

**Measures and Correlations related to:
Service Empowerment, Needs and Recovery Related Outcomes**

Updated 6-10-05

Legend of Measured Variables

CMREL-CR, CMREL-CM: The Service Relationship measure (CMREL-CR, CMREL-CM) included questions drawn and adapted from three sources (Cambell & Schraiber, 1989; Neese-Todd & Weinberg, 1992; Rosenfield, 1992). The questions referred to the extent to which the consumer-case manager relationship included attributes such as acceptance, support, respect, and reciprocity (e.g., How often does this person take into account your ideas and opinions? How often do you take into account this person's ideas and opinions?). Ratings were made on a 5-point scale: 0 (never), 1 (seldom/rarely), 2 (sometimes), 3 (often), 4 (always). The consumer scale (CMREL-CR) included 19 items ($\alpha = .93$); the case manager scale (CMREL-CM) included 15 items ($\alpha = .88$).

SVCDEC-CR, SVCDEC-CM: The Service Decisions measure (SVCDEC-CR, SVCDEC-CM) assessed the extent to which consumers were involved in and had control over decisions regarding their services and medications. The questions were adapted from Rosenfield's (1992) Empowerment Scale to administer to both consumers and case managers. Ratings were made on a 5-point scale: 0 (none), 1 (a little), 2 (some), 3 (quite a bit), 4 (complete). The consumer scale (SVCDEC-CR) included 5 items ($\alpha = .79$); the case manager measure (SVCDEC-CM) included 6 items ($\alpha = .82$).

CONTACT: Sufficiency of contact was assessed by asking consumers, "Do you have enough contact with people from the mental health agency when you need it?" Responses were made on a 3-point scale: 1 (no), 2 (sometimes), 3 (yes).

ENFSAY: Say over services was assessed by asking consumers to respond to the following question: "How much say do you have in the services that you receive?" Responses were made on a 3-point scale: 1 (none), 2 (some), 3 (a lot).

MN-MH, MN-CSP, MN-SS: Met needs were assessed from consumers' (-CR) and case managers' (-CM) perspectives. Consumers and case managers were asked to rate the amount of help that consumers currently needed and the amount of help that they currently received in 15 areas related to mental health and daily living. Ratings were made on a 5-point scale: 0 (none), 1 (a little), 2 (some), 3 (quite a bit), 4 (complete). Ratings of help needed were subtracted from

ratings of help received to determine the extent to which needs were met by the level of help received. The 15 need areas were classified into 3 domains: (1) mental health service needs (MN-MH-) included talking about problems, dealing with upsets and crises, managing medication, and finding available services; (2) community support/daily living needs (MN-CSP-) included daily living skills, housing, vocational training, transportation, managing money, legal issues, obtaining benefits and medical and dental care; and (3) social support needs (MN-SS) included interpersonal issues involving family, friends, and roommates, and making friends. Met need was assessed by calculating the mean met needs rating in each domain. Because each domain score was a composite of ratings in several diverse areas, internal consistency was not assessed.

DEP, ANX, PSYCHOT. Symptomatology was assessed using both consumers' reports (-CR) and case managers' reports (-CM). Consumers' ratings (Dep-CR, Anx-CR, Psychot-CR) were obtained using the depression subscale (7 items, $\alpha = .87$) and the anxiety subscale (6 items, $\alpha = .87$) of the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983) and the psychoticism subscale (12 items, $\alpha = .88$) of the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1977). Consumers rated how bothered they were by various symptoms on a 5-point scale: 0 (not at all), 1 (a little bit), 2 (moderately), 3 (quite a bit), 4 (extremely). Case managers' ratings (Dep-CM, Anx-CM, Psychot-CM) were obtained by asking case managers to rate the extent to which consumers' symptoms matched definitions of depression, anxiety, and psychoticism based on Derogatis (1983). Ratings were made on a 5-point scale ranging from 0 (not present) to 4 (extreme).

