance (Bell, 1992; Miller & Ashford, 1992). Miller has referred to this as Toxic Induced Loss of Tolerance or TILT (Miller, 1999). Rossi (1996) hypothesized that intracerebral localized kindling could best account for the tendency of MCS to spread over time to new incitants and to worsen even in the absence of continued exposures. Pall (2003) has extended the neural sensitization (kindling) hypothesis and postulated that MCS is the result of an inflammatory feedback loop involving elevated nitric oxide and a more permeable blood brain barrier sensitized by pesticides or organic solvents. To date, Pall's theory is the most broad-based, and accounts for the largest number of characteristics of MCS of any theory. However, even the bulk of MCS research supportive of the condition, being from a biomedical rather than a social model, seeks to identify what is wrong, altered, or genetically deviant about people with MCS. An exception is the work of Saito et al.

(2005), who found that in the absence of chemical exposure, persons reporting MCS had no more physical or mental symptoms than people without sensitivities.

Another strand of literature denies and delegitimizes MCS, constructing it as a psychosomatic phenomenon (Black, 1996; Bolla-Wilson, Wilson, & Bleecker, 1988; Selner & Staudenmayer, 1992; Simon, 1994). The current resistance and disagreement over chemical sensitivity is reminiscent of past questions about lupus, MS, chronic fatigue syndrome (known as myalgic encephalomyelitis or ME in the EU), and endometriosis (Klonoff & Landrine, 1997), all of which are now generally accepted as being truly physiological conditions.

Without validation, persons with disabling sensitivities are extruded from participation in the structures of industrial capitalism and often experience significant life disruption including difficulties with work, finances, and access to public resources. Disruption in work is common in people with sensitivities. Gibson et al. (1996) found that of a sample of 268 persons self-reporting MCS, most (76.8%) reported having lost their jobs or being forced to quit due to chemicals in the workplace. Only 7% of respondents were currently working in conditions that they considered safe for their health. Participants' mean income was barely above the poverty line. This can be particularly devastating when financial burdens are already high. For instance, participants spent an average of almost \$6,000 on medical care in the previous year, and an estimated average of almost \$35,000 over the course of their illness. Medical benefits were often difficult to obtain, and many reported being forced to spend their life savings in order to survive.

Of respondents who attributed their illness to one large chemical exposure, over half reported that it had occurred in the workplace. People suffered declining motivation for work and increased stress in relationships with co-workers as a result of their attempts to avoid workplace chemical exposures. Co-workers often resisted accommodating the sensitive worker, thus preventing the worker from creating a safe workspace (Gibson et al., 1996).

Those who are able to continue working often experience considerable harassment from coworkers, and reluctance from management to provide appropriate accommodations. Reasonable disability accommodation is often not difficult or expensive in general (Brodwin, Parker, & DeLaGarza, 2003) and many accommodations for chemical or electromagnetic sensitivities are as simple as working near an open window, using less toxic cleaners, limiting fragrance on co-workers, or working away from strong electrical fields. Yet workers disabled by chemical and electrical barriers receive resistance from workplace personnel and scant help from the mainstream medical profession in acquiring accommodations. The mainstream medical industry is itself an institution engendered by industrial capitalism and uses its powers to delegitimize the condition, preserving the status quo and illustrating the use of medical practitioners as gatekeepers to services for disabled people (Begum, 1996).

If the worst happens and people are no longer able to work, they must adjust to not only financial and social losses, but also to being perceived as unproductive in a culture that measures its worth through work. Thus chemical and electrical exposures are work stressors needing research attention.

Roulstone and Warren (2005) have advocated a barriers approach to monitoring employment for people with disabilities as opposed to an impairment approach. However, chemicals and electrical equipment have not been recognized as barriers in industrial culture. Instead, they are perceived as benevolent tools or personal appearance enhancers despite emerging research data to the contrary. Employers often resist workplace requests for accommodations, complaining that accommodations are difficult and costly. However, this is often not the case in that common requests include a reduction in perfume use by co-workers, to work near an open window or during "off" hours, the use of safer pesticides and cleaners, and removal of possibly problematic electrical devices. Still these accommodations are often refused and some have become the topic of court litigation. When accommodations are not made or fail to remedy the access problem, persons are forced out of the workplace and often must apply for

disability benefits. Of 305 people in our lab's life impact study of MCS, 151 had applied for disability benefits or workers compensation (Gibson et al., 1996). The application process for disability was often stressful, lengthy, and costly, as applicants reported that it took two years, required three applications, and entailed severe stress (Gibson, 2006).

