The Psychology of Psychopharmacology

Learning Objectives
1. To appreciate that psychological factors have an important influence on pharmacotherapy outcomes
2. To describe pill, patient, prescriber, and partnership variables that play a role in pharmacotherapy
3. To explain how psychological factors can influence pharmacotherapy, with reference to the meaning of medication, defence mechanisms, transference, countertransference, and resistance

Outline
• Review of the evidence on psychological factors in psychopharmacology
• "Med consults"
• Split vs. combined treatment
• Meanings of medication for children/adolescents, parents, families, and clinicians
• Medication as defence: patients & physicians
• Transference & countertransference
• Treatment resistance
• Value of a psychodynamic formulation

Should ACP be Revamped?
“Given that the evidence suggests that nonpharmacologic aspects of medications play a major (and perhaps even primary) role, it seems clear that this evidence should be well represented in the psychopharmacology curriculum. One might even argue that if more than half the benefit that patients derive from medications comes from meaning and interpersonal factors, then more than half of the psychopharmacology didactics should focus on those factors.”
Mallo & Mintz, 2013

Evidence on Psychological Factors in Psychopharmacology
• Mallo & Mintz, 2013:
  – A strong evidence base supports the influence of psychological and interpersonal factors in psychopharmacology
  – Most studies emerge from primary care medicine and psychology, and evidence specific to child psychopharmacology is still limited
  – Non-pharmacological factors that influence pharmacotherapy outcome can be divided into 4 types of variables: pills, patients, prescribers, partnerships

Pill Variables
• The following pill characteristics have been found to affect pharmacotherapy outcome:
  – Colour (de Craen et al., 1996)
  – Expense (Waber et al., 2008)
  – Route (de Craen et al., 2000)
  – Brand vs. generic (Weissenfeld et al., 2010)
  – Setting (Fisher & Greenberg, 1997)
• Other variables to consider (Mallo & Mintz, 2013):
  – Drug name
  – Packaging
**Patient Variables**

The following patient characteristics have been found to affect pharmacotherapy outcome:

- Locus of control (Reynaert et al., 1995)
- Tendency to acquiesce (McNair et al., 1968)
- Expectations of treatment (Sneed et al., 2008)
- Readiness to change (Lewis et al., 2009)
- Social disadvantage (Hahn, 1997)
- Personality traits (Davis et al., 1995)
- Attachment style (Ciechanowski et al., 2006)
- Ambivalence about medication or illness (Warden et al., 2009; Van Egmond & Kummeling, 2002)

**Patient Variables (cont.)**

Patient preference can also have a considerable impact. For example, in an RCT of chronically depressed adults treated with an antidepressant, psychotherapy, or the combination, remission rates were (Kocsis et al., 2009):

- ~50% in patients receiving their preferred treatment
- 22% in patients who preferred medication but received psychotherapy
- 8% in patients who preferred psychotherapy but received medication

In child psychiatry, both child and parent preference are likely important.

Implications for the value of RCTs?

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**Prescriber Variables**

The influence of prescriber variables on outcome is supported by evidence from the Treatment of Depression Collaborative Research Program (TDCRP).

The TDCRP involved an RCT in which 250 adults with MDD were randomized to the following (Elkin et al., 1989):

1. IPT
2. CBT
3. Imipramine (plus clinical management)
4. Placebo (plus clinical management)

Overall pattern of results:

- Imipramine > IPT = CBT > Placebo

A subsequent analysis considered the effect of the psychiatrists on patient outcomes, and compared this to the effect of medication (McKay et al., 2006):

- 1/3 of psychiatrists were highly effective, 1/3 were average, and 1/3 were relatively ineffective
- For both BDI and HAM-D scores, the proportion of variance due to psychiatrists was greater than that due to medication
- The highly effective psychiatrists achieved better outcomes with placebo than the least effective psychiatrists achieved with active medication

Beyond warmth (Rickels et al., 1971) and empathy (Downing et al., 1973), little is known about which prescriber factors are important.

