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Correlates of Occupational Disability in a Clinical Sample of Obsessive Compulsive Disorder

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Abstract

Objective— To examine correlates of occupational disability in a large, clinical sample of individuals with a primary diagnosis of Obsessive Compulsive Disorder (OCD).

Methods— 238 individuals with a primary DSM-IV diagnosis of OCD were interviewed at intake into an observational study of the course of OCD. Primary was defined as the diagnosis that the patient identified as the most problematic lifetime.

Results— At the time of interview, 38% of the sample reported being unable to work due to psychopathology. OCD with occupational disability was associated with greater functional impairment in completing household duties, social functioning, and quality of life. Few differences in treatments received were found among individuals with and without occupational disability. Although number of years on psychotropic medications was similar among the two groups, those with disability had been on a greater number of serotonin-reuptake inhibitors (SRIs) lifetime. Half of individuals with occupational disability had entered cognitive-behavioral therapy (CBT) at some point but only one-third had received at least 13 sessions. Regression analyses revealed that OCD severity was the most powerful predictor of occupational disability, followed by depression severity, and presence of a lifetime substance use disorder.

Conclusions—A substantial proportion of individuals in our sample were unable to work. CBT treatment was underutilized and reasons for this remain unclear. Comorbid depression and substance use present additional risk factors for disability. Further advances in biological and psychosocial treatments are needed to improve functioning and the overall prognosis of the disorder.

OCD is a chronic psychiatric illness that affects from 1.6–3% of the worldwide population (1,2). The disorder is characterized by persistent, intrusive thoughts (obsessions), and repetitive intentional behaviors (compulsions). These symptoms persist despite individuals' attempts to eliminate them, and are accompanied by marked and often overwhelming anxiety. Typical obsessions are unrealistic concerns with cleanliness, order, and harm avoidance that, in the extreme, can occupy nearly every waking moment. Typical compulsive behaviors are excessive hand washing, counting and checking rituals that can disrupt all routine activities.

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The morbidity associated with this disorder is not generally appreciated by the psychiatric community. In the Epidemiology Catchment Area Survey, 22% of patients with OCD were unemployed and 24% were living at a socioeconomic status considered substandard (3). Sixteen percent were receiving disability payments (4). Of the leading causes of disability in 1990, measured in years lived with disability (YLD), OCD ranked 10th in the industrialized world, accounting for 2.2% of the total disability (4). Patients with OCD are impaired in multiple domains of functioning and quality of life (5). Studies suggest that individuals hospitalized for OCD are as functionally impaired as those hospitalized with schizophrenia and more impaired than those with depression (6,7).

Although OCD severity has been consistently related to functional impairment (5,8,9), surprisingly little is known about the characteristics of individuals who are unable to maintain paid employment due to OCD. Some have suggested that variables such as gender, age at onset, duration of OCD, symptom subtypes and comorbid psychiatric conditions (10) may be associated with occupational disability. Understanding these correlates is a critical first step to identifying pathways to disability and optimizing impact of treatment.

In a recent paper, we found that quality of life among patients with OCD, as compared to published community norms, was significantly lower across a broad range of functioning domains (5). We also found that one-third of the sample reported an inability to work due to psychopathology and 14% reported receiving disability benefits because of their OCD symptoms. In the present study, we compare individuals with and without occupational disability on a number of demographic, clinical, and treatment characteristics. To our knowledge, this study is the first to examine clinical correlates of disability in a large sample of patients with OCD who have received treatment in naturalistic, clinical settings. Based on clinical experience, we predicted that individuals with and without disability would show similar patterns of OCD symptoms (e.g. content of obsessions and compulsions) but would differ in patterns of psychiatric comorbidity. Specifically, individuals with disability would show more severe depressive symptoms and personality disorders than those without disability.

