Quality of Life Following Remission of Mental Disorders: Findings From the National Epidemiologic Survey on Alcohol and Related Conditions

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ABSTRACT

Objective: Although psychiatric disorders are associated with decreased health-related quality of life, it is unknown whether symptom remission is associated with its improvement or normalization.

Method: Data were derived from the National Epidemiologic Survey on Alcohol and Related Conditions, a large national sample of the United States population. A total of 34,653 adults 18 years and older residing in households completed 2 waves (2001–2002 and 2004–2005) of face-to-face surveys. *DSM-IV* psychiatric diagnoses of mood, anxiety, and substance use disorders were based on the Alcohol Use Disorder and Associated Disabilities Interview Schedule–*DSM-IV* Version. Health-related quality of life was assessed with the Short Form-12 Health Survey, Version 2 (SF-12).

Results: Remission from alcohol dependence, major depressive disorder, bipolar disorder, dysthymia, social anxiety disorder, and generalized anxiety disorder was associated with significant improvement in SF-12 scores compared to nonremission (ranging from $\beta = 7.28$ in dysthymia to $\beta = 3.16$ in social anxiety disorder, all $P < .05$). However, with the exception of alcohol abuse, individuals who had remitted from all other disorders had lower SF-12 scores than individuals without lifetime history of the disorder. Furthermore, remission of alcohol abuse, cannabis use disorder, nicotine dependence, panic disorder, and specific phobia was not associated with significant improvement in SF-12 scores.

Conclusions: The relationship between psychiatric disorders and health-related quality of life is complex and differs across disorders. Although remission of several psychiatric disorders was associated with significant improvements, remission was generally not associated with full restoration of health-related quality of life, even among those without comorbid disorders.

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Mental health problems are among the most burdensome of all disease classes.[1] In over one-quarter of all individuals with disabilities in the United States, mental disorders are the primary reason for receipt of benefits.[2] The heavy burden arises from high prevalence,[3] high impact on functionality,[4] early onset,[3] and a tendency toward chronicity.[5] However, despite having a tendency to run a persistent course, several disorders have a high probability of episode remission.[6–13] Whether clinical improvement of mental disorders has an impact on health-related quality of life is unknown. A better understanding of the relationship between remission and changes in health-related quality of life could have important implications for clinical care as well as treatment and policy development.

The variable course of mental disorders has been examined in some epidemiologic studies. Across several mood and anxiety disorders, long-term follow-up reveals substantial symptomatic recovery. For example, longitudinal studies evidenced that for adults with major depressive disorder (MDD), panic disorder, social anxiety, and posttraumatic stress disorder, diagnostic criteria were met by only a minority of the cases through follow-up,[6,8–10,13] whereas other studies demonstrated that for other disorders, including bipolar disorder, generalized anxiety disorder (GAD), and specific phobia, symptomatic recovery occurred in around half of the long-term outcomes.[7,11–13] Similarly, data from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) revealed that only between one-half and one-third of the individuals with substance use disorders (SUD) persist in meeting criteria after 3 years from baseline assessment.[9] Taken together, this evidence indicates that episodic remission is a common phenomenon in the natural history of mental disorders.

While there is an extensive literature from cross-sectional studies reporting decreased levels of health-related quality of life associated to mental disorders,[4,14–17] the changes in health-related quality of life in relation to the course of specific mental disorders have been less studied. A study of bipolar patients seeking treatment in the outpatient setting found that significant improvements occurred following a 2-month period of not meeting criteria for a mood episode.[18] An improvement has also been reported among patients with alcohol dependence following a 3-month period in which they did not meet diagnostic criteria.[19] Whether these findings from clinical studies extend to the general population is unknown, with the exception of MDD. Evidence from the Netherlands Mental Health Survey and Incidence Study (NEMESIS), a prospective study of a sample from the Dutch general population aged 18 to 64 years, suggests that most individuals with MDD return to premorbid levels of health-related quality of life after no longer meeting diagnostic criteria.[20] The NEMESIS investigators also found that individuals with history of other mental disorders had lower levels of health-related quality of life than those without disorders even after episode remission. However,

Clinical Points

- Remission of mood, anxiety, or substance use disorders is commonly associated with improvements in quality of life, although clinicians should be aware of residual deficits in all the domains, even when diagnostic criteria are not met.
- Clinicians should be aware of comorbid mental disorders in patients who show remission from a particular disorder, particularly substance use disorders.

in contrast with their investigation of MDD, they did not examine whether episode remission was associated with improvements in health-related quality of life.[4]

We sought to study whether findings from clinical studies extend to the general population and to examine levels of health-related quality of life in individuals whose mental disorder episode did not persist in a national longitudinal study. We also aimed to examine the role of comorbidities in this change. We drew on data from NESARC, a longitudinal, prospective survey of a large, nationally representative sample of the United States, to compare the sociodemographic characteristics and quality of life of individuals with and without remission from several Axis I disorders.

