

Interpretation of MMPI-2 Content, Supplementary, and PSY-5 Scales

The Content and Content Component Scales

History of Content Scales

- Challenges of face valid item content
 - Distortion
 - Differential subjective interpretation
- Wiggins (1966) Content Scales
 - A person's self-presentation is meaningful
 - Developed 13 MMPI Content Scales
 - Were outdated, inappropriate, or incomplete for MMPI-2 use

Development of MMPI-2 Content Scales

1. Rational Identification of Content Areas
2. Statistical Verification of Item-Scale Membership
3. Final Rational Review
4. Final Statistical Refinement
5. Rational Descriptions for Scales

Application of the Content Scales

1. Clarify Clinical Scale interpretation
 - What content domains tapped by the Clinical Scales should we focus on?
2. Provide information not directly covered by the Clinical Scales
 - **E.g.**, fears, low self-esteem, anger, work interference, treatment concerns
3. Content Scales are interpreted with a T-score great than 64

Content Scales

- ANX Anxiety
- FRS Fears
- OBS Obsessiveness
- DEP Depression
- HEA Health Concerns
- BIZ Bizarre Mentation
- ANG Anger
- CYN Cynicism
- ASP Antisocial Practices
- TPA Type A Behavior
- LSE Low Self-Esteem
- SOD Social Discomfort
- FAM Family Problems
- WRK Work Interference
- TRT Negative Treatment Indicators

Anxiety (ANX) 23 Items

- Report general symptoms of anxiety, including tension, somatic problems, sleep difficulties, worries, and poor concentration
- They fear losing their minds, find life a strain, and have difficulty making decisions.
- Outpatients receive diagnoses of depression or dysthymia
- Report anxiety and obsessive compulsive tendencies
- Therapist describe as anxious, depressed and pessimistic, experienced suicidal ideation, worry and feel life is a strain. Feel as if they are failures.

Fears (FRS) 23 Items

- Report many specific fears, including the sight of blood, high places, money, animals such as snakes, mice, or spiders; leaving home, fire, storms, and natural disasters, water, the dark, being indoors, and dirt.
- Outpatients Report
 - Phobic fears
 - Men receive diagnosis of schizophrenia and have hallucinations and obsessions
 - Women lack in achievement and work orientation, less competitive and less likely to cope with stress

Obsessiveness (OBS) 16 Items

- Have tremendous difficulty making decision and are likely to ruminate excessively about issues and problems.
- Are distressed by change and may report some compulsive behaviors like counting or saving unimportant things. Are excessive worriers who become overwhelmed by their own thoughts.
- Outpatients are more likely to be viewed as depressed and present with obsessive-compulsive tendencies, anxiety, and some psychotic symptoms
- Women were more likely to have histories of being sexually abused and have few or no friends.
- Therapists described males as depressed, anxious nervous, feeling hopeless and complaining of sleep disturbance.

Depression (DEP) 33 Items

- Report depressive thoughts and cognitions. Report feeling blue, uncertain about the future, and disinterested in their lives
- They feel unsupported by others. They are unhappy, brood, cry easily, and feel hopeless and empty. They may report thoughts of suicide and the wish to be dead.
- Outpatients were more likely to receive a depression or dysthymia diagnosis and have hx of suicide attempt and few or no friends.
- More likely to have hx of hospitalization and present with depressive symptoms, described on intake as being sad, depressed, and unhappy
- Also feel hopeless, sad, report sleep disturbance, suicidal ideation, pessimistic, low energy. Feel life is a strain.

Health Concerns (HEA) 36 Items

- Worry about their health and report physical symptoms including:
- Gastro-intestinal symptoms: Constipation, nausea, and vomiting
- Cardiovascular symptoms: Heart or chest pain.
- Neurological symptoms: Convulsions, dizzy and fainting spells, paralysis
- Sensory problems: Poor eyesight, and hearing
- Skin problems
- Respiratory problems
- Pain: Head ache and neck ache
- Outpatients described as being preoccupied with health problems presenting with multiple somatic complaints, developing physical symptoms in response to stress, being hypochondriacal and inclined toward somatization
- Described as depressed, anxious, pessimistic, low energy and fatigued, agitated, angry resentful, and histrionic.