Method

Sample

The sample consisted of 238 consecutive adult participants of the Brown Longitudinal OCD Study (BLOCS), an observational follow-up study of the course of OCD. Study inclusion criteria were: primary diagnosis of OCD (i.e., OCD was the disorder that the participant identified as causing the most problems lifetime), at least 19 years of age, and treatment-seeking for OCD within the past five years. Individuals with organic mental disorders were excluded from the study (n=2).

Participants were 96% Caucasian; 46% were married and 55% were female. Patients had a mean age of 41.1 years (*SD* = 12.8, range = 19–75). The sample was well-educated: 48% had completed high school and an additional 32% had achieved a bachelor's degree or higher. Fifty-nine percent of patients were employed at the time of interview. Demographic and clinical features are detailed elsewhere (11) and are consistent with other clinical samples of OCD (12–14).

Procedures

Participants were recruited from multiple psychiatric treatment settings including consecutive admissions to an outpatient OCD specialty clinic, inpatient units of a psychiatric hospital, community mental health centers, two general outpatient psychiatric clinics and the private practices of three experts in cognitive-behavior therapy for OCD. The Butler Hospital and

Brown University Institutional Review Boards approved the study. Participants were interviewed in person by trained research assistants after providing written informed consent to participate in annual interviews. Subjects were paid $25 for participating in the intake interview.

The data presented here were collected as part of the intake interview which consisted of semi-structured interviews, rater-administered assessments, and self-report questionnaires. Interviews were conducted between June 2001 and October 2004 and all data were edited and reviewed by at least two senior staff members. A more detailed description of the sample characteristics, subject recruitment and study procedures is available elsewhere (11).

Measures

The Butler Hospital OCD Database, a semi-structured rater administered questionnaire, was used to collect detailed information on demographic characteristics, clinical features of OCD, and previous treatments. Data regarding occupational disability were obtained by asking participants whether they were receiving disability payments at the time of the interview, and whether the disability was primarily due to OCD. This instrument has been used in previous phenomenological studies (15). Highest educational level and occupational status (current and highest attained) were also collected. Socioeconomic status, as measured by the two-factor version of the Hollingshead Index (16) was derived from educational level attained and category of employment (highest socioeconomic level corresponding to Hollingshead Index 1 and lowest socioeconomic level corresponding to Hollingshead Index 5).

Occupation disability was also assessed using the baseline version of the Longitudinal Interval Follow-Up Evaluation (LIFE-base) (17), a semistructured interview with established psychometric properties which assesses functioning across various domains (17). Interviewers rated the degree of impairment in occupational activities as a result of psychopathology over the past month, using a six-point likert scale (1=no impairment to 6=not working due to psychopathology). Individuals with occupational disability were those who were rated as not working due to psychopathology. The LIFE-base was also used to assess functioning in household and student domains using the same six-point scale. Quality of relationships, recreation and satisfaction with current level of functioning were rated using a five point scale (1= very good to 5=very poor).

A multimethod assessment of functional impairment consisted of two rater-administered measures and two self-report assessments. In addition to the Life-Base described above, raters also rated overall global impairment during the past month using the DSM-IV Social and Occupational Functioning Assessment Scale (SOFAS(18)). The SOFAS is a global rating of 0 to 100, with lower scores indicating greater impairment in functioning (18,19). Participants completed the Social Adjustment Scale-self-report (SAS-SR) (20), a self-report assessing perceptions of functioning across six domains: *work, social and leisures activities, relationships with extended family, marital role, parental role,* and role as part of a *family unit*. The *Overall score* is a mean of all items and reflects overall functioning. Higher scores indicate poorer functioning. Participants also completed the Medical Outcomes Study 36-item Short Form Health Survey (MOS SF-36), a self-report measure of mental and physical aspects of health-realted quality of life with established reliability and validity (21). The scale yields three mental health-related subscores (*psychological well-being, role limitations due to emotional problems, and social functioning)*, three physical health-related subscores *(physical functioning, role limitations due to physical health problems, and bodily pain)*, a *vitality* (energy/fatigue) score, and a *general health* score. Lower scores indicate poorer functioning.