On in-depth qualitative questions about identity, participants with MCS indicated that loss of work had been not only a catastrophic financial stressor, but had devastated their self-esteem, social support, sense of purpose, and place as an integral part of our economically driven culture (Gibson et al., 2005).

Not surprisingly people with MCS often score poorly on quality of life indicators. In our lab we have found low levels of hope, social support, and life satisfaction. The mean score on the Satisfaction with Life Scale (SWLS) in 209 persons with MCS was 14.9, lower than scores reported in the literature for populations of university undergraduates (24.54) (Coutinho & Woolery, 2004), medical outpatients (23.5) (Arrindell, Meevvesen, & Huyse, 1991) and elderly persons (24.2), and only slightly higher than populations of male prison inmates (12.3) and veterans hospital inpatients (11.8) (Pavot & Diener, 1993).

No published studies to date have examined how persons with environmental sensitivity fare in their requests for work accommodations. Our purpose in the present study was to examine work accommodations for persons with disabling sensitivities. In relation to the workplace we were interested specifically in persons' requests for disability accommodations, whether requests were granted, and, when granted, whether these accommodations were helpful in maintaining employment. We also were interested in a possible relationship between acquisition of work accommodations and life satisfaction and predicted that persons receiving accommodations would report greater satisfaction.

Method

Participants

Participants were 100 persons self-identified as having MCS gathered through notices in newsletters and on websites of MCS advocacy and support groups.

Procedure

Notices asked specifically for people with MCS who either were currently employed or had been employed while having MCS. We used the research definition of MCS published in the May/June 1999 issue of *Archives of Environmental Health* ("Multiple Chemical Sensitivity," 1999), probably the most commonly cited MCS definition in the U.S. Potential respondents were invited to participate in the study if they experienced sensitivities and negative reactions to chemicals, and their condition met these six criteria:

- 1) Their symptoms should be reproducible with repeated chemical exposure.
- 2) Their condition should be chronic.
- 3) Their symptoms should occur from low levels of chemical exposure [lower than they previously tolerated or than other people tolerate without problems].
- 4) Their symptoms should improve or resolve when the chemical incitants are removed.
- 5) They should have symptoms to multiple chemically unrelated substances.
- 6) Symptoms should involve multiple organ systems, (for example digestive and respiratory.)

People who met these criteria were invited to request either a hard copy or e-mail attachment survey and to return it through e-mail or regular mail. Volunteers received and completed a survey that included informed consent. Surveys received were coded with a number and all identifying information was kept separately in a locked cabinet.

Measures

Participants answered questions about basic demographics, work experiences (including accommodations requested or received), and harassment experienced in the workplace. Respondents indicated whether their sensitivities had improved, stayed the same, or deteriorated in the past two years; and categorized their level of MCS-induced disability according to a 4-point scale originally published in the Human Ecology Action League (HEAL) newsletter ("E.I. Disability," 1987). They also completed the Satisfaction with Life Scale (SWLS) that measures global life satisfaction on five questions using a 7-Point Likert-type scale. The SWLS has good internal (.87) and test-retest reliability (.82). Possible scores on the scale range from 5 to 35, and researchers have found means of 23 to 24 in a variety of samples including college students, single women without children, and medical outpatients (Arrindell et al., 1991; Diener et al., 1985; Pavot & Diener, 1993).

Results

Quantitative results were analyzed using SPSS version 13.0 for the Macintosh. Qualitative/open-ended results were tallied and collapsed into categories to create summary data. Results are presented here for 82 women and 18 men, primarily Caucasian, but including 1 African American, 1 Native American, and 1 Latin. Participants were a mean of 50 years of age. Mean annual household income for the whole sample was \$52,000 and personal income was \$32,000. Twelve percent reported mild disability, 57% moderate, 25% severe, and 3% reported being completely disabled by the condition. When asked what they thought caused their sensitivities, 27% blamed a series of low level exposures over time, 9% one large chemical exposure, 1% a preceding physical illness, and 11% other causes. Forty-three percent believed the cause to be a combination of several factors, and 7% reported not knowing the initial cause.