METHOD

Sample

The NESARC is a longitudinal survey with its first wave of interviews fielded in 2001–2002 and the second wave, in 2004–2005. The target population was the civilian noninstitutionalized population residing in households and group quarters, aged 18 years and older. Blacks, Hispanics, and young adults (aged 18–24 years) were oversampled, with data adjusted for oversampling and household- and person-level nonresponse. The weighted data were then adjusted to represent the US civilian population based on the 2000 Census. All procedures, including informed consent, received full human subjects review and approval from the US Census Bureau and US Office of Management and Budget.

In Wave 1 of the study, conducted in 2001–2002, 43,093 individuals were assessed for a lifetime history of psychiatric disorders as well as other information.[21] In Wave 2, attempts were made to conduct face-to-face reinterviews with all 43,093 respondents to the Wave 1 interview. Excluding respondents ineligible for the Wave 2 interview (eg, deceased), the Wave 2 response rate was 86.7% (n = 34,653), and sample weights were developed to additionally adjust for Wave 2 nonresponse. The present analysis includes the 34,653 respondents who completed interviews at Waves 1 and 2. Remitted individuals were those who met criteria for a disorder at Wave 1 but not at Wave 2 (regardless of whether they sought treatment), whereas nonremitters were those who met criteria at both waves. A total of 7,363 remitters and 3,004 nonremitters were identified and included in the analyses.

Assessment

Sociodemographic measures included age, race-ethnicity, nativity, marital status, education, and family income. All diagnoses were made according to the *DSM-IV* criteria using the Alcohol Use Disorder and Associated Disabilities Interview Schedule–*DSM-IV* version (AUDADIS-IV).[22–24] Axis I diagnoses assessed in both waves included (1) SUD, including alcohol abuse and dependence, cannabis use disorder (CUD), and nicotine dependence; (2) mood disorders, including MDD, dysthymia, and bipolar disorder; and (3) anxiety disorders, including panic disorder, social anxiety disorder, specific phobia, and GAD. The test-retest reliability and validity of AUDADIS-IV measures of past-year *DSM-IV* disorders are good to excellent for alcohol abuse and dependence ($\kappa = 0.74$), nicotine dependence ($\kappa = 0.63$), CUD ($\kappa = 0.62$), MDD ($\kappa = 0.59$), bipolar disorder ($\kappa = 0.59$), dysthymia ($\kappa = 0.58$), and panic disorder ($\kappa = 0.52$) and fair for social anxiety disorder ($\kappa = 0.44$), specific phobia ($\kappa = 0.40$), and GAD ($\kappa = 0.41$).[22–24]

Health-related quality of life was measured using the Short Form-12 Health Survey, Version 2 (SF-12),[25] a reliable and valid measure of health status that reflects physical and mental function and well-being and is commonly used in population surveys.[26] The 12 questions can be scored to yield a mental component summary (MCS) score and a physical component summary score. Given the aim of the study, we focused only on MCS scores. Each SF-12 disability scale is a norm-based score with a mean of 50 and standardized range of 0–100, with higher scores indicating lower health-related quality of life.[25]

Analytic Strategy

To examine the effect at the individual level of psychiatric disorder on MCS scores, mean MCS scores were computed stratified by these characteristics. To assess the independent effect of the association between MCS and each Axis I disorder, multiple linear regressions were conducted with MCS score as the outcome variable. Each MCS-associated value represents the score for the group when the psychiatric disorder was present. In the analysis of each disorder, the reference group was the remaining sample without the specific psychiatric disorder.