GQOL, FFRQOL, LQOL: Quality of life was assessed using three subscales of the Lehman Quality of Life Inventory (Lehman, 1983): Global, Family, and Leisure. Consumers were asked to rate how they feel about various aspects of their lives on a 7-point scale: 1 (terrible), 2 (unhappy), 3 (mostly dissatisfied), 4 (mixed), 5 (mostly satisfied), 6 (pleased), 7 (delighted).

BEH, SKILL, SOC: Level of functioning was assessed using Ohio's 508 Functioning Scales (Beane et al., 1988), which measure functioning using an adapted form of the Uniform Client Data Instrument (Widlak, McKee, Greenberg, & Greenley, 1992). This instrument included

three functioning subscales: behavior problems (BEH), basic living skills (SKILL), and social skills (SOC). For the behavior problems subscale, case managers were asked to rate the degree to which the client exhibited specific behaviors on a 4-point scale: 1 (no problem), 2 (problem), 3 (moderate problem), 4 (serious problem). This item was reverse scored prior to testing the structural equation model. For the basic living skills subscale, case managers were asked to rate the extent to which clients could and were willing to do specific activities on a 5-point scale: 1 (acts independently), 2 (needs minor assistance), 3 (needs physical assistance), 4 (doesn't know but tries), 5 (unwilling). This item was reverse scored prior to testing the structural equation model. For the social skills subscale, case managers were asked how frequently their clients took part in social activities on a 5-point scale: 1 (never), 2 (once a week or less), 3 (2-3 days a week), 4 (4-5 days a week), 5 (5-7 days a week).

Correlation Matrices of Measured Variables

Sample Correlation Matrix : Quality of Life

	CMREL-CM	SVCDEC-CM	CMREL-CR	SVCDEC-CR	CONTACT
CMREL-CM	1.000				
SVCDEC-CM	0.644	1.000			
CMREL-CR	0.185	0.196	1.000		
SVCDEC-CR	0.051	0.165	0.564	1.000	
CONTACT	-0.027	-0.018	0.408	0.369	1.000
ENFSAY	-0.016	0.079	0.416	0.429	0.458
MN-CSP-CR	-0.029	0.024	0.169	0.250	0.249
MN-CSP-CM	0.028	0.100	0.065	0.128	0.039
MN-MH-CR	0.042	0.022	0.175	0.210	0.272
MN-MH-CM	0.210	0.213	0.137	0.098	0.036
MN-SS-CR	-0.001	0.008	0.241	0.194	0.233
MN-SS-CM	0.132	0.122	0.081	0.080	0.036
GQOL	-0.107	-0.051	0.201	0.206	0.256
LQOL	-0.171	-0.137	0.084	0.178	0.211
FFRQOL	-0.031	-0.011	0.187	0.296	0.279

	ENFSAY	MN-CSP-CR	MN-CSP-CM	MN-MH-CR	MN-MH-CM
ENFSAY	1.000				
MN-CSP-CR	0.327	1.000			
MN-CSP-CM	0.023	0.167	1.000		
MN-MH-CR	0.255	0.605	0.142	1.000	
MN-MH-CM	0.083	-0.010	0.568	0.001	1.000
MN-SSCR	0.268	0.534	0.112	0.496	0.018
MN-SS-CM	0.054	0.085	0.259	0.169	0.269
GQOL	0.218	-0.295	0.029	-0.388	0.104
LQOL	0.163	-0.301	-0.103	-0.440	0.043
FFRQOL	0.310	-0.242	-0.092	-0.395	-0.054

	MN-SS-CR	MN-SS-CM	GQOL	LQOL	FFRQOL
MN-SS-CR	1.000				
MN-SS-CM	0.048	1.000			
GQOL	0.270	0.060	1.000		
LQOL	0.318	0.079	0.685	1.000	
FFRQOL	0.410	0.086	0.606	0.621	1.000

Number of cases = 221.