Respondents had been affected by MCS for a mean of almost 19 years. Twenty-four said that they were electrically as well as chemically sensitive. Fifty-eight said they were currently employed and 42 were not. Of the 58 working, 52 worked outside of the home. (Some received the accommodation of being able to work at home.)

Income differences between the working and non-working groups were substantial. Those not working had a mean household income of \$34,000 and a mean personal income of \$12,000. Household income for the working group ranged from \$6,000 to \$190,000 with a mean of \$64,000. Personal income ranged from \$6,000 to \$150,000 with a mean of \$46,000. The mean MCS health care expenditure for the past year for the unemployed group was \$5,500 but there was much variation with costs ranging from zero to \$22,000. Those working actually spent a little less in health care in the last year than the unemployed group, spending amounts ranging from zero to \$18,000, with a mean of \$4,158.

The Employed Group

The 58 employed respondents worked in a large number of occupations including professional, clerical, computer/technical, and other. Included, for example, are 4 college professors, 4 nurses, 2 teachers, 2 attorneys, 3 counselors, and 2 administrative assistants. Those employed were primarily mildly and moderately affected with only one working person rated him or herself as severe and one as disabled. Of those employed 81% said they were currently getting at least some accommodations and 18% said that they were not. Of the 46 who had some accommodations, 44% said that they had had difficulty acquiring them and 33% said that they had not. Nineteen percent of those without accommodations said they had asked for and not received them. Eleven of the 58 employed people said that they were electrically sensitive. Of the 10 of these who used a computer at work, 5 received computer accommodations and 5 did not.

Some people were accommodated consistently and quite well in the workplace. Many of these people had considerable power in their positions however. For example, one person owned the company and one was a senior health care provider. However, most people receiving accommodations reported ongoing struggles that included frequent slip-ups, lack of compliance due to persons' resistance, failure to remember the agreements, interruptions in continuity due to changes in management and custodial workers, and failure to enforce policies. These combined variables made for a continuous struggle to maintain what accommodations were provided. One person was allowed to work from home only after 10 years of asking and filing a U.S. EEOC complaint. However, once the U.S. Equal Employment Opportunity Commission (EEOC) closed the case, the person was terminated despite having received both an excellent job review and a raise. One person described being "set up" through the assignment of an almost impossible task. Even when the person succeeded in completing the task, the feedback was negative and used against the worker.

Table 1 shows the number of people who indicated on a checklist that they had requested and/or received some commonly suggested accommodations for environmental sensitivities. Respondents then listed the exact accommodations received in response to an open-ended question (Table 2). Respondents mentioned 35 fragrance-related accommodations, 34 area-related (such as acquiring a safer office or working at home), 23 cleaning and renovation-related, 6 ventilation-related, 5 carpet-related, 5 pesticide-related, 5 computer-related, and 11 other. Some persons reported more than one accommodation.

Respondents also described employers' reasons for failing to provide any requested accommodations. Reasons ranged from casual dismissals such as "pesticides are necessary," to outright violations of the ADA such as informing workers in two cases that the school did not recognize their ADA letters from their doctors and therefore they were not disabled in the eyes of the institution. One particularly creative

reason given by a supervisor for not providing accommodations was that the person worked for the chemical industry and it was a conflict of interest for her to get sick from chemicals when the chemical industry was paying her salary. Another person who worked for a religious community was told by the pastor that she was just thinking negatively and therefore feeling sick, the implication being that if she would just cheer up and work she would feel better. Another version of this offered by an alternative health establishment to a student was that cultivating the defensive "chi" would reduce her vulnerability to environmental illness (Table 3).

An analysis of variance (ANOVA) comparing those who did and did not receive workplace accommodations showed that those receiving accommodations had significantly higher life satisfaction scores. Mean life satisfaction scores for those receiving accommodations was 17.64 compared with 11.20 for those not being accommodated [$F(1,56)=5.027, p=.029$].