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**Partnership Variables**

Considerable evidence indicates that the therapeutic alliance has an important influence on pharmacotherapy outcome.

For example, in a TDCRP analysis comparing placebo patients with good alliance to antidepressant patients with poor alliance, the quality of the alliance predicted response much more strongly than drug condition, accounting for 17 times more variance (Krupnick et al., 1996).

Factors that contribute to improved therapeutic alliance include collaborative communication and involvement of the patient in decision making (Mallo & Mintz, 2013).

**Therapeutic Alliances in Child Psychiatry**

Alliances must be negotiated with multiple players:

- Child/adolescent
- Parents
- Teachers
- Psychotherapist
- Treatment team

Pressure from parents, teachers, or a therapist to initiate or change medication may threaten the alliance between the child/adolescent and the physician.

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Leuchter et al., *Br J Psychiatry* 2014

- Study objective was to examine the effects of pill administration, interpersonal interaction, and expectation on the placebo response in MDD
- 88 adults with at least moderate MDD (no comorbidities) were randomized to 8 weeks of:
  1. Supportive care alone
  2. Supportive care + antidepressant (VLX, DLX, or eCIT)*
  3. Supportive care + placebo*
- Analyzed the effect of the following on treatment outcome:
  - Patients’ expectations of treatment/medication efficacy
  - Therapeutic alliance

*Double-blind*

Effect of Therapeutic Alliance

- Therapeutic alliance was assessed with the California Pharmacotherapy Alliance Scale (CALPAS), which measures:
  a) Patients’ commitment to treatment
  b) Patients’ working capacity
  c) Treatment providers’ understanding and involvement
  d) Goal and working strategy consensus between patient and treatment provider

- Of the 4 CALPAS subscales, only (d) predicted symptom change in the placebo and medication groups

Reference: Leuchter et al., 2014

Effect of Expectation of Medication

- % change in the 17-item Hamilton Rating Scale for Depression

Reference: Leuchter et al., 2014

Expectation vs. Therapeutic Alliance

- Therapeutic alliance was not associated with expectations of treatment generally or medication specifically
- When expectations of medication and goal and working strategy consensus (GWSC) were both entered into the model for the sample of patients treated with antidepressant, only GWSC remained a significant predictor of outcome
- However, for the sample of patients treated with placebo, expectations of medication and GWSC were each significant predictors

Reference: Leuchter et al., 2014

What is a “Med Consult”?

- A request for a “med consult” is often interpreted narrowly as a request for a recommendation about starting or changing medication, and it tends to create momentum to prescribe
- However, a broader perspective is to view the consultation as pertaining to the treatment as a whole, including diagnosis, therapeutic options, progress and setbacks to date, and a formulation of the underlying forces at work (Chubinsky & Homan, 2013)

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Split Treatment

• When psychotherapy and pharmacotherapy are provided by different clinicians (split treatment), advantages may include:
  – Enabling sufficient focus on both psychotherapeutic and psychopharmacological aspects of the treatment
  – Greater support for both families and clinicians, especially with more challenging cases
• However, challenges in split treatment include: communication, competition, differences in opinion, and splitting (Mintz, 2005)

Combined Treatment

(Chubinsky & Rappaport, 2006)

• When psychotherapy and pharmacotherapy are provided by the same physician (combined treatment), there is greater opportunity to explore psychological factors related to medication
• However, because treating a child/adolescent with medication typically requires more interaction with parents, a combined treatment model can disrupt the therapeutic alliance with the child/adolescent
• On the other hand, the increased interaction with parents in a combined treatment model can also facilitate individual psychotherapy with a child/adolescent

Meanings of Medication for Youth

(Rappaport & Chubinsky, 2000; Chubinsky & Rappaport, 2006)

• Worries about being defective, crazy, bad, or stupid
• Interference with self-image as autonomous, perfect, or invulnerable
• Fears regarding the effects of the medication
• Criticized, blamed, punished, or controlled, especially with respect to aggressive or sexual impulses
• Uncomfortable feelings of dependence on the physician
• Relieved and empowered, as symptoms are now viewed as part of a treatable medical problem, not a personal failing