Sample Correlation Matrix : Level of Functioning

	CM-REL-CM	SVCDEC-CM	CM-REL-CR	SVCDEC-CR	CONTACT
CM-REL-CM	1.000				
SVCDEC-CM	0.638	1.000			
CM-REL-CR	0.192	0.200	1.000		
SVCDEC-CR	0.063	0.173	0.564	1.000	
CONTACT	-0.023	-0.014	0.409	0.369	1.000
ENFSAY	-0.011	0.085	0.418	0.430	0.455
MN-CSP-CR	-0.004	0.041	0.168	0.245	0.246
MN-CSP-CM	-0.001	0.084	0.069	0.139	0.043
MN-MH-CR	0.075	0.045	0.177	0.207	0.264
MN-MH-CM	0.160	0.186	0.151	0.123	0.048
MN-SS-CR	0.029	0.025	0.240	0.188	0.236
MN-SS-CM	0.104	0.106	0.086	0.091	0.041
BEH	0.058	0.174	0.304	0.235	0.253
SKILL	0.068	0.191	0.110	0.142	0.048
SOC	-0.064	-0.054	0.000	-0.011	0.022

	ENFSAY	MN-CSP-CR	MN-CSP-CM	MN-MH-CR	MN-MH-CM
ENFSAY	1.000				
MN-CSP-CR	0.325	1.000			
MN-CSP-CM	0.027	0.191	1.000		
MN-MH-CR	0.247	0.598	0.173	1.000	
MN-MH-CM	0.098	0.036	0.555	0.061	1.000
MN-SS-CR	0.271	0.527	0.139	0.496	0.071
MN-SS-CM	0.059	0.109	0.241	0.201	0.233
BEH	0.280	0.111	0.173	0.139	0.190
SKILL	0.186	0.069	0.200	0.042	0.126
SOC	0.082	0.104	0.187	0.137	0.026

	MN-SS-CR	MN-SS-CM	BEHY	SKILLY	SOCY
MN-SS-CR	1.000				
MN-SS-CM	0.075	1.000			
BEHY	0.188	0.186	1.000		
SKILLY	0.047	0.069	0.392	1.000	
SOCY	0.191	0.086	0.048	0.110	1.000

Number of cases = 219.

Sample Correlation Matrix: Symptomatology-Consumer Report

	CM-REL-CM	SVCDEC-CM	CMREL-CR	SVCDEC-CR	CONTACT
CMREL-CM	1.000				
SVCDEC-CM	0.651	1.000			
CMREL-CR	0.193	0.178	1.000		
SVCDEC-CR	0.052	0.133	0.551	1.000	
CONTACT	-0.048	-0.053	0.396	0.356	1.000
ENFSAY	-0.041	0.037	0.398	0.411	0.437
MN-CSP-CR	-0.045	0.012	0.149	0.256	0.221
MN-CSP-CM	0.028	0.101	0.058	0.126	0.027
MN-MH-CR	0.034	0.011	0.154	0.199	0.244
MN-MH-CM	0.204	0.214	0.115	0.082	-0.005
MN-SS-CR	-0.024	-0.002	0.230	0.197	0.200
MN-SS-CM	0.134	0.134	0.093	0.093	0.041
ANX-CR	0.056	0.054	-0.022	-0.093	-0.108
DEP-CR	0.110	0.060	-0.063	-0.122	-0.126
PSYCHT-CR	0.015	0.012	-0.118	-0.127	-0.075

	ENFSAY	MN-CSP-CR	MN-CSP-CM	MN-MH-CR	MN-MH-CM
ENFSAY	1.000				
MN-CSP-CR	0.307	1.000			
MN-CSP-CM	0.010	0.161	1.000		
MN-MH-CR	0.229	0.594	0.127	1.000	
MN-MH-CM	0.046	-0.056	0.567	-0.050	1.000
MN-SS-CR	0.241	0.508	0.099	0.474	-0.039
MN-SS-CM	0.061	0.091	0.265	0.182	0.281
ANX-CR	-0.181	-0.135	0.018	-0.279	-0.007
DEP-CR	-0.151	-0.240	0.031	-0.390	0.109
PSYCHT-CR	-0.179	-0.255	-0.011	-0.357	0.043