The Unemployed Group

Respondents currently unemployed were from the moderate, severe, and disabled groups. No mildly affected persons were unemployed. Forty of the 42 unemployed persons said that ES was responsible for their unemployment. Respondents were asked to describe their experiences at their most recent or most important job. If one line of work had been their career, then they were asked to describe that. Included were 6 teachers, 5 nurses, 3 social workers, 2 artists, 2 marketing coordinators, 2 computer workers, and a number of others. Eighty-six percent said that they had asked for work accommodations when they were employed and 55% had received some of what they had requested. Of those who received accommodations, 17% said the accommodations received were sustained and 26% said they were not. Twenty-one percent said that the accommodations had helped and 17% said they had not. When asked if they could have continued to work had accommodations been provided, 36% of the unemployed

said "yes" and "17%" said "no." Others were not sure. Some of those who said "no" explained that their health was deteriorating such that eventually they would have been forced out regardless. When respondents lost employment 45% lost their health insurance, 33% lost their life insurance, 38% lost retirement benefits, 83% lost social interaction, 29% lost their homes, and 26% lost access to medical care. Sixty-nine percent said that telecommuting would be an option for them, although some would need accommodations in the form of computer alterations or the use of a laptop so as to have the LCD monitor.

Workplace Harassment

Workplace harassment was common in both the employed and the unemployed groups with 41% of the employed and 71% of the unemployed people reporting having experienced harassment in the workplace. Workers with sensitivities endured eye-rolling, disgusted looks, verbal abuse, increased use of perfume, perfume spraying outside of their doors, being "tested" in various ways to see if chemicals really did make them sick, laughter when they wore masks, and ostracism. Humiliation was common and in one case the head physician in a medical facility said openly at a meeting with the MCS worker present that he thought MCS was a mental illness. Four unemployed respondents said that co-workers had thought of them as "crazy." In addition, a few respondents described more aggressive incidents that qualified as assaults. For example, one person reported that a manager had sprayed cleaning solution in the worker's face, another that a hostile co-worker poured aftershave into a typewriter that the worker needed to use. This harassment occurred in a milieu where co-workers rarely received any guidelines or education from the workplace regarding sensitivities or appropriate treatment of those affected. Although 75 of the 100 participants reported that they had informally offered information on sensitivities to workplace

personnel, only 19 said that any formal education had occurred, and in only 12 cases was an outside entity involved.

Unemployed persons described the most severe incidents of harassment. A crosstabs comparison of harassment endured by employed and unemployed respondents showed that a greater number of those now unemployed had endured workplace harassment than expected if the harassment had been evenly distributed ($\chi^2=9.73$, $p=.009$).

Satisfaction with Life Scale (SWLS)

Satisfaction with Life Scale mean score for the whole sample was 14.9 of a possible 35 (SD=8.1). This is the exact same mean that our lab previously found in a sample of 209 persons with self-reported MCS. Other researchers using the SWLS have reported scores ranging from 23.5 to 25.8 for medical outpatient and elderly samples respectively (Arrindell et al., 1991; Diener, Emmons, Larsen, & Griffin, 1985; Lewis & Borders, 1995). Our respondents with ES scored approximately 10 points lower on this measure than populations with other disabling illnesses or elderly persons. Our previous study found significant gender differences on the SWLS, with women scoring higher than men. In this study, although women scored slightly higher than men (15.06 vs. 13.94), the differences were not significant.

Summary/Conclusions

In summary, work was described as a difficult struggle for most of the employed study participants. Given that 52% of the sample either got no accommodations at all or were forced out of employment, accommodations for environmental sensitivity were not taken seriously by the majority of employers in this sample. Employers appeared to have little knowledge of chemical or electromagnetic sensitivities or the ADA, and whether or not the worker received adjustments depended upon the whim of the

supervisor and sometimes the attitudes of co-workers. Harassment was a common experience, such that employees with disabling sensitivities were subjected to hostile work environments in addition to having to cope with a tedious and relentless disability. Despite the importance of social integration with co-workers for disabled people (Wehman, 2003), education of co-workers rarely occurred, outside agencies were not often used, and the workers were left to tackle piecemeal the task of educating resistant co-workers.

Losing employment was accompanied by other losses including financial losses such as insurance, social losses such as interaction with others, and psychological losses in that people described struggling with poor self-esteem and isolation. Study participants represent highly trained and experienced workers who were extruded from the workplace largely on the basis of supervisors' blatant refusal to remove workplace chemical barriers, because of rigidity of workplace functioning, or due to ignorance regarding the ADA.