Psychodynamic Models to Consider

• Freud:
  – Oral fantasies
  – Anal struggles for control
• Erikson:
  – Basic trust vs. mistrust
  – Autonomy vs. shame and doubt
  – Identity vs. role confusion
• Winnicott:
  – Medication as a transitional object
• Kohut:
  – Development of the self
  – Narcissism
  – Idealization

Meanings of Medication for Parents

(Rappaport & Chubinsky, 2000; Chubinsky & Rappaport, 2006)

• Loss and grief (e.g., about the fantasy of a perfect child)
• Shame and guilt (e.g., about the child being “damaged,” being bad parents, or transmitting an inherited condition)
• Fear of chronic illness or addiction
• Expression of unconscious anger towards the child
• Devaluing of psychosocial factors
• Relieved, hopeful, and validated as parents, as the child’s symptoms are now viewed as part of a treatable medical problem, not the result of poor parenting

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Meanings of Medication for Families

- It has been suggested that medicating a child/adolescent is “symbolically medicating a family because the effects of medication generate meanings that implicate an entire family system” (Floersch et al., 2009)
- Prescribing medication for a child/adolescent may create or reinforce narratives or perceived roles within the family (e.g., the “bad” or “sick” sibling vs. the “good” or “healthy” sibling)
- Pharmacotherapy may also influence family dynamics related to themes of attention and specialness, in part because medication can mean “treat” as well as “treatment” (Pruett et al., 2011)

Meanings of Medication for Clinicians

(Mintz, 2005; Mallo & Mintz, 2013)

- Prescribing medication may cause a physician to perceive a child as a “biological object” as opposed to a subject with internal resources that can be recruited in the service of recovery
- Prescribing medication may cause a physician to view symptoms only as problems in themselves, as opposed to “partial solutions” to deeper or more complex problems (e.g., overwhelming affect, unconscious conflict)
- Decisions to prescribe or not prescribe medication can also have meanings related to a physician’s professional identity (e.g., “a real doctor” vs. “not just a pill pusher”)

Psychodynamic Definitions

- Defence:
  - Unconscious mechanism that serves to protect against intolerable drives, wishes, or affects
- Transference:
  - A largely unconscious process where patterns of feelings, thoughts, and behaviour that were originally experienced in relation to significant figures during childhood are displaced onto a person in a current relationship

Definitions (cont.)

- Countertransference:
  - A clinician’s transference towards a patient/family
- Resistance:
  - Largely unconscious forces that interfere with treatment and improvement

Medication as Defence: Patients

- Taking medication may serve unconscious defensive functions for the patient
- Examples include (Mintz & Flynn, 2012):
  - To support a split between the “good” self and the “bad” illness
  - To disavow ownership of feelings or responsibility for actions
  - To avoid interpersonal interactions (“replace people with pills”)

Medication as Defence: Physicians

- Prescribing medication may serve unconscious defensive functions for the physician
- Examples include (Mintz, 2005):
  - To avoid feeling powerless or helpless and instead feel good and giving
  - To de-intensify an intense engagement with a patient
  - To avoid feelings of loss by promoting a patient’s dependency
  - To act out feelings of anger that cannot be tolerated or expressed verbally
Transference & Countertransference

- "A psychodynamic psychopharmacologist recognizes that the psychiatric relationship is an encounter between a big mess and an even bigger mess." (Mintz, 2011)
- As in psychotherapy, the psychopharmacological encounter has the potential for both patient and physician to get caught up in irrational processes that relate to previous relationships and other unconscious factors

Transference

(Mintz & Flynn, 2012)

- Negative transferences can lead to poor pharmacotherapy outcomes, including poor response, non-adherence, and emergence of side effects ("nocebo" effect)
- Negative transferences to a prescriber may result from previous experiences with medications, physicians, or other caregivers
- Patients can also have transferences towards medications themselves, which become imbued with meaning based on past experiences

Countertransference

(Mintz & Flynn, 2012)