Comorbidity was assessed using the Structured Clinical Interview for DSM-IV Axis I Disorders – Patient version (SCID-P)(22) and the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II)(23).

OCD symptom severity was assessed using the Yale-Brown Obsessive Compulsive Scale (Y-BOCS), a rater-administered 10-item severity scale. The Y-BOCS has established reliability and validity, and is widely accepted as the standard severity measure for OCD (24). To assess current severity of depressive symptoms, raters administered the 25-item Modified Hamilton Rating Scale for Depression (MHRSD), a modified version of the widely accepted Hamilton Rating Scale for Depression (HRSD) (25,26). The validity of the MHRSD has been established by comparing it to the original HRSD(26).

Data Analysis

Statistical analyses were performed using Statistical Analysis System (SAS) for Windows version 8 (27). LIFE-base ratings were used to stratify participants into two groups: those who reported occupational disability (i.e. completely unable to work due to psychopathology) and those who denied occupational disability. Descriptive analyses consisted of computing frequencies, means, and standard deviations. We conducted univariate analyses of potential predictors using chi square analysis for categorical variables and t-tests for continuous variables. All analyses were two-tailed with an alpha level of .05. To account for multiple comparisons, we adjusted alpha levels using Bonferroni corrections.

A stepwise logistic regression analysis was used to identify characteristics independently associated with occupational disability status. Predictor variables associated in univariate analyses with occupational disability were entered and a forward selection method was used to identify variables that made independent contributions to the model ($p < .05$, two-tailed).

Results

Sample Characteristics

Of the 238 participants that met DSM-IV criteria for OCD at intake, 90 (38%) reported being unable to work due to psychopathology in the past month (occupational disability). Half of the sample (n=119) were employed at the time of the interview and the remaining 12% (n=29) reported not working for reasons other than psychopathology [retired (n=8), homemaker (n=8), full-time college student (n=7), physical disability (n=3), unemployed (n=3)].

At the time of interview, 38 (42%) of the 90 participants reporting occupational disability were receiving disability payments primarily due to OCD. Participants receiving disability payments received initial treatment for OCD at a younger age than those not receiving disability payments (24.5 ± 7.3 years vs. 29.4 ± 10.1 years; $t = -2.47$, $df = 89$, $p = .015$). There were no other differences in demographic or clinical characteristics among these two groups. Therefore, we combined the 90 individuals who reported occupational disability into one group for the remaining analyses.

As shown in Table 1, demographic characteristics of the participants who reported occupational disability did not differ from those who denied disability. More than half of participants reporting occupational disability were under the age of 40. Participants with occupational disability had more severe symptoms across all severity and functioning measures but did not differ on other clinical characteristics. Frequencies of current primary obsessions (e.g. contamination, aggressive, hoarding) or compulsions (e.g. cleaning, checking, repeating) were similar between groups.

Table 2 lists Axis I and Axis II comorbidity rates for the sample. Participants with occupational disability were more likely to meet criteria for a concurrent Axis I disorder than those who denied disability. Although both groups had high rates of lifetime disorders, those with disability had met criteria for a greater number of disorders than those who denied disability (3.2 ± 2.1 vs. 2.4 ± 2; t= 3.42, df=236, p=.001). Axis II disorders (Cluster B in particular) were also more common in the disability group. Obsessive Compulsive Personality Disorder (OCPD) was the most frequent comorbid personality disorder (27% of the sample). Although a higher proportion of participants with occupational disability had comorbid OCPD, this difference was not statistically significant [35% of participants with disability versus 23% of participants without disability (χ^2= 3.68, df=1, p=.055)].