Discussion

With 12.8% of the U.S. population demonstrating sensitivity to chemicals and 1.8% losing their jobs because of their hypersensitivity (Caress & Steinemann, 2003), large numbers of persons may be being excluded from employment in industrialized countries due to the ubiquity of workplace chemicals and the failure to address accommodations for this population. Large portions of people extruded from the workplace go on to apply for worker's compensation or Social Security Disability. In our large treatment study we found that of a sample of 917 people with MCS, 31% had applied for worker's compensation and 55% had applied for Social Security Disability (Gibson, Elms, & Ruding, 2003).

Despite advocacy for a barriers approach to disability monitoring (versus impairment) (Roulstone & Warren, 2006), chemicals in the workplace are not

recognized as barriers by legislation, disability advocates, or academics, and are therefore unlikely to receive attention. Matt and Butterfield (2006) support improving the workplace disability climate in order to address negative sequelae of intolerance for disabled people, but it is important to point out that even inclusion of current state of the art disability awareness would exclude environmental sensitivities. E.g, The characteristics of ES are not included in any of Brodwin et al's (2003) list of 19 "functional limitation categories."

The fact that a greater portion of unemployed than employed people in this study had endured workplace harassment raises the question whether the harassment is not in fact a causal factor in job loss. Co-worker harassment may help to weed out the worker with sensitivities so that business can go on as usual. Whether workers mirror the attitudes of their supervisors or act independently to contribute an additional stressor to the worker cannot be determined from this project, but further investigation in this area would be welcome and useful. A Canadian Survey of Labour and Income Dynamics (SLID) of 14,808 persons found that persons with disabling illness are four times more likely than persons without illness or disability to be dismissed from their jobs (Magee, 2004). The author speculated that this is congruent with a harassment model, but suggested research to address the motivations of employers for these dismissals. Schur et al. (2005) reported that employees view accommodations for co-workers as unfair when they are unique or visible and when they impact others. Fragrance-free policies and other reduced chemical use in the workplace are such actions that may likely stir co-worker resentment.

The lack of workplace education about environmental sensitivities in particular allows for a negative attitude to become a workplace norm and for workers to engage in a "groupthink" that becomes destructive to the person with invisible disabilities. A free and accessible structured workplace education program would allow supervisors and managers to set a better standard for workplace behavior even without themselves becoming expert in environmental sensitivity issues. The provision of appropriate work accommodations for this

population could improve workplace retention and preserve their quality of life, though Galvin (2006) points out that this pressure to keep people in problematic systems helps to preserve status quo systems that created disability in the first place.

Regardless, improved workplace accommodation for people disabled by sensitivities may be particularly difficult to implement in the current economic milieu. Johnstone (2001) has stated:

“ . . . in a capitalist society profit and wealth through participation in the market are primary objectives, and the economics of disability service provision is dependent upon the continuation of prosperity and acquisition for those who are powerful and wealthy. Disability rights are conditional to capitalist economics” (p. 100).

Likewise, Roulstone (2002) has discussed the ironic juxtaposition of increased disability legislation with the forces of globalization and corporate domination and their concomitant push for homogenization of the work force and disaggregation of work tasks. Industrial capitalism requires its current paradigmatic exclusion of chemicals as problematic in any way in terms of health. In the U.S. in particular, the chemical and wireless telecommunications industries are very prominent and changes in law are much slower than in the EU. It may be, then, that disabilities that implicate industrial products as causative, are destined to be disparaged and delegitimized by industrial capitalism, as accommodation and prevention of these sensitivities would require a rethinking of the very basis of the industrial economy. Marks has said: “It is only by defining an ‘Other’ – someone who is fundamentally different – that non-disabled culture is able to sustain an image of itself as rational, in control, authoritative and knowing” (p. 153). Thus, perhaps the pathologising of persons with ES serves to bolster the mainstream hegemonic assertion of safety, immunity, and protection through government oversight, despite evidence to the contrary. As Oliver (1990) has said, the “politics of social policy is circumscribed by economic considerations” (p. 97).

If the medical system is the gatekeeper of disability certification and, as Oliver says, medicalisation is a product of industrial capitalism, which is in turn the cause of environmental sensitivity, it will be difficult for persons with this disability to bolster support for their work accommodations from the majority of medical practitioners.