Bizarre Mentation (BIZ) 24 Items

- Report psychotic thought process including auditory visual or olfactory hallucinations. Report paranoid ideation and may feel have special powers or abilities
- Outpatients more likely to present with psychotic symptoms, paranoia, anxiety
- Men report depression and Hx of being physically abused as well as hx of cocaine abuse. Men described as having loose associations, angry mood
- Women hx of being sexually abused, suicide attempts, hospitalization, hallucinations. having psychotic symptoms and low frustration tolerance

Anger (ANG) 16 Items

- Suggests anger control problems.
- Report being irritable, impatient hotheaded, annoyed and stubborn and report losing self-control and being physically abusive toward people and objects.
- Outpatients more likely to have been physically abusive and higher rates of substance abuse.
- Rated as hostile by therapists and having temper tantrums.
- Men physically abusive, domestic violence
- Women described as grouchy, hx of sexual abuse and suicide attempts

Cynicism (CYN) 23 Items

- Exhibit misanthropic beliefs and hold negative attitudes towards others.
- They expect hidden negative motive behind the acts of others. Believe that most people are honest because they fear being caught. Others are to be distrusted because they believe most people use others and are friendly only for selfish reasons.
- Outpatients present with paranoid ideation and hostility.
- Described as being sad and depressed, complain of sleep disturbance.
- Women less likely to be viewed as being likable and dependable, poor insight, psychologically immature and difficult to motivate.

Antisocial Practices (ASP) 22 Items

- Report problem behaviors in youth and antisocial practices
 - Being in trouble with the law, stealing, shoplifting
 - Believe it is acceptable to get around the law
- Outpatients have hx of being arrested, described as hostile.
- Men have hx of domestic violence and physically abusive and antisocial personality disorder and substance abuse.
- Woman had hx of misdemeanor convictions, cocaine abuse, described as sociopathic, problems with authority, superficial, and bored easily.

Type A (TPA) 19 Items

- Hard driving, fast-moving, and work oriented.
- Frequently become impatient irritable and annoyed
- Direct interpersonally and may be overbearing in relationships.
- Time conscious and rushed.
- Outpatients more likely to present with interpersonal hostility.
- Men viewed by therapists as excitable and developing physical symptoms in response to stress.

Low Self Esteem (LSE) 24 Items

- Low opinions of themselves, do not feel they are liked or are important. Feel unattractive, awkward and clumsy, useless, and a burden.
- Lack self-confidence and find it hard to accept compliments.
- Outpatients present with symptoms of depression and interpersonal sensitivity.
- Seen as depressed, anxious, and sad. Described as being insecure, passive-submissive, self-degrading, self-doubting, pessimistic and introverted.
- Women tend to be passive in relationships.

Social Discomfort (SOD) 24 Items

- Feel uneasy around others and prefer to be by themselves.
- Tend to isolate in social situations and view themselves as shy often avoiding social or group situations.
- Outpatients described by therapist as introverted, shy, and socially awkward.
- Men were insecure, uncomfortable with members of the opposite sex, pessimistic, anxious, suspicious, angry resentful, and emotionally controlled.

Family Problems (FAM) 25 Items

- Report a high level of family discord and describe their families as lacking in love and being unpleasant
- Marriages are describe as unhappy and lacking in affection.
- Outpatients described as having family problems, coming from families lacking in love and characterized by discord, resenting family member and blaming family for their difficulties.

Work Interference (WRK) 33 Items

- Possess attitudes and display behaviors likely to interfere with work performance.
 - Low self-confidence, poor concentration, obsessiveness, tension, and indecisiveness, lack of family support for career, question choice of career, and negative attitude toward coworkers
- Outpatients described as sad, depressed, and angry
- Less
 - Achievement oriented, energetic, extroverted, self-reliant, or able to tolerate stress.
- Overly sensitive to criticism.