Highest Socioeconomic Status (SES)

Average lifetime Hollingshead indices of participants reporting occupational disability did not differ from those of participants with no disability **(**Table 1). Among the 90 participants reporting occupational disability, 82% had held paid employment positions in the past. Specifically, prior to being unable to work, 15% held Category I occupations (higher executives, professionals, business managers), 17% held Category II occupations (administrative personnel), 23% held category III occupations (clerical or sales worker), 6% held category IV (skilled labor) and 21% held category V or VI occupations (semi-skilled or unskilled labor).

Treatments Received and Occupational Disability

Table 3 lists differences in level of treatments received among participants with and without occupational disability. Most participants were receiving an SRI at time of interview and there were no significant differences among the two groups in the total number of years on psychotropic medications. However, patients reporting occupational disability had received a greater number of SRI trials over their lifetime. Two-thirds of the participants reporting occupational disability had received three or more SRI trials lifetime. Patients reporting disability were also more likely to have received a neuroleptic augmentation trial than patients without occupational disability (29% vs. 12% respectively; χ^2= 10.35, df=1, p=.001.

Likelihood of receiving CBT was similar across the two disability groups. One-third of participants in each group had received at least 13 sessions of CBT. Among the participants with occupational disability, only 2% (n=2) had received intensive outpatient sessions (three or more sessions per week) of CBT and 9% (n=8) had attended a specialized OCD residential program. Participants with occupational disability were more likely to have been hospitalized for psychiatric reasons than those without disability.

Functional Impairment

Rates of functional impairment across other domains of psychosocial functioning are presented in Table 4. Participants with occupational disability received more severe global impairment ratings (Life-Base GSA and SOFAS scores). They were also more likely to be rated as impaired in household duties, quality of friendships, quality of recreational activities, and satisfaction with current level of functioning. On the MOS SF-36, mean t-scores for participants with occupational disability were lower across all subscales with the most severe impairment in role limitations due to emotional problems, vitality, and mental health.

Predictors of Occupational Disability

A stepwise logistic regression was used to identify variables independently associated with occupational disability. Data regarding insight into OCD (total BABS score) was missing for 22 participants therefore we did not include this variable in the analysis. All other variables in

Tables 1 and 2 that were found to be significantly associated in univariate analyses were entered as predictors. The final model correctly classified 73.9% of the sample (51.7% of participants with disability and 87.1% of participants without disability). As shown in Table 5, greater severity of OCD, greater severity of depressive symptoms, and lifetime substance use disorders were all independently associated with greater risk for occupational disability. Lifetime mood disorder, presence of a personality disorder, and presence of a concurrent Axis I disorder were not associated with an elevated risk of disability. Results indicated that with each standard deviation increase on the Y-BOCS (5.83 points), the odds of occupational disability increased by a factor of 2.26. Each increase in standard deviation in HAM-D (11.55 points) was associated with an increase by a factor of 1.96 in risk for disability.

Discussion

This is the first study to examine the characteristics of OCD patients with occupational disability in a large, clinical sample. A major strength of this study is that it is a well-characterized cohort of individuals who identified OCD as their primary psychiatric problem. The participants in our sample are likely to be more impaired than individuals in epidemiological samples. However, we have previously shown that our sample is representative of typical clinical samples of OCD (11) and believe our results have important treatment and public health implications.

More than one-third of individuals reported occupational disability at the time of the interview; about half of those were receiving disability payments. These findings are consistent with previous reports of disability payments due to OCD from a U.S. population-based survey (28) and a survey of members of the Obsessive Compulsive Foundation (29). The findings also show that occupational disability of individuals with OCD is comparable to disability rates reported for panic disorder, major depressive disorder, and body dysmorphic disorder (30–32).

Most participants with occupational disability were on an SRI and had received multiple trials of SRIs. However, only one-third of participants with occupational disability had received the recommended minimum number of CBT sessions. CBT is considered the first-line psychosocial treatment for OCD, and intensive exposure and ritual prevention (three times per week or daily sessions) is considered to be the most powerful mode of behavioral therapy (33,34). It is unclear why individuals with severe, disabling OCD symptoms had not received this highly efficacious treatment. Potential reasons might be the patient's unwillingness to participate in CBT, inability to tolerate CBT, lack of access to treatment, or the financial means to pay for treatment. Understanding these reasons and identifying barriers to CBT is a crucial step in improving current treatments for OCD.