Linear regressions were conducted to compare changes in mean MCS scores between individuals who had remitted from a particular disorder and those who had not. We also conducted a *t* test to examine significant differences in the mean SF-12 MCS score between remitters and nonremitters at Wave 1. We additionally conducted linear regressions to compare the Wave 2 MCS scores of individuals who had remitted from one disorder with the scores of those without the corresponding lifetime disorder. To assess the effect of comorbidity, a subanalysis was conducted using the sample who met criteria for only 1 mental disorder. For that subanalysis, individuals who remitted were compared with those not meeting criteria for any lifetime Axis I disorder. To better identify which individual domains of the MCS changed after remission of the mental disorder, we conducted identical analyses (available from the corresponding author upon request) on the SF-12 MCS scores focusing on the role emotional, mental health, and social function subscales

Table 1. Mean SF-12 Mental Component Summary Scores and Change in SF-12 Scores From NESARC Wave 1 to Wave 2 in Individuals Who Remitted From an Axis I Psychiatric Disorder Compared With Respondents Who Did Not Remit From That Disorder

	Remitted					Nonremitted					Difference in the Change in SF-12 Score[a]	
Axis I Disorder	n	%	SE	Mean SF-12 Score at Wave 1	Mean Change in SF-12 Score at Wave 2	n	%	SE	Mean SF-12 Score at Wave 1	Mean Change in SF-12 Score at Wave 2	β	*P* Value
Alcohol abuse	1,099	71.05	1.43	52.46	−1.16	423	28.95	1.43	53.05	−0.97	−0.24	.7028
Alcohol dependence	750	63.66	1.70	48.22[b]	1.94	422	36.34	1.70	46.36[b]	−1.36	3.35	.0005
Cannabis use disorder	327	74.94	2.32	47.28	0.55	117	25.06	2.32	48.92	−0.55	1.18	.3808
Nicotine dependence	1,512	37.41	0.98	50.77[b]	−0.23	2,505	62.59	0.98	48.34[b]	−1.00	0.66	.1291
Major depressive disorder	1,313	67.81	1.30	43.85[b]	4.25	616	32.19	1.30	39.75[b]	−1.00	5.07	<.0001
Bipolar disorder	600	62.63	1.80	43.77[b]	3.33	357	37.37	1.80	38.07[b]	−0.15	3.60	.0020
Dysthymia	432	90.27	1.78	38.81	3.22	49	9.73	1.78	35.70	−4.35	7.28	.0238
Panic disorder	596	78.28	1.73	42.82[b]	3.55	179	21.72	1.73	38.57[b]	1.13	2.49	.1279
Social anxiety disorder	768	78.02	1.66	44.63[b]	1.91	221	21.98	1.66	40.30[b]	−1.52	3.16	.0048
Specific phobia	1,911	74.42	1.05	48.91[b]	−0.13	668	25.58	1.05	46.71[b]	−0.21	0.05	.9442
Generalized anxiety disorder	558	75.76	1.99	38.84[b]	5.34	188	24.24	1.99	35.36[b]	−1.71	7.19	<.0001

[a]Controlled for age; race/ethnicity; nativity; education; individual income; marital status; personality disorders; incident Axis I psychiatric disorders; past history of mood, anxiety, and substance use disorders; and change in marital status, urbanicity, and educational attainment between Waves 1 and 2.
[b]Difference in baseline mean SF-12 score at Wave 1 between individuals who remitted and did not remit at Wave 2 is statistically significant (*P* value < .05 in *t* test).
Abbreviations: NESARC = National Epidemiologic Survey on Alcohol and Related Conditions, SE = standard error, SF-12 = Short Form-12 Health Survey.

separately, rather than on the MCS.[25] For the analysis of each disorder, 2 linear regression models were assessed. The first model controlled for all sociodemographic variables (age, race/ethnicity, nativity, education, individual income, and marital status), personality disorders, number of other incident Axis I psychiatric disorders, and past history of mood, anxiety, and substance use disorders. The second model controlled for the change in marital status, change in urbanicity, and change in education in addition to those used in the first model. Because the estimates of these models are very similar, only the results of the last model are reported. All analyses were computed using SUDAAN (RTI International, Research Triangle Park, North Carolina) to adjust for the design characteristics of the survey.