Negative Treatment Indicators (TRT) 26 Items

- Have negative attitudes towards doctors and mental health treatment.
 - Feel no one can understand them, uncomfortable talking about problems, do not want to change or feel change is not possible, and give up in the face of adversity.
- Outpatients viewed on intake as sad and depressed, men as angry.
- Described as feeling overwhelmed and feel like a failure.
- Men were angry, resentful and obsessive compulsive.
- Women were less likely to be achievement oriented and have high aspirations or many interests.

Content Component Scales

- **Development**
 - Factor analytic/Rational strategy
 - Homogeneous sub-groupings of items
 - Example:
 - BIZ1 – Psychotic Symptomatology
 - BIZ2 – Schizotypal Characteristics
- **Guidelines**
 - Only interpret if its parent Content Scale is at ≥ 60
 - 10 T score point difference between component scales
 - Emphasize correlates of higher scale

12 of 15 Content Scales yielded Content Component Scales

- **Fears Subscales**
 - Generalized Fearfulness (FRS₁) 12 items
 - Multiple Fears (FRS₂) 10 items
- **Depression Subscales**
 - Lack of Drive (DEP₁) 12 items
 - Dysphoria (DEP₂) 6 items
 - Self-Depreciation (DEP₃) 7 items
 - Suicidal Ideation (DEP₄) 5 items

Content Component Scales

- **Health Concerns Subscales**
 - Gastrointestinal Symptoms (HEA₁) 5 items
 - Neurological Symptoms (HEA₂) 12 items
 - General Health Concerns (HEA₃) 6 items
- **Bizarre Mentation Subscales**
 - Psychotic Symptomatology (BIZ₁) 11 items
 - Schizotypal Characteristics (BIZ₂) 9 items
- **Anger Subscales**
 - Explosive Behavior (ANG₁) 7 items
 - Irritability (ANG₂) 7 items

Content Component Scales

- Cynicism Subscales
 - Misanthropic Beliefs (CYN₁) 15 items
 - Interpersonal Suspiciousness (CYN₂) 8 items
- Antisocial Practices Subscales
 - Antisocial Attitudes (ASP₁) 16 items
 - Antisocial Behaviors (ASP₂) 5 items
- Type A Subscales
 - Impatience (TPA₁) 6 items
 - Competitive Drive (TPA₂) 9 items

Content Component Scales

- Low Self-Esteem Subscales
 - Self-Doubt (LSE₁) 11 items
 - Submissiveness (LSE₂) 6 items
- Social Discomfort Subscales
 - Introversion (SOD₁) 12 items
 - Shyness (SOD₂) 7 items

Content Component Scales

- Family Problems Subscales
 - Family Discord (FAM₁) 12 items
 - Familial Alienation (FAM₂) 5 items
- Negative Treatment Indicator Subscales
 - Low Motivation (TRT₁) 11 items
 - Inability to Disclose (TRT₂) 5 items

The Supplementary Scales

MMPI-2 Supplementary Scales

- An ad hoc collection of scales and sets of scales developed over the course of the test's history.
- Included in the test manual based on evidence that they provide information not available from the clinical scales.
- Augment clinical scale interpretation by focusing on more specific areas of personality function and dysfunction.

MMPI-2 Supplementary Scales

- Many other MMPI/MMPI-2 scales have been developed over the years.
 - >450 different scales over the years
- The “Official” set of supplementary scales is updated periodically, and scales are added or deleted.
 - Scales are retained based on existing data supporting the reliability and validity of the scale
- The most recent update occurred in 2001.
- Unless otherwise noted, interpret scale with $T \geq 65$ as HIGH and $T \leq 40$ as LOW

Groupings of Supplementary Scales

- Generalized Emotional Distress Scales
 - Anxiety (A)
 - College Maladjustment (Mt)
 - Post-Traumatic Stress Disorder-Keane (PK)
 - Marital Distress scale (MDS)
- Broad Personality Characteristic Scales
 - Repression (R)
 - Ego Strength (Es)
 - Dominance (Do)
 - Social Responsibility (Re)

Groupings of Supplementary Scales

- Behavioral Dyscontrol
 - Hostility (Ho)
 - Over-controlled Hostility (O-H)
 - MacAndrew Alcoholism – Revised (MAC-R)
 - Addiction Admission Scale (AAS)
 - Addiction Potential Scale (APS)
- Gender Role
 - Gender Role – Masculine (GM)
 - Gender Role – Feminine (GF)

Groupings of Supplementary Scales

- Personality Psychopathology Five
 - Discussed in a separate section

Descriptions

Generalized Emotional Distress

- **Anxiety (A)**
 - Assesses first major dimension that emerges when validity and clinical scales are factor analyzed;
 - Related to general maladjustment and also to specific symptoms including anxiety, depression, and somatic complaints.