- "A hallmark of countertransference prescribing is its focus on managing the experience of the prescriber rather than the experience of the patient"
- Children/adolescents and their parents may trigger unconscious processes in a prescriber related to the prescriber’s own experiences as a child/adolescent or parent, and these unconscious processes can influence prescribing behaviour
- Consultation with colleagues is critical when working with patients or families who elicit strong countertransference reactions

Treatment Resistance

(Mintz & Flynn, 2012)

- If a patient doesn’t respond to medication, think about “treatment resistance” in the psychological sense, not just the pharmacological sense
- Pharmacotherapy can reinforce resistance in various ways, such as:
  – Externalizing responsibility for improvement
  – Interfering with the opportunity to learn from difficult feelings or experiences by turning them into symptoms that become targets for medication
  – Promoting secondary gain in the form of increased attention from the physician

Value of a Psychodynamic Formulation

(Mintz & Flynn, 2012)

- Exerts a containing and conservative influence in the face of strong disorganizing affect (on the part of both patient and prescriber)
- Helps anticipate and avoid prescribing enactments
- Helps maintain empathy
- Can be brief and focused on the relationship of the patient/family to medication and treatment providers

Psychodynamic Formulation Guidelines

(Perry et al., 1987)

- Four parts (totalling 500-750 words):
  i. Case summary, including current problems, life situation, and developmental history
  ii. Description of nondynamic factors contributing to the psychiatric difficulties
  iii. Psychodynamic explanation of central conflicts, including their role in the current situation and their origins in the developmental history
  iv. A prediction of how these conflicts are likely to affect treatment (including pharmacotherapy!) and the therapeutic relationship
### Take-Home Points

1. Substantial evidence indicates that psychological factors—especially patient preference, patient expectations, and therapeutic alliance—have a strong influence on pharmacotherapy outcomes.

2. It is important to explore the meaning of medications for patients, parents, families, and clinicians.

3. The role of psychodynamic mechanisms (e.g., defences, transference, countertransference, resistance) should be considered in pharmacotherapy as well as in psychotherapy.

4. A brief psychodynamic formulation is helpful to contain disorganizing affect, avoid prescribing enactments, recognize resistance, and maintain empathy.
Note: By chance, patients randomly assigned to supportive care had lower expectations of treatment in general (prior to randomization) than those assigned to the pill-taking conditions.

Reference: Leuchter et al., 2014
Effect of Expectation of Medication

% change in the 17-item Hamilton Rating Scale for Depression

Reference: Leuchter et al., 2014
**TABLE 2**
Adolescent perceptions of medications – selected quotations

<table>
<thead>
<tr>
<th>Theme</th>
<th>Need for Medication (Treatment)</th>
<th>How Medications Work</th>
<th>Adherence to Medication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnosis/Disorder/Symptom</td>
<td>‘it was for anxiety attacks and depression’</td>
<td>‘They balance off my mood swings to where I won’t have as many.’ [negative]²</td>
<td>‘I don’t want to get hooked on it or anything like that.’</td>
</tr>
<tr>
<td>Emotion</td>
<td>‘I think it’s mostly because I had a really, really bad attitude.’</td>
<td>‘. . . when I get angry, make me not like want to hurt my little sister cause she just gets on my nerves.’ [positive]</td>
<td>‘At first my parents told me to, but once I see that that actually help, I take it.’</td>
</tr>
<tr>
<td>Expectation/Hope</td>
<td>‘. . . because I was having problems, real problems in school.’</td>
<td>‘It’s making me act better.’ [positive]</td>
<td>‘It’s my sleeping pill.’</td>
</tr>
<tr>
<td>Self</td>
<td>‘I’m a mental case.’</td>
<td>‘. . . they thought that I was disrespecting them if I told them no.’</td>
<td>‘I gain a relationship with my family again.’ [negative]</td>
</tr>
<tr>
<td>Behavior/Action</td>
<td>‘. . . when I wasn’t paying attention in school.’</td>
<td>‘. . . listening and focusing and stuff.’ [positive]</td>