Life-Course Theory of Readmission of Substance Abusers Among Homeless Veterans

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This study examined outcomes of 310 female and 315 male homeless veterans who were admitted to a Department of Veterans Affairs inpatient program for dual diagnoses of a substance use disorder and another mental illness. Participants were surveyed to determine gender differences for types of transforming experiences and for types of abuse as predictors of readmission within two years. Predictors were selected primarily from life-course theory and were analyzed with Cox's proportional hazards model. Transforming experiences, such as enhanced ego identity and spiritual well-being, attenuated the effects of childhood abuses, combat exposure, and depression for both genders. Transforming experiences also reduced the risk of readmission that was associated with aggression for men and abuse that occurred either in the military or recently for women. (*Psychiatric Services* 55:1308–1310, 2004)

Life-course theory offers actionable explanations for predictors that can be translated into planned change, and prediction studies provide systematic information about the relative potency of predictors, which can be useful to program design and resource allocation. The primary tenet of life-course theory is that

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transforming experiences alter some persons' life trajectory from relapse and morbidity to healthier developmental pathways (1). Transforming experiences include enhanced social support, improved relationships with family and friends, heightened work satisfaction, and spiritual awakening (1). Healthy relationships with family and friends can motivate persons to exercise restraint over self-destructive tendencies and can encourage efforts to overcome adverse feelings and thoughts, such as depression and suicidal thinking, which often arise from early traumas, such as childhood abuse (2).

Evidence from studies of different populations suggests that homeless women veterans, in particular, are likely to report high prevalence rates of lifelong victimization (3). I was unable to locate any research that examined possible gender differences in theoretical predictors of readmission to a Department of Veterans Affairs (VA) medical center for substance abuse and mental illness. This study examined outcomes of homeless veterans who were admitted to a VA inpatient program for dual diagnoses of a substance use disorder and another mental illness. Participants were surveyed to determine gender differences for types of transforming experiences and for types of abuse as predictors of readmission within two years. Predictors were selected primarily from life-course theory (1). Life-course theory suggests that any extended effects of early abuses are attenuated by transforming experiences later in life (4). However, most developmental theories posit that early abuse can have

rippling effects on subsequent development, even neurologic impairments, which can lead to adversities in adulthood (4).

Methods

This retrospective study consisted of a convenience sample of 310 women who entered an inpatient VA program for co-occurring disorders—substance use disorder and another psychiatric disorder—over a three-year period from 1999 to 2001. A systematic random sample of 315 men was selected during that period from the same program. Women were more likely than men to be married, to have children, and to have been sexually or physically abused, both during active duty and in the past year (5).

The institutional human subjects review board of the VA approved the study. Written consent was obtained from all veterans before two intake interviews at the medical center. A third interview was conducted one month after their release to aftercare services. In the final interview, scales were administered that measured the psychiatric problems that are shown in Table 1.

The effect of transforming experiences was measured by the change in scores from scales given at the intake interviews to scales given at the final interview. Inpatient treatment and aftercare services were designed to promote transforming experiences.

Eight subscales from Hudson's Multi-Problem Screening Inventory (6) measured current aggression, depression, suicidal thoughts, confused thinking, memory loss, family relations, friendships, and work satisfaction. Ego identity (12 items), self-effi-

Table 1

Cox's proportional hazards model of veterans with dual diagnoses of a substance use disorder and another mental illness who were not readmitted to a Department of Veterans Affairs inpatient program

Variable	Women[a]			Men[b]		
	Beta	Hazard rate	95% CI	Beta	Hazard rate	95% CI
Predictor						
Age[c]	.14	1.15	1.05–1.27	.17*	1.18	1.12–1.22
Race	.01	1.01	.81–1.07	.02	1.02	.91–1.11
Marital status	.17*	1.18	1.04–1.37	.1	1.11	1.04–1.19
Childhood physical abuse[c]	.48**	1.61	1.46–1.8	.22**	1.25	1.16–1.37
Childhood sexual abuse[c]	.23**	1.26	1.16–1.39	.28**	1.32	1.22–1.41
Alcohol use disorder	.51**	1.66	1.55–1.71	.79**	2.2	1.95–2.36
Drug use disorder	.4**	1.48	1.38–1.59	.75**	2.12	1.96–2.29
Physical abuse during military service[d,e]	.34**	1.4	1.25–1.67	—	—	—
Sexual abuse during military service[d,e]	.64**	1.89	1.61–2.09	—	—	—
Recent physical abuse[d]	.56**	1.75	1.52–1.99	.01	1.01	.9–1.1
Recent sexual abuse[d,e]	.94**	2.56	2.3–2.79	—	—	—
Combat exposure[c]	.04	1.04	.96–1.18	.42**	1.52	1.33–1.74
Combat-related posttraumatic stress disorder	.53**	1.69	1.52–1.89	.56**	1.76	1.6–1.99
Psychiatric problems						
Aggression[f]	.01	1.01	.96–1.09	.29**	1.34	1.11–1.53
Depression[c]	.46**	1.59	1.43–1.76	.2**	1.22	1.11–1.35
Suicidal thoughts	.21*	1.23	1.11–1.36	.17	1.18	1.07–1.31
Confused thinking	.09	1.09	.96–1.2	.47**	1.6	1.46–1.76
Memory loss	.01	1.01	.9–1.12	.41**	1.51	1.39–1.71
Transforming experiences (residualized change scores)						
Ego identity	–.4**	.67	.52–.83	–.6**	.55	.42–.77
Self-efficacy	–.13	.88	.69–.99	–.55**	.58	.42–.85
Social support	–.58**	.56	.43–.69	–.56**	.57	.41–.72
Spiritual well-being	–.52**	.59	.41–.66	–.87**	.42	.28–.57
Relationships with family	–.56**	.57	.39–.73	–.02	.98	.89–1.08
Relationships with friends	–.73**	.48	.36–.62	–.04	.96	.83–1.11
Work satisfaction	.03	.97	.89–1.07	.92**	.4	.28–.53