Another important finding is that 82% of participants with occupational disability had held paid employment positions in the past and one-third had been working as higher executives, professionals, or administrators. These findings suggest that although OCD usually begins in adolescence (average age of onset was 17–18 years), the disabling impact of OCD may affect many individuals *after* they enter the workforce. A prospective examination of the course of OCD as well as the impact of life events may help elucidate the path to disability.

OCD severity was the dominant factor associated with occupational disability, followed by severity of depressive symptoms, and then presence of a substance use disorder. In contrast to our hypothesis, the presence of a personality disorder was not independently associated with risk for occupational disability. This pattern of comorbidity is consistent with predictors of work impairment in other disorders such as schizophrenia (35). More research regarding the relationship of OCD and substance use is warranted. One review (36) confirmed that anxiety

disorders and alcohol use disorders can each serve to initiate the other, and that anxiety contributes to the maintenance and relapse of alcohol use disorders. It is unclear whether the exacerbating effects of comorbid substance use or depression lead to disability or whether disability leads to an increased risk of developing depression or a substance use disorder.

The data presented in this paper should be interpreted in the context of the study's limitations. First, our results are limited to clinical samples and cannot be generalized to community samples. Second, results are based on cross-sectional data and duration of occupational disability was not collected. Unlike schizophrenia, acute treatment of severe OCD is associated with greater post-treatment gains in psychosocial functioning and independent living skills (7). However average psychosocial functioning scores of treatment responders are still lower than those of the general population and it's unclear whether most of these individuals return to premorbid levels of functioning. Prospective data can help clarify the relationship between symptom reduction and long-term functional impairment. Multimodal treatments directly targeting functioning may be a necessary adjunct to symptom-reduction treatments such as SRIs and CBT (7).

In summary, we found high rates of occupational disability in individuals who had identified OCD as their primary psychiatric problem and who had received treatment for their symptoms. CBT treatment was underutilized and reasons for this remain unclear. Comorbid depression and substance use present additional risk factors for disability. Further advances in biological and psychosocial treatments are needed to improve functioning and the overall prognosis of the disorder.

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Table 1

Characteristics of Participants With and Without Occupational Disability (N=238)

Characteristic	OCD + Disability	OCD – Disability	Statistic		
	% of 90	**% of 148**	χ^2	***df***	***p*** [a]
Sex, female	52.2	58.8	0.979	1	.322
Age group:					
18–21	6.7	8.1	3.827	3	.281
22–39	46.7	41.9			
40–59	44.4	41.9			
60+	2.2	8.1			
Race/ethnicity, White/non-Hispanic	94.4	0.0	*		.007
Marital Status, married	27.8	46.6	8.316	1	.004
Education, college degree	43.3	60.1	6.356	1	.012
	Mean (SD)	**Mean (SD)**	***t*-value**	***df***	***p*** [a]
Highest Lifetime Occupational Status[b]	3.1 (0.9)	3.3 (0.8)	−2.10	236	.037
Age at onset of minor symptoms, yrs	11.8 (6.7)	11.9 (8.6)	0.10	219	.920
Age of onset of OCD, yrs	17.5 (8.4)	18.3 (10.2)	0.66	235	.512
Age first received treatment for OCD, yrs	30.5 (11.1)	28.9 (12.4)	−0.97	232	.331
Duration of illness, yrs	22.21 (12.8)	21.32 (13.7)	−0.50	234	.620
Current symptom severity (possible range)					
YBOCS (0–40)	26.53 (5.2)	21.30 (5.3)	−7.43	236	**<.001**
MHRSD (0–50)	16.07 (9.8)	9.12 (7.5)	−5.57	145	**<.001**
BABS (0–24)	9.13 (5.4)	5.95 (4.4)	−4.79	222	**<.001**
GAF (0–100)	38.68 (7.5)	53.47 (6.9)	13.93	236	**<.001**
SOFAS (0–100)	39.45 (7.1)	55.52 (9.9)	13.85	202	**<.001**
SAS-SR overall score (0–5)	2.39 (0.6)	1.97 (0.5)	−6.66	218	**<.001**

[a] The Bonferroni-corrected alpha level for comparisons in this table is 0.05/16 = 0.003. Significant p values are highlighted in bold.

