

Lesson 4: Depression and Anxiety in Patients with Comorbidities

Understanding Comorbidity Patterns

Depression and anxiety frequently co-occur with other medical conditions, creating complex clinical presentations that require integrated management approaches.

Prevalence of Comorbidity

Depression and anxiety commonly occur with other conditions. Up to 33% of patients with chronic medical conditions experience depression, while anxiety disorders are present in approximately 18% of patients with medical conditions. Bidirectional relationships exist between mental and physical health, and multiple comorbidities increase complexity of care.

Common Comorbidity Patterns: Specific Associations Between Conditions

Medical Condition	Depression Prevalence	Anxiety Prevalence	Notes
Cardiovascular Disease	15-20% after MI	Significant	Post-MI depression associated with worse outcomes
Diabetes	2-3x general population	Elevated	Bidirectional relationship with metabolic control
Chronic Pain Conditions	Up to 50%	Up to 50%	Shared neural pathways and mechanisms
COPD	7-42%	10-55%	Wide range reflects assessment methods
Cancer	20-40% during treatment	20-40% during treatment	Varies by cancer type and treatment stage

Mechanisms Linking Depression, Anxiety, and Physical Conditions

- Shared biological pathways (inflammation, HPA axis dysfunction)
- Behavioral factors (reduced self-care, treatment adherence)

- Psychological factors (illness perceptions, coping strategies)
- Social determinants (reduced support, economic burden)
- Iatrogenic factors (medication side effects, fragmented care)

Impact of Comorbidity on Outcomes

- Increased symptom burden and functional impairment
- Reduced quality of life
- Poorer treatment adherence and response
- Higher healthcare utilization and costs
- Increased mortality in some conditions

Assessment Strategies for Comorbid Conditions

Effective assessment of depression and anxiety in patients with comorbidities requires specialized approaches.

Diagnostic Challenges: Distinguishing Mental Health Symptoms from Physical Conditions

- Symptom overlap (e.g., fatigue, sleep disturbance, appetite changes)
- Somatic symptom attribution (physical vs. psychological)
- Timing of symptoms relative to disease course
- Impact of medications on mood and anxiety

Comprehensive Assessment Approach: Gathering Complete Information

- Medical history and current treatment review
- Assessment of symptom patterns and timeline
- Evaluation of functional impact
- Consideration of social and environmental factors
- Medication review for mood/anxiety effects

Modified Screening Approaches: Adapting Tools for Comorbid Conditions

- Using instruments validated in specific medical populations
- Considering alternative cutoff scores when appropriate
- Focusing on psychological rather than somatic symptoms
- Implementing serial assessments to track changes over time

Collaborative Assessment: Working with the Healthcare Team

- Coordinating with specialists managing medical conditions
- Obtaining input from multiple providers
- Including family members when appropriate
- Centralizing information to avoid fragmented care

Treatment Approaches for Comorbid Depression and Anxiety

Managing depression and anxiety in patients with comorbidities requires integrated approaches that address both mental and physical health.

Pharmacological Considerations: Medication Selection for Comorbid Conditions

- Reviewing drug-drug interactions with existing medications
- Considering impact on comorbid condition (e.g., SSRIs in cardiovascular disease)
- Starting at lower doses and titrating slowly
- Monitoring for exacerbation of physical symptoms
- Selecting medications that may benefit both conditions when possible

Psychotherapeutic Approaches: Evidence-Based Interventions for Comorbidity

- Cognitive-behavioral therapy adapted for specific medical conditions
- Acceptance and Commitment Therapy for chronic conditions
- Problem-solving therapy for functional limitations
- Interpersonal therapy for role transitions related to illness
- Mindfulness-based interventions for symptom management

Lifestyle Interventions: Addressing Behavioral Factors

- Physical activity appropriate to medical condition
- Sleep hygiene and management
- Nutrition counseling
- Stress management techniques
- Social engagement and support

Integrated Care Models: Collaborative Approaches to Treatment

- Collaborative care with care managers
- Regular communication between providers
- Shared treatment plans
- Patient-centered medical homes

- Stepped care approaches based on symptom severity

Case Management and Monitoring

Ongoing management of patients with comorbid conditions requires systematic monitoring and coordination.