[a] – 2 log likelihood=983.2**
[b] – 2 log likelihood=998.3**
[c] Significant reduction in betas between analyses with and without transforming experiences for both men and women
[d] Significant reduction in betas between analyses with and without transforming experiences for women only
[e] Analyses were not able to be done for men because data were not available for enough persons
[f] Significant reduction in betas between analyses with and without transforming experiences for men only
*p<.05
**p<.01

cacy (25 items), and social support (12 items) were measured with scales found in the book of measures by Fischer and Corcoran (7).

Other measures included Ellison's Spiritual Well-Being Scale, Laufer's Combat Scale, the Mississippi Scale for Combat-Related PTSD, and subscales of the Childhood Trauma Questionnaire; the latter scale was reworded and administered in the first interview to measure childhood abuse, in the second interview to measure abuse on active duty, and in the third interview to measure abuse in the past year. Detailed description of these scales and psychometric prop-

erties can be obtained from the author. All scales had Cronbach's alphas above .70 and strong validity.

Information about whether participants were readmitted for psychiatric or substance abuse treatment within two years after discharge was obtained by examining the computer databases of all VA hospitals in the state in which the study was conducted and in the surrounding states.

A correlation matrix, tests of tolerance, and the variance inflation factor did not indicate a problem with multicollinearity, and no variable was missing more than 3 percent of the cases.

Results

Sixty-six percent (N=204) of the women and 70 percent (N=220) of the men were readmitted to an inpatient facility for a substance use disorder or another psychiatric disorder during the two-year follow-up period.

Cox's proportional hazards model was used because it is not based on any assumption about the nature or shape of the underlying survival distribution (8). Data were standardized, and thus the hazard rate in Table 1 represents the change in the readmission rate for a change in the predictor variable of one standard deviation. A majority of variables shown in Table 1 are significant predictors of readmis-

sion for a substance use disorder, a psychiatric disorder, or both. Wald's chi square of betas for women and for men showed that women were more likely than men to be readmitted with increases in scores on measures of depression, suicidal thoughts, and physical and sexual abuses that occurred during childhood, in the military, and recently (7). Men were more likely than women to be readmitted with higher scores on measures of alcohol and other drug abuse, combat exposure, aggression, confused thinking, and memory loss. Despite noteworthy gender differences, childhood abuse and depression were also significant predictors of readmission for men and both alcohol and other drug use disorders were notable predictors of readmission for women.

Residualized change scores (8) for measures of transforming experiences showed that enhanced ego identity, social support, and spiritual well-being were associated with a lower risk of readmission, irrespective of gender. Improved relationships with family and friends were related to a lower risk of readmission for women, whereas greater self-efficacy and work satisfaction were allied with a lower probability of readmission for men.

The difference in effects (beta) between a Cox model with transforming experiences and a model without these experiences were tested with the Wald chi square statistic to see whether those experiences attenuated the effects of predictors. The Cox analysis without the transforming experiences is not shown because of space limitations. However, significant reductions in effects between the models with and without transforming experiences are denoted in Table 1.

Discussion and conclusions

This study supported the life-course theory (1), because it found that there were transforming experiences for both male and female homeless substance abusers with a co-occur-

ring psychiatric disorder that attenuated the potency of certain predictors of readmission, that is, childhood abuses, combat exposure, and depression. These transforming experiences also reduced the prediction effects of sexual or physical abuse that occurred either in the military or recently for women and the prediction effects of aggression for men.

A major transforming experience in this study was found to be enhanced ego identity. Erikson (9) described ego identity as serving a variety of functions, including inner continuity, coherence and synthesis of successive identifications, and protection against experiences of sudden discontinuities that are caused by adversities, such as those discussed in this study. Identity formation involves exploration and commitment. This study suggests that cognitive and psychodynamic treatments and services should be directly aimed at exploration of and commitment to a specific set of goals, values, beliefs, and behavioral patterns (10). Self-efficacy is likely bolstered by the processes of exploration and commitment. Services that improve family and other relationships, spiritual well-being, and work satisfaction will strengthen the elements of social bonding, which, in turn, reinforce identity formation. Vocational and psychiatric services are essential as well as those supporting ego identity (2).

These findings suggest that women benefit from improved relationships, perhaps because they are generally more social. The data also suggest that men benefit from improvements in self-efficacy and work satisfaction, because the men in this study had low scores on these measures initially.

The high number of women who were abused either sexually or physically while they were in the military (120 participants, or 39 percent, and 71 participants, or 23 percent, respectively) and recently (93 partici-

pants, or 30 percent, and 77 participants, or 25 percent, respectively) suggests that consideration should be given to having separate wards and programs for women, perhaps with only female service providers. These conditions would prevent possible unwanted comments and advances and would encourage open dialogue, which might be inhibited by the presence of men.

In conclusion, the inferences drawn from this study are limited by a lack of longitudinal data, self-reports from persons who may have problems with recall, and investigation of only one site. However, this study offers preliminary findings that transforming experiences may increase tenure in the community and could reduce recidivism if services directly target these experiences. ♦

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