	MN-SS-CR	MN-SS-CM	ANX-CR	DEP-CR	PSYCHT-CR
MN-SS-CR	1.000				
MN-SS-CM	0.047	1.000			
ANX-CR	-0.199	0.009	1.000		
DEP-CR	-0.329	-0.009	0.755	1.000	
PSYCHT-CR	-0.318	-0.060	0.786	0.746	1.000

Number of cases = 211.

Sample Correlation Matrix : Symptomatology – Case Manager Report

	MN-CSP-CM	MN-MH-CM	MN-SS-CM	SVCDEC-CM	CMREL-CM
MN-CSP-CM	1.000				
MN-MH-CM	0.519	1.000			
MN-SS-CM	0.202	0.203	1.000		
SVCDEC-CM	0.091	0.224	0.127	1.000	
CMREL-CM	0.030	0.212	0.146	0.671	1.000
MN-CSP-CR	0.116	-0.062	0.030	0.027	-0.026
MN-MH-CR	0.092	-0.056	0.129	0.019	0.058
MN-SS-CR	0.109	0.001	0.038	0.020	0.009
SVCDEC-CR	0.094	0.070	0.048	0.157	0.072
ENFSAY	-0.026	0.090	0.035	0.089	-0.001
CMREL-CR	0.043	0.140	0.042	0.190	0.209
CONTACT	0.043	0.064	0.035	-0.001	-0.005
DEP-CM	-0.025	0.059	-0.142	0.084	0.123
ANX-CM	0.016	-0.049	0.062	0.095	0.147
PSYCHT-CM	-0.048	-0.030	0.031	-0.127	-0.067

	MN-CSP-CR	MN-MH-CR	MN-SS-CR	SVCDEC-CR	ENFSAY
MN-CSP-CR	1.000				
MN-MH-CR	0.610	1.000			
MN-SS-CR	0.547	0.545	1.000		
SVCDEC	0.244	0.200	0.208	1.000	
ENFSAY	0.341	0.243	0.298	0.448	1.000
CMREL-CR	0.157	0.167	0.256	0.555	0.407
CONTACT	0.266	0.276	0.254	0.392	0.429
DEP-CM	-0.113	-0.186	-0.177	0.006	-0.164
ANX-CM	-0.010	-0.026	-0.117	0.008	-0.151
PSYCHT-CM	-0.030	-0.067	-0.056	-0.162	-0.103

	CMREL-CR	CONTACT	DEP-CM	ANX-CM	PSYCHT-CM
CMREL-CR	1.000				
CONTACT	0.408	1.000			
DEP-CM	0.091	-0.187	1.000		
ANX-CM	-0.001	-0.110	0.361	1.000	
PSYCHT-CM	-0.169	0.042	0.061	0.091	1.000

Number of cases = 204.

Factor Loadings and T-Values

Model 1: Quality of Life (QOL)

	Emp – CM	Emp – CR	Needs – CR	Needs – CM	QOL
CMREL-CM	.749, 8.68				
SVCDEC-CM	.860, 9.08				
CMREL-CR		.713, 15.15			
SVCDEC-CR		.713, 15.13			
CONTACT		.593, 10.84			
ENFSAY		.640, 12.39			
MN-MH-CR			.789, 19.59		
MN-SS-CR			.671, 14.23		
MN-CSP-CR			.757, 18.09		
MN-MH-CM				.834, 10.25	
MN-SS-CM				.345, 4.86	
MN-CSP-CM				.679, 9.18	
QOL-Global					.811, 24.46
QOL-Family /Friends					.751, 20.11
QOL-Leisure					.835, 26.34

Note. The first number is the factor loading and the second, the T-value.