Treatment Monitoring: Tracking Outcomes Systematically

- Regular reassessment of depression and anxiety symptoms
- Monitoring physical condition parameters
- Assessing medication adherence and side effects
- Evaluating functional status and quality of life
- Adjusting treatment based on response

Care Coordination: Facilitating Integrated Care

- Designating a care coordinator
- Establishing clear communication channels between providers
- Creating shared care plans with defined responsibilities
- Using electronic health records to facilitate information sharing
- Including the patient as an active participant in care coordination

Addressing Treatment Barriers: Overcoming Common Challenges

- Managing multiple appointment schedules
- Addressing polypharmacy concerns
- Navigating insurance and coverage issues
- Providing transportation and access solutions
- Supporting patients with complex self-management regimens

Relapse Prevention: Maintaining Improvements Over Time

- Developing personalized relapse prevention plans
- Identifying early warning signs
- Establishing action plans for symptom recurrence
- Scheduling maintenance visits
- Providing booster sessions for psychotherapy

Social Media and Emotional Well-Being

The Digital Landscape of Mental Health

Social media has become ubiquitous in modern life, with profound implications for emotional well-being and mental health. Healthcare providers must understand both the risks and potential benefits to effectively support patients.

Prevalence and Patterns of Use

- Over 4.9 billion people worldwide use social media (62% of global population)
- Average daily use is 2-3 hours, with higher rates among adolescents and young adults
- Usage patterns vary by platform, with different platforms associated with different mental health outcomes
- Passive consumption (scrolling) versus active engagement (posting, interacting) have different effects

The Paradox of Connection

Social media promises connection but can increase feelings of isolation. Online interactions can supplement but not fully replace face-to-face relationships. The quality of online engagement matters more than quantity.

Negative Effects of Social Media on Emotional Well-Being

Research has identified multiple mechanisms through which social media use can harm mental health and emotional well-being.

Social Comparison and Self-Esteem

Social media creates unprecedented opportunities for upward social comparison, comparing oneself to others who appear better off.

Mechanisms of Harm:

- Users typically present idealized versions of their lives, creating unrealistic comparison standards
- Exposure to others' highlight reels can increase feelings of inadequacy and envy
- Appearance-focused platforms (Instagram, TikTok) are particularly associated with body dissatisfaction
- Constant comparison activates reward and threat systems in the brain, driving compulsive checking

Research Findings:

- Systematic reviews show consistent associations between social media use and increased depression and anxiety, particularly in adolescents (Keles et al., 2020)
- Instagram use is associated with higher rates of body dissatisfaction and disordered eating behaviors
- Facebook use predicts declines in subjective well-being over time (Shakya & Christakis, 2017)
- The more platforms an individual uses, the greater the risk of depression and anxiety

Fear of Missing Out (FOMO)

FOMO refers to the anxiety that others are having rewarding experiences from which one is absent.

Impact on Well-Being:

- Social media amplifies awareness of others' activities, intensifying FOMO
- FOMO is associated with lower life satisfaction, mood disturbances, and reduced sleep quality
- Creates pressure to constantly check social media, disrupting other activities
- Particularly affects younger users and those with lower self-esteem

Cyberbullying and Online Harassment

The anonymity and distance of online interactions can facilitate harmful behaviors.

Prevalence and Effects:

- Approximately 37% of youth report experiencing cyberbullying
- Cyberbullying is associated with depression, anxiety, low self-esteem, and suicidal ideation
- Effects can be more severe than traditional bullying due to 24/7 accessibility and public nature
- Victims often experience sleep disturbances, academic problems, and social withdrawal

Sleep Disruption

Social media use, particularly before bed, significantly impacts sleep quality and duration.

Mechanism	Impact
Blue Light Exposure	Suppresses melatonin production, delaying sleep onset
Stimulating Content	Activates nervous system, making relaxation difficult
FOMO and Notification Anxiety	Interrupts sleep throughout the night
Late-Night Use	Reduces total sleep time

Research Evidence:

- Higher social media use is associated with increased sleep disturbances (Levenson et al., 2016)
- Each hour of social media use increases odds of sleep problems by 6%
- Sleep disruption mediates the relationship between social media use and mental health problems

Addiction-Like Patterns

Social media platforms are designed to maximize engagement through psychological principles that can create compulsive use patterns.

Addictive Design Features:

- Infinite scroll removes natural stopping points
- Variable reward schedules (unpredictable likes, comments) activate dopamine systems
- Social validation through likes and comments creates reinforcement loops

- Notifications create urgency and interrupt other activities

Consequences:

- Difficulty controlling use despite desire to reduce
- Neglect of other activities and responsibilities
- Continued use despite negative consequences
- Withdrawal symptoms (anxiety, irritability) when unable to access

Positive Effects of Social Media on Emotional Well-Being

Despite risks, social media can support emotional well-being and flourishing when used intentionally.