Generalized Emotional Distress

- **College Maladjustment (Mt)**
 - 41 items designed to identify maladjusted college students
 - Ineffective, anxious, pessimistic
 - Behavioral (Luterbach, Garcia & Gloster, 2002)
 - Late to class
 - Lower GPA
 - Hx of Tx
 - Factor analysis yields 3 factors: **low self-esteem, lack of energy, and cynicism/restlessness** not specific to college population (Barthlow et. al., 2004).
 - Does not add incrementally to mean of the 8 clinical scales as measure of general distress (Graham, et al., 2002).

Generalized Emotional Distress

- **Post Traumatic Stress Disorder - Keane (PK)**
 - Developed to identify veterans with PTSD
 - Intense emotional distress
 - Anxiety and sleep disturbance
 - Cut scores vary across settings
 - Sensitive but not specific
 - Combat veterans seeking services in VA
 - Raw score of 28
 - T score >83
 - Not specific for noncombat PTSD
 - Women subjected to domestic abuse
 - Workers injured in work-related accidents

Generalized Emotional Distress

- **Marital Distress (MDS)**
 - 14 items identified by correlating MMPI-2 items with scores on Dyadic Adjustment scale in couples in counseling and normative group.
 - Rational item deletion.
 - Dissatisfaction with marriage or romantic relationship

Broad Personality Characteristics

- **Repression (R)** – assesses second dimension that emerges when validity and clinical scales are factor analyzed
 - Internalizing
 - Introverted
 - Careful and cautious lifestyle.

Broad Personality Characteristics

- **Ego Strength (Es)** – developed to predict response to psychotherapy
 - Good measure of general adjustment
 - Many resources for coping with demands of life
 - Higher scores indicate better prognosis for psychological treatment and lower scores indicate poorer prognosis
 - Can be artificially high in defensive profiles and artificially low in exaggerated profiles

Broad Personality Characteristics

- Scales developed empirically by contrasting groups thought to differ on the dimensions.
- **Dominance (Do)** – self and other perceptions as strong in face-to-face personal situations; self-confident; not readily intimidated.
- **Social Responsibility (Re)** – willing to accept consequences of own behavior; sense of responsibility to social group; dependable and trustworthy.

Behavioral Dyscontrol

- **Hostility (Ho)** – developed to predict rapport of teachers in classroom.
 - General maladjustment in mental health settings
 - Angry, hostile
 - Cynical, suspicious
 - Increased risk for health problems
 - Sustained elevation in BP after exposure to anger-evoking stimuli
 - Coronary Heart Disease

Behavioral Dyscontrol

- **Over-controlled Hostility (O-H)** – developed by identifying items that were answered differently by extremely assaultive prisoners, moderately assaultive prisoners, nonviolent prisoners, and men never convicted of crimes.
 - Occasional hostile/angry behavior that is exaggerated for amount of provocation
 - In correctional settings higher scores suggestive of aggressive and violent acts, but not in other settings
 - High scores frequent in defensive profiles (emotionally over-controlled)

Behavioral Dyscontrol - Addiction

- **MacAndrew Alcoholism Revised (MAC-R)**
 - Items that differentiated male alcoholic from non alcoholic psychiatric patients (excluded overt ETOH items)
 - Risk-taking, sensation-seeking
 - Extroverted, exhibitionistic
 - Increased risk for substance abuse
- Interpretation
 - >28 positive
 - 24-27 possible alcohol problems
- Caution: Doesn't work as well with women