RESULTS

Change in SF-12 Scores After Remission of *DSM-IV* Axis I Psychiatric Disorders

Axis I psychiatric disorders and change in health-related quality of life scores after remission are shown in Table 1. At Wave 1, the SF-12 MCS score ranged from 52.46 for alcohol abuse to 38.84 for GAD among those who remitted at Wave 2 and from 53.05 for alcohol abuse to 35.36 for GAD among nonremitters. Baseline SF-12 MCS score was significantly higher for those who would remit at Wave 2 from alcohol and nicotine dependence, MDD, bipolar disorder, panic disorder, social anxiety disorder, specific phobia, and GAD. Remission of alcohol dependence, MDD, bipolar disorder, dysthymia, social anxiety disorder, and GAD at Wave 2 was associated with a significantly greater positive difference in the change of SF-12 MCS score between both waves, compared to persistent cases. The largest improvements in the SF-12 MCS score were associated with remission of MDD, dysthymia, and GAD. By contrast, remission of alcohol abuse, CUD, nicotine dependence, panic disorder, or specific phobia was not associated with significant improvement in health-related quality of life (Table 1).

When we examined the changes in the in the SF-12 MCS subscales after remission, there were significant ($P < .05$) improvements for MDD and GAD across all MCS subscales. For alcohol dependence, bipolar disorder, and dysthymia, there were significant improvements in the mental health and social function subscales, whereas for social anxiety disorder there were significant improvements in the role emotional and social function subscales ($P < .05$ for all).

Residual Effect After Remission of *DSM-IV* Axis I Psychiatric Disorders

When the full sample was considered, individuals who remitted from any psychiatric disorder in Wave 2 had lower scores on the SF-12 MCS than those who never had that disorder, with the exception of individuals who remitted from alcohol abuse (Table 2). These significant differences occurred across all subscales ($P < .05$), with the exception of individuals with alcohol dependence, who had lower scores than individuals without alcohol dependence for the mental health, but not for the role emotional and social functioning subscales.

A subanalysis of the sample with only "pure" disorders at Wave 1 (ie, individuals with 1 disorder but no comorbidity) indicated that individuals who remitted from each of the Axis I *DSM-IV* disorders had significantly lower health-related quality of life than those who had no history of mental disorder (Table 3). For individuals who remitted, all subscales were decreased compared with those for individuals without a lifetime diagnosis of any of the examined mental disorders, with the exceptions of social anxiety disorder, which had lower scores only in social functioning and in mental health, and specific phobia, which had lower scores only in the mental health subscale.

DISCUSSION

In a prospective study of a nationally representative sample of the US adult population, remission of most

Table 2. Mean SF-12 Mental Component Summary Scores of Individuals Who Remitted From an Axis I Psychiatric Disorder Versus Those Without Lifetime History of That Disorder

	Remitted[a]				No History of the Diagnosis[b]				Adjusted Mean Difference in SF-12 Score[c]	
Axis I Disorder	n	%	SE	Mean SF-12 Score at Wave 2	n	%	SE	Mean SF-12 Score at Wave 2	β	*P* Value
Alcohol abuse	1,099	3.97	0.19	51.30	27,856	96.03	0.19	51.31	−0.02	.9570
Alcohol dependence	750	2.67	0.12	50.16	29,739	97.33	0.12	51.86	−1.80	.0001
Cannabis use disorder	327	1.18	0.07	47.90	31,552	98.82	0.07	51.66	−3.82	<.0001
Nicotine dependence	1,512	5.70	0.21	50.54	27,096	94.30	0.21	52.13	−1.63	<.0001
Major depressive disorder	1,313	4.07	0.15	48.12	28,685	95.93	0.15	52.28	−4.12	<.0001
Bipolar disorder	600	1.76	0.09	47.15	32,159	98.24	0.09	52.00	−4.81	<.0001
Dysthymia	432	1.14	0.07	42.06	33,285	98.86	0.07	51.71	−9.52	<.0001
Panic disorder	596	1.78	0.09	46.37	32,026	98.22	0.09	51.94	−5.51	<.0001
Social anxiety disorder	768	2.32	0.12	46.50	32,205	97.68	0.12	51.91	−5.33	<.0001
Specific phobia	1,911	5.91	0.24	48.76	29,166	94.09	0.24	52.05	−3.27	<.0001
Generalized anxiety disorder	558	1.65	0.09	44.13	31,923	98.35	0.09	52.16	−7.98	<.0001

[a]Refers to row-specific diagnosis. Individuals may not have remitted from other disorders. [b]Refers to row-specific diagnosis. Individuals may have other psychiatric disorders. [c]Controlled for age; race/ethnicity; nativity; education; individual income; marital status; personality disorders; incident Axis I psychiatric disorders; past history of mood, anxiety, and substance use disorders; and change in marital status, urbanicity, and educational attainment between Waves 1 and 2.
Abbreviations: SE = standard error, SF-12 = Short Form-12 Health Survey.