Social Support and Connection

Social media can facilitate meaningful connections and provide support, particularly for marginalized or geographically isolated individuals.

Benefits:

- Maintaining relationships across distances
- Connecting with others who share similar experiences or conditions (chronic illness, mental health, identity)
- Access to emotional support during difficult times
- Reducing isolation for homebound or mobility-limited individuals

Research Findings:

- Active engagement (commenting, messaging) is associated with increased well-being, unlike passive scrolling
- Online support groups can provide valuable information and emotional support for health conditions
- LGBTQ+ youth report that social media provides important community and reduces isolation

Information and Health Resources

Social media provides access to health information, mental health resources, and wellness content through health education and awareness campaigns, access to mental

health resources and crisis support, peer modeling of healthy behaviors and recovery, and connection to healthcare providers and services.

Self-Expression and Identity Development

Social media platforms can support identity exploration and creative expression, particularly for adolescents and young adults, through opportunities for self-expression and creativity, exploration of identity in relatively safe environment, finding communities that affirm identity and values, and developing digital literacy and communication skills.

Civic Engagement and Social Movements

Social media facilitates collective action, awareness-raising, and social change efforts including mobilization around social justice causes, raising awareness about mental health and reducing stigma, building communities around shared values and purposes, and amplifying marginalized voices.

Clinical Assessment of Social Media Use

Healthcare providers should routinely assess social media use as part of comprehensive mental health evaluation.

Key Assessment Questions:

- How much time do you spend on social media daily?
- Which platforms do you use most frequently?
- How does social media use make you feel (energized vs. drained, connected vs. isolated)?
- Do you find yourself checking social media compulsively or have difficulty stopping?
- Has social media use interfered with sleep, work, relationships, or other activities?
- Have you experienced cyberbullying or harassment online?
- Do you use social media for specific purposes (connection, information) or mindless scrolling?

Warning Signs:

- Spending excessive time on social media (>3 hours daily associated with higher mental health risks)
- Checking social media immediately upon waking or before sleep

- Experiencing anxiety or distress when unable to access social media
- Neglecting face-to-face relationships or activities due to online engagement
- Increased symptoms of depression, anxiety, or body dissatisfaction coinciding with social media use
- Sleep disturbances related to social media use

Evidence-Based Interventions for Healthy Social Media Use

Healthcare providers can offer practical strategies to help patients optimize social media use for well-being.

Strategy Category	Specific Recommendations	Research Support
Time Limitation	<ul style="list-style-type: none"> • Set daily time limits (30 minutes or less) • Use built-in screen time tracking and limiting features • Designate social media-free times (meals, first/last hour of day, family time) • Remove social media apps from phone or disable notifications 	<p>Hunt et al. (2018): Limiting to 30 minutes/day significantly reduced depression and loneliness</p> <p>Self-monitoring increases awareness</p>
Intentional Use	<ul style="list-style-type: none"> • Define specific purposes before logging on • Prioritize active engagement over passive scrolling 	<p>Active engagement associated with increased well-being vs. passive scrolling</p>

Strategy Category	Specific Recommendations	Research Support
	<ul style="list-style-type: none"> • Curate feeds to include positive content • Unfollow accounts that trigger negative emotions • Take periodic breaks or "digital detoxes" 	
Mindful Social Media Use	<ul style="list-style-type: none"> • Practice awareness of emotional reactions • Notice urges to check without immediately acting • Pause before posting to consider motivation • Regularly reflect on alignment with values 	Increases conscious choice and reduces compulsive use
Protecting Sleep	<ul style="list-style-type: none"> • No screens for 1 hour before bedtime • Keep phones out of bedroom • Use "do not disturb" mode • Use blue light filters if evening use necessary 	Improves sleep quality and duration

Strategy Category	Specific Recommendations	Research Support
	<ul style="list-style-type: none"> • Establish relaxing pre-sleep routines 	
Building Real-World Connections	<ul style="list-style-type: none"> • Prioritize face-to-face interactions • Use social media to facilitate in-person connections • Engage in activities with in-person social interaction • Develop hobbies that don't involve screens 	Strengthens authentic relationships and reduces isolation

When to Refer

Indications for specialized support:

- Social media use meeting criteria for behavioral addiction
- Severe mental health symptoms (depression, anxiety, suicidal ideation) related to social media
- Cyberbullying or harassment causing significant distress
- Body image disturbances or disordered eating behaviors linked to social media
- Family conflict centered on social media use, particularly for adolescents

Special Considerations for Adolescents

Adolescents are particularly vulnerable to negative effects of social media due to developmental factors.