Behavioral Dyscontrol - Addiction

- **Addiction Admission Scale (AAS)**
 - Rationally identified items
 - Scores T > 60
 - Acknowledge substance abuse
 - History of acting out
- **Addiction Potential Scale (APS)**
 - Items that men and woman in inpatient CD unit answered differently from men and women psychiatric inpatients and normative group.
 - T-score > 60 suggests possible substance abuse problems
 - Anti-social behaviors possible

Gender Role

- **Gender Role Masculine (GM)**
 - Scale developed by identifying items scored by majority of men and 10% fewer women in normative sample.
 - Stereotypic masculine interests and activities
 - Denial of fears and anxieties
 - Self-confidence
- **Gender Role Feminine (GF)**
 - Scale developed by identifying items scored by majority of women and 10% fewer men in normative sample.
 - Stereotypic feminine interests and activities
 - Denial of antisocial behaviors
 - Excessively sensitive

The Personality Psychopathology Five (PSY-5) Scales

Personality Disorders as Variants of Normal Personality?

- Costa, Widiger, and the Five Factor Model
 - Extraversion
 - Neuroticism
 - Agreeableness
 - Conscientiousness
 - Openness to Experience
- Five Factor Model based on Lexical Approach
 - Allport and Dictionary
 - Non-evaluative terms

PSY-5: Background

- Harkness (1992) examines how lay people describe personality and its disorders.
- DSM-III-R personality disorder criteria are “translated” into lay language and presented along with other personality descriptors to raters asked to judge similarity among descriptors.
- 60 personality descriptor clusters are identified.
- Harkness & McNulty (1994) conduct further lay-person-based similarity analyses of the 60 clusters yielding the five factors that make up the PSY-5.

The PSY-5 and DSM-5 Section III

PSY-5	DSM-5 Section III Domains
Aggressiveness	Antagonism
Psychoticism	Psychoticism
Disconstraint	Disinhibition
Neuroticism/Negative Emotionality	Negative Affectivity
Introversion/Low Positive Emotionality	Detachment

PSY-5: Scale Construction

- Harkness, McNulty, & Ben-Porath (1995)
 - Replicated Rational Selection
 - Expert Review
 - Psychometric Performance Review

PSY-5 Scales

- Measures personality traits rather than symptoms, thus, more long-lasting pathology
- Can help aid in determining chronicity of problem as well as underlying personality traits/pathology that may be of importance in treatment planning
- T-score of 65 considered elevated
- When Applicable, $T < 40$ are considered low scores

PSY-5 Aggressiveness (AGGR)

- Measures Instrumental Aggression
 - Enjoy intimidating others
 - Linked with dominance and hate
 - Offensive, instrumental aggression
 - More likely to have history of being physically abusive
 - Rated by therapist as antisocial and possessing aggressive features
 - Men have history of domestic violence and women of arrest.
- Grandiosity
- Assertiveness/Social Potency
- Low scorers are dependent, passive-submissive, and have low self-esteem

PSY-5 Psychoticism (PSYC)

- Assesses disconnection from reality
 - Unshared beliefs
 - Unusual sensory and perceptual experiences
 - Alienation
 - Unrealistic expectations of harm
 - Disconnection from reality

PSY-5 Disconstraint (DISC)

- Measures Behavioral Disinhibition and aspects of sensation seeking
 - Risk-taking
 - Impulsive
 - Nonconforming to societal norms
 - Easily bored
 - Antisocial
- Low Scores
 - Greater self-control
 - Rule follower

PSY-5 Negative Emotionality/Neuroticism (NEGE)

- Measures disposition to experience negative affects and emotions
 - Avoidance of aversive events
 - Anxious, worry-prone
 - Overly self-critical
 - Guilt
 - Catastrophize
 - Focus on the negative

PSY-5 Introversion/Low Positive Emotionality (INTR)

- Measures hedonic capacity
 - Capacity to experience joy
 - Positive engagement
- High score associated with
 - Sadness
 - Dysphoria
 - Introversion
 - Social withdrawal
- Low Scores associated with
 - Extroversion
 - Energetic
 - Social engagement