Limitations of the Study

The present study suffers from several limitations including the use of volunteers, a small sample – particularly of those who subscribe to publications targeted to those with sensitivities, and the use of retrospective self-report. Nonetheless it renders some insight into working conditions and access problems for those reporting environmental sensitivity. Future studies could further investigate workplace harassment, the denial of accommodations, and the possibility of telecommuting. Perhaps most importantly, we need protocols for educating workplace supervisors regarding the rights of persons who report and are considered to have sensitivities and a way to implement protective reductions in toxic and electromagnetic exposures in industrial capitalism.

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Table 1. *Number of Working Participants who Requested and Received Accommodations*

Accommodation	Requested	Received
Fragrance-free area	43	29
Use of less toxic cleaners	38	26
Use of less toxic insect control	22	16
Move to a safer work area	31	23
Access to a window that opens	22	19
Flexible work hours	18	16
Removal/turning off of electrical items (computers, florescent lights, etc)	7	1
Total N=58		

Table 2. *Actual Accommodations Received by MCS Workers as Described in Open-Ended Question*

Fragrance-Related	
Co-workers not allowed to wear fragrance	6
“Lower fragrance zone”	5
Informal or loosely enforced policy of less fragrance	4
Non-scented meetings	2
Sign on the floor mandating no scent	1
May ask people to come fragrance-free to meetings	1
Clients come unscented	1
Co-worker changed deodorant	1
Students required to be fragrance-free	4
Visitors not allowed in worker’s office if scented	1
Patients asked not to use fragrance/smoke before visit	1
Removal of scent dispensers in restroom	4
Employees not allowed to wear synthetic clothing	1
Non-scented soap for employees	1
Tolerable personal care products for residents	2
Cleaning and Renovation-Related	
Safer cleaners	4
No cleaners in office	1
Use of low odor wax	1
No wax in classroom	1
Safer paint	9
Not work during painting	1
No floor stripping/buffing while person at work	1
Tolerable glue	1
Cleaning done in evening	1
Notice of renovations	3
Carpet-Related	
Carpet outgassed before instillation	1
Non-toxic carpet cleaning	1
Notification of carpet cleaning	1
No carpet in office	3
Pesticide-Related	
No pesticides	2
Only boric acid for pests	1
Allowed to stay out after fumigation	1
Notification of spraying	1
Computer-Related	
Computer out-gassed before installation	1
Customized, vented computer	1
Laptop computer (LCD)	2
LCD computer vented to outside	1
“Area”-Related	
Given single office	4
Move to a safer area	2
Safe office space	2
Safe classroom	2
Room with windows	1
Meetings outdoors	1
Choice of meeting sites	2

Larger meeting room to avoid fragrance	1
Meeting at worker's home	1
Allowed to work at home	6
Can work at home when necessary	3
Meeting attendance via speaker phone	2
Videotaping of classes	1
Telecommute some	1
Relieved of hallway/cafeteria/parking lot duty	1
Not required to "float" to other units	1
Can skip meetings if conditions not ok	1
Allowed to skip conventions	1
Check out client's home before working in it	1
Ventilation-Related	
Fresh air vent into office/classroom	3
Increased air flow	1
Switch to close outside air vent (school buses)	1
Sign on curb outside "do not idle"	1
Other	
Flexible hours	2
No fluorescent lighting	1
Air filter	4
Wear mask	1
No isopropyl alcohol near worker	1
Residents' nails not painted before worker arrives	1
Staff warn worker about smells	1

Table 3. *Reasons Given By Employers for Denying MCS-Related Accommodations*

Reason	# of cases
No reason – request ignored (one job eliminated)	2
The expense	2
“Too much of a problem” or unreasonable to ask people to make changes	2
Walls must be painted to look decent	1
The need to combat bacteria and viruses (cleaners in hospital)	1
Pesticides are “necessary”	1
There are more “pressing items” to discuss at meetings	1
Too hard to take worker off schedule at last minute	1
Can ask people to stop wearing fragrance but not require it	1
No separate office because staff needs access to the worker and she would just encounter fragrance when she came out	1
An open window is a security issue (company leases building)	1
Others’ “rights”	1
It is a conflict of interest to react to chemicals when the chemical industry is paying your salary	1
School does not recognize ADA letter from doctor and therefore does not recognize person as disabled	2
Didn’t believe worker was sick and so would not spend money	1
MCS is not covered by ADA under any circumstances	1
Employer does not believe MCS is a disease	1
Employer said sensitivity does not affect a “life function” and does not want to start a “perfume war”	1