Developmental Vulnerabilities

- Heightened sensitivity to social evaluation and peer acceptance
- Developing identity and self-concept more susceptible to external influences
- Brain regions governing impulse control still maturing

- Critical period for establishing relationship patterns and emotional regulation skills

Parental Guidance

Healthcare providers can support parents in helping adolescents navigate social media.

Recommendations for Parents:

- Model healthy technology use
- Maintain open, non-judgmental communication about online experiences
- Establish family rules about social media use (age limits, time limits, device-free zones)
- Monitor use while respecting appropriate privacy for developmental stage
- Educate about privacy, digital citizenship, and critical media literacy
- Prioritize sleep and face-to-face activities

Clinical Case Example: Social Media and Mental Health

Patient Profile: 19-year-old female college student presenting with worsening depression and anxiety over past year. Reports spending 5-6 hours daily on social media, primarily Instagram and TikTok.

Assessment:

- Excessive time on appearance-focused platforms
- Primarily passive consumption (scrolling) with minimal active engagement
- Frequent social comparison and body dissatisfaction
- Sleep disruption due to late-night social media use
- FOMO and anxiety when unable to check social media
- Reduced in-person social activities and academic performance decline

Intervention Plan:

Psychoeducation

- Discussed research on social media and mental health
- Explored personal patterns and triggers
- Identified connection between social media use and symptom exacerbation

Behavioral Changes

- Gradual reduction to 30 minutes daily social media use
- Removed apps from phone; accessed only via computer
- Disabled all notifications
- No social media 1 hour before bed or first hour after waking

- Unfollowed accounts that triggered negative comparisons
- Weekly "digital Sabbath" (24-hour social media break)

Alternative Activities

- Joined campus club aligned with interests (in-person social connection)
- Resumed exercise routine (walking with friend)
- Established evening routine focused on sleep hygiene
- Scheduled regular video calls with family and friends (active connection)

Therapeutic Support

- Cognitive-behavioral therapy to address negative thought patterns
- Mindfulness practices to increase awareness of urges and emotions
- Values clarification to guide technology use decisions

Outcomes at 3 Months:

- PHQ-9 score decreased from 15 (moderate depression) to 7 (mild)
- GAD-7 score decreased from 12 (moderate anxiety) to 6 (mild)
- Improved sleep quality and duration
- Increased in-person social connections and engagement
- Better academic performance and overall functioning
- Reports feeling "more present" and "less anxious"

This case demonstrates how addressing problematic social media use can significantly improve mental health outcomes as part of comprehensive lifestyle medicine care.

Social Isolation in Chronic Illness: A Bidirectional Relationship

Chronic medical conditions and social isolation have bidirectional relationships that significantly complicate the management of comorbid depression and anxiety. Physical illness often leads to social isolation through multiple pathways including physical limitations that restrict mobility and participation in social activities, fatigue and pain that reduce energy available for social engagement, and self-consciousness about symptoms or medical equipment that causes withdrawal from social situations. Chronic illness can disrupt valued social roles such as employment, caregiving, or community involvement, leading to loss of identity and social connection. The time demands of medical appointments, treatments, and self-care activities may reduce available time for social interaction. Additionally, friends and family members may withdraw due to discomfort with illness, uncertainty about how to help, or their own emotional distress about the patient's condition. This illness-induced social isolation significantly increases risk of depression and anxiety, creating a vicious cycle where physical illness causes isolation,

which exacerbates mental health problems, which further reduces social engagement and may worsen physical health outcomes.

Conversely, strong social support significantly improves outcomes in patients with comorbid medical and mental health conditions, making assessment and intervention targeting social connection essential components of comprehensive care. Social support enhances treatment adherence, with patients who have supportive relationships showing better medication adherence, greater engagement in recommended lifestyle changes, and more consistent attendance at medical appointments. Practical support from family and friends assists with transportation to appointments, medication management, and daily tasks that illness makes difficult. Emotional support provides encouragement during discouragement, validation of the challenges of living with chronic illness, and hope that sustains motivation for ongoing self-management. Healthcare providers should systematically assess social support as part of evaluation for patients with comorbid conditions, asking about who patients can rely on for practical assistance, emotional support, and companionship. For patients lacking adequate social support, interventions might include involving family members in care planning, connecting patients with peer support groups for their specific condition, referring to community services that provide practical assistance, or utilizing care coordination models that provide ongoing supportive contact. Recognizing social isolation as a modifiable risk factor for poor outcomes in patients with comorbidities elevates social connection to the same clinical importance as other treatment targets.

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