Table 3. SF-12 Mental Component Summary Scores of Individuals Who Remitted From a Mental Disorder and Had No Psychiatric Comorbidity Versus Those Without Any Lifetime History of Psychiatric Disorder

	Remitted (no psychiatric comorbidity)[a]				No Lifetime *DSM-IV* Diagnosis[b]				Adjusted Mean Difference in SF-12 Score	
Axis I Disorder	n	%	SE	Mean SF-12 Score at Wave 2	n	%	SE	Mean SF-12 Score at Wave 2	β	*P* Value
Alcohol abuse	643	2.39	0.14	52.25	11,959	94.64	0.33	54.10	−1.89	.0002
Alcohol dependence	296	1.03	0.08	51.75	11,959	97.51	0.19	54.10	−2.44	.0001
Cannabis use disorder	56	0.24	0.04	49.90	11,959	99.39	0.10	54.10	−4.30	.0021
Nicotine dependence	846	3.32	0.16	51.71	11,959	92.90	0.36	54.10	−2.40	<.0001
Major depressive disorder	582	1.77	0.09	49.41	11,959	95.83	0.22	54.10	−4.69	<.0001
Bipolar disorder	312	0.93	0.07	48.42	11,959	97.54	0.18	54.10	−5.71	<.0001
Dysthymia	100	0.26	0.03	47.30	11,959	99.29	0.09	54.10	−6.77	<.0001
Panic disorder	155	0.44	0.04	49.65	11,959	98.83	0.12	54.10	−4.41	<.0001
Social anxiety disorder	255	0.78	0.06	49.32	11,959	97.93	0.17	54.10	−4.73	<.0001
Specific phobia	1,032	3.09	0.14	50.76	11,959	92.74	0.37	54.10	−3.33	<.0001
Generalized anxiety disorder	95	0.27	0.03	46.63	11,959	99.28	0.08	54.10	−7.42	<.0001

[a]Refers to row-specific diagnosis. Individuals did not have any other comorbid disorders at baseline. [b]Individuals had no lifetime history of psychiatric disorder at baseline.
Abbreviations: SE = standard error, SF-12 = Short Form-12 Health Survey.

mental disorders was associated with improved health-related quality of life. Baseline SF-12 MCS scores were already greater for those who would remit at Wave 2 from alcohol and nicotine dependence, MDD, bipolar disorder, panic disorder, social anxiety disorder, specific phobia, and GAD. Not only did remitters from these disorders have better scores from baseline, but in addition the difference in the change of SF-12 MCS scores between Waves 1 and 2 was significantly greater and positive for those who remitted in comparison with those who did not. Specifically, remission from alcohol dependence, MDD, bipolar disorder, dysthymia, social anxiety disorder, and GAD was associated with significant improvements in health-related quality of life after the remission occurred. With the exception of alcohol abuse, individuals with any Axis I disorder continued to have lower scores in all the subscales of the SF-12 MCS than individuals who never had that disorder. Individuals who remitted at Wave 2 from alcohol abuse, CUD, nicotine dependence, panic disorder, and specific phobia did not have greater quality of life than those who persisted in having the disorder at Wave 2. The pattern of results indicates that the relationship between presence of the disorder and quality of life is complex and differs across disorders.

Remission from mood and anxiety disorders was associated with improved health-related quality of life compared with persistence of the disorders, with the exception of panic disorder and specific phobia, for which no difference was found in health-related quality of life between those who remitted and those who did not remit. Although the burden of mood and anxiety disorders in terms of disability and poor health-related quality of life is widely accepted,[4] less is known concerning improvement associated with symptom remission. Several studies have found a strong correlation between severity of mood and anxiety symptoms and health-related quality of life in mood and anxiety disorders.[27,28] A decrease in mood and anxiety symptoms is likely to contribute to improvement in health-related quality of life. However, remission was followed by only a partial restoration

of SF-12 MCS scores. This finding suggests that additional factors account for residual decrements in health-related quality of life.