Model 2: Level of Functioning (LOF)

	Emp – CM	Emp – CR	Needs – CR	Needs – CM	LOF
CMREL-CM	.638, 15.90				
SVCDEC-CM	1.00				
CMREL-CR		.714, 15.26			
SVCDEC-CR		.700, 14.69			
CONTACT		.593, 10.84			
ENFSAY		.654, 12.92			
MN-MH-CR			.748, 16.57		
MN-SS-CR			.669, 13.69		
MN-CSP-CR			.793, 18.24		
MN-MH-CM				.711, 9.99	
MN-SS-CM				.336, 4.64	
MN-CSP-CM				.771, 10.54	
Behavioral- LOF					.760, 8.48
Skills-LOF					.515, 6.74
Social-LOF					.103, 1.26

Note. The first number is the factor loading and the second, the T-value.

Model 3: Symptomatology – Consumer Report (Symp-CR)

	Emp – CM	Emp – CR	Needs – CR	Needs – CM	Symp – CR
CMREL-CM	.565, 7.13				
SVCDEC-CM	.886, 7.44				
CMREL-CR		.712, 14.20			
SVCDEC-CR		.710, 14.15			
CONTACT		.569, 9.71			
ENFSAY		.617, 11.11			
MN-MH-CR			.768, 17.09		
MN-SS-CR			.655, 12.87		
MN-CSP-CR			.757, 16.67		
MN-MH-CM				.849, 10.05	
MN-SS-CM				.353, 4.89	
MN-CSP-CM				.666, 8.84	
Anx-CR					.879, 39.47
Dep-CR					.854, 35.13
Psychot-CR					.887, 40.88

Note. The first number is the factor loading and the second, the T-value.

Model 4: Symptomatology – Case Manager Report (Symp-CM)

	Emp – CM	Emp – CR	Needs – CR	Needs – CM	Symp – CM
CMREL-CM	.81, 9.58				
SVCDEC-CM	.829, 9.66				
CMREL-CR		.701, 13.98			
SVCDEC-CR		.715, 14.50			
CONTACT		.599, 10.56			
ENFSAY		.645, 12.01			
MN-MH-CR			.772, 17.85		
MN-SS-CR			.712, 15.35		
MN-CSP-CR			.779, 18.14		
MN-MH-CM				1.0	
MN-SS-CM				.203, 3.01	
MN-CSP-CM				.519, 10.11	
Anx-CM					.714, 4.40
Dep-CM					.506, 4.08
Psychot-CM					.102, 1.13

Note. The first number is the factor loading and the second, the T-value.

Correlation Matrices of Latent Variables

Model 1: Quality of Life (QOL)

	Emp-CR	Emp-CM	Needs-CR.	Needs-CM.
1. Emp-CR				
2. Emp-CM	.18			
3. Needs-CR	.46	.02		
4. Needs-CM	.17	.27	.09	
5. QOL	.37	.13	.57	-.01

Model 2: Level of Functioning (LOF)

	Emp-CR	Emp-CM	Needs-CR.	Needs-CM.
1. Emp-CR				
2. Emp-CM	.19			
3. Needs-CR	.46	.05		
4. Needs-CM	.19	.18	.23	
5. LOF	.49	.25	.23	.37

Model 3: Symptomatology, Consumer Report (Symp-CR)

	Emp-CR	Emp-CM	Needs-CR.	Needs-CM.
1. Emp-CR				
2. Emp-CM	.15			
3. Needs-CR	.44	.01		
4. Needs-CM	.14	.27	.02	
5. Symp-CR	-.19	.06	-.43	.05

Model 4: Symptomatology, Case Manager report (Symp-CM)

	Emp-CR	Emp-CM	Needs-CR.	Needs-CM.
1. Emp-CR				
2. Emp-CM	.18			
3. Needs-CR	.46	.03		
4. Needs-CM	.14	.27	-.06	
5. Symp-CM	-.12	.19	-.25	.04