[b] Hollingshead index range for occupational categories is 1 (higher executives, professionals, business managers) through 6 (unskilled labor).

Table 2

Differences in Comorbidity Among OCD With and Without Occupational Disability

DSM-IV Diagnosis	OCD + Disability (N=90)	OCD − Disability (n=148)			
	%	%	χ^2	*df*	p^a
Other Current Axis I disorder	74.4	56.1	8.10	1	**.004**
Other Lifetime Axis I disorder[b]	93.3	87.8	1.86	1	.172
Mood disorder	85.6	67.6	9.50	1	**.002**
Anxiety disorder	53.3	54.1	0.01	1	.914
Substance Use disorder	40.0	18.9	12.65	1	**<.001**
Somatoform Disorder	8.9	8.1	0.04	1	.833
Eating Disorder	13.3	10.1	0.57	1	.451
Impulse Disorder	16.7	19.6	3.18	1	.573
Tic Disorder	16.7	14.2	0.27	1	.605
Any Axis II disorder[c]	55.1	34.9	9.16	1	**.003**
Cluster A disorders	5.6	2.1	2.13	1	.144
Cluster B disorders	15.7	3.4	11.27	1	**.001**
Cluster C disorders	46.1	32.2	4.54	1	.033

[a] The Bonferroni-corrected alpha level for comparisons in this table is 0.05/13 = 0.004. Significant p values are highlighted in bold.

[b] Differences in rates of psychotic disorders were not examined because only 6 participants met lifetime criteria for a psychotic disorder.

[c] Cluster A =Paranoid, Schizoid, and Schizotypal Personality Disorders; Cluster B=Antisocial, Borderline, and Narcissistic Personality Disorders; Cluster C=Avoidant, Dependent, and Obsessive-Compulsive personality disorders.

Table 3

Treatments Received by Participants With and Without Occupational Disability

	OCD + Disability (N=90)	OCD − Disability (n=148)			
Treatments Received	**%**	**%**	**χ^2**	**df**	**p[a]**
On SRI medication at Time of Interview	83.3	78.4	0.87c	1	.352
At least one session of CBT	52.2	50.7	0.54c	1	.817
Received 13 or more sessions of CBT	32.2	35.9	1.05c	1	.305
Psychiatric Hospitalization – Inpatient	54 (60.0)	32 (21.6)	35.70	1	**<.001**
Psychiatric Hospitalization - Partial	39 (43.3)	16 (10.8)	33.32	1	**<.001**
	Mean (SD)	**Mean (SD)**	***t***	***df***	***p***
Years on Psychotropic Meds, mean (sd)	8.9 (7.4)	7.9 (6.7)	1.01t	228[b]	.314
Total Number of SRI Trials[c], mean (sd)	2.8 (1.6)	2.13 (1.4)	3.00t	169.6	**.003**
Total Number of CBT sessions, mean (sd)	40.0 (49.5)	34.3 (41.1)	0.70t	120[d]	.487

NOTE: SRI =Serotonin Reuptake Inhibitor: clomipramine, fluoxetine, sertraline, paroxetine, fluvoxamine, citalopram, venlafaxine, escitalopram. CBT=cognitive-behavioral therapy

[a] The Bonferroni-corrected alpha level for comparisons in this table is 0.05/8= 0.006. Significant p values are highlighted in bold.

[b] 8 participants could not reliably estimate number of years on psychotropic medications.

[c] SRI trial was defined as taking an SRI for at least 12 weeks(33).

[d] Based on the 122 participants who received any CBT.

Table 4

Impairment Across Other Functioning Domains

	OCD + Disability (N=90)	OCD − Disability (n=148)			
	%	%	χ^2	*df*	p^a
LIFE-base[b] (substantial impairment)					
Household Duties	74.4	44.6	21.25	1	**<.001**
Student Work[c]	86% of 14	45% of 20	5.78	1	.016
Interpersonal Relationships					
Parents,[cd]	16% of 71	6% of 120	4.88	1	.027
Spouse/Partner[c]	23% of 31	13% of 75	1.39	1	.238
Friends	36.7	13.5	17.33	1	**<.001**
Recreation	50.0	29.1	10.54	1	**.001**
Satisfaction with Functioning	50.0	11.5	43.09	1	**<.001**
	Mean (SD)	**Mean (SD)**	***t***	***df***	p^a
SAS-R[e]					
Household Role	2.27 (0.95)	2.17 (0.70)	0.81	181	.418
Social and leisure	2.91 (0.81)	2.37 (0.78)	4.97	218	**<.001**
Extended family	2.15 (0.62)	1.82 (0.51)	4.09	215	**<.001**
Primary relationship	2.62 (0.84)	2.37 (0.85)	1.40	106	.167
Parental relationships	1.85 (0.78)	1.83 (0.89)	0.07	90	.945
Family unit	2.58 (1.10)	2.07 (0.92)	3.69	217	**<.001**
MOS SF-36 [f]					
Role limitation due to emotional problems	34.17 (38.60)	49.63 (42.29)	2.74t	178	.007
Vitality	37.75 (22.44)	42.39 (22.68)	1.45t	212	.148
Mental Health	39.31 (21.53)	51.55 (20.47)	4.15t	211	**<.001**
Social Functioning	47.41 (28.72)	63.25 (27.69)	4.02t	213	<.**001**
General Health	52.52 (23.04)	62.30 (22.04)	3.11t	214	.002
Role limitation due to physical problems	61.11 (43.48)	77.26 (36.08)	2.81t	146	.006
Body Pain	63.20 (27.06)	72.31 (21.06)	2.59t	139	.011
Physical Functioning	73.15 (26.75)	86.11 (21.12)	3.71t	141	<.**001**

Abbreviations= LIFE-base=baseline version of the Longitudinal Interval Follow-up Evaluation; SAS-R = Social Adjustment Scale-Revised; MOS SF-36 = Medical Outcomes Study 36-item Short Form Health Survey

[a] The Bonferroni-corrected alpha for comparisons in this table is 0.05/22= 0.002. Significant p-values are highlighted in bold.

[b] Substantial impairment was defined as a rating of moderate, severe, or complete impairment on the LIFE-BASE for household duties and student work; a rating of "poor" or "very poor" on the relationship, recreation, and satisfaction domains.

[c] N's vary to reflect only the total number of participants who assumed student roles (n=34), had at least one living parent (n=191), and were married or living with a significant other (n=106). These domains were not assessed for participants who did not assume these roles.

[d] Relationship with parents was based on the average of ratings of quality of relationship with father and mother.

[e] Higher scores on the SAS-R indicate poorer functioning.

[f] Lower scores on the MOS SF-36 indicate poorer functioning.

Table 5

Logistic Regression Analysis Summary for Predictors of Occupational Disability (n=234).

Variable	B	Standard Error	P value	Odds Ratio	95% Confidence Interval
Total Y-BOCS	.140	.032	.000	2.26[a]	1.57 – 3.28
Total MHRSD	.060	.019	.002	1.98[b]	1.30 – 3.04
Lifetime Substance Use Disorder	.666	.340	.050	1.95	1.00 – 3.79

[a] Y-BOCS standard deviation = 5.83

[b] HAM-D standard deviation = 11.55