Persistence of the measured nonremitted comorbid disorders may partially explain this residual effect. Yet, among adults without comorbid disorders, the SF-12 MCS score was also lower than in the sample without lifetime history of mental disorder. Our study suggests that other factors in addition to nonremitted comorbid disorders are likely to contribute to residual decrements in the SF-12 MCS scores after symptomatic recovery. This finding is in agreement with previous studies[29,30] that found that severity of symptoms does not explain all of the variance in current levels of health-related quality of life. Subthreshold symptoms and the contextual impact of a mental disorder episode may be relevant in explaining this residual effect. In a longitudinal study about depression,[10] subthreshold symptoms accounted for a larger part of the course of depressed subjects than major depressive episodes. Furthermore, evidence suggests that subsyndromal depressive symptoms account for the residual impairment in formerly depressed individuals.[20,31] Similarly, subthreshold manic symptoms are much more frequent than manic episodes and may also contribute to this residual effect.[32–34] Despite the relevance of subthreshold symptoms found in mood disorders, there is scarce literature about the role of subthreshold symptoms in the course of other mental disorders.

Stigma associated with mental illness or difficulties overcoming the interpersonal, social, and professional delays, skill deficits, and disruptions associated with an episode of a mental disorder may also account for a suboptimal recovery of health-related quality of life after symptomatic improvement.[35,36] In addition, recent clinical trials that focused on the management of subthreshold depressive symptoms were successful in reducing impairment on several work, social, and psychological domains[37–39] and suggest that this clinical focus may also be beneficial in the treatment of other disorders. A better understanding of the decrements in health-related quality of life after syndromal remission of mental disorders would probably help to develop interventions with better outcomes in terms of quality of life. However, measures that emphasize the elimination of psychosocial limitations in addition to achieving symptom remission may be difficult to implement in the increasingly pharmacologically oriented and symptom-centered approach to mental health care.[40,41]

Regarding SUD, there was an improvement after remission for alcohol dependence only. It is very likely that, for alcohol abuse, the lack of improvement is related to levels of health-related quality of life comparable to those of the healthy population, as previously reported.[4] The health-related quality of life after remission of SUD varied substantially depending on the presence or absence of comorbid psychiatric disorders. Remitters with comorbid disorders had levels of quality of life similar to those of nonremitters, while those without comorbid disorders had levels of quality of life that were significantly lower than those of individuals without a lifetime history of mental disorders. These patterns highlight the importance of achieving remission from alcohol dependence. Given the high proportion of individuals who eventually achieve episode remission,[42] it is important to develop interventions that accelerate achievement of symptomatic remission and functional recovery. Comorbidity in alcohol dependence, which is present in as much as 27.55% of the cases,[21] predicts greater severity and poorer prognosis.[42] Progress is needed on the etiologic basis of this comorbidity[43] and on whether treatment and prevention interventions should target comorbid disorders jointly or separately.[44,45]

Our study also found that, with the exceptions of MDD and GAD, remission was not associated with increased health-related quality of life across all MCS subscales, but rather restricted to certain domains. An important direction for future research will be the examination of why remission is associated with domain-specific rather than uniform improvement in health-related quality of life and the development of interventions targeting domains that may not always improve following symptomatic remission.

Our results should be interpreted in light of several limitations. First, because of the observational design, it is not possible to establish causality between remission and change in SF-12 MCS score. Second, remitters in our sample may not be representative of individuals who remit after periods longer than 3 years, although most remissions appear to occur within a shorter time period.[42,46] Third, the NESARC assessed most common mental disorders and unmeasured psychiatric disorders such as somatoform, sleep, and eating disorders, as well as general medical conditions that may have distinct comorbidity profiles and may contribute to the decrements in quality of life. Fourth, the diagnosis of some disorders in the AUDADIS-IV had fair test-retest reliability, and therefore these diagnoses may have increased error variance, limiting power and therefore leading to more conservative results. Fifth, lower remission rates and different patterns might be observed in clinical samples, as these may be composed by more severe cases. Finally, the present study did not examine treatment response[47] and therefore does not distinguish between spontaneous and treatment-related disorder remission.

In conclusion, although remission of mood and anxiety disorders is common and associated with improvements in health-related quality of life, remission is generally not associated with its full restoration, even among those without comorbid disorders. Furthermore, among those with substance use disorders and psychiatric disorder comorbidity, there were no differences in quality of life between remitters and nonremitters. There is a need to develop and refine interventions that can lead individuals not only to achieve remission, but also to restore their full potential and quality of life in all its domains. Furthermore, because remission is often associated with domain-specific rather than uniform improvement in health-related quality of life, domain-specific intervention may be better able to target the needs of individuals who remit from psychiatric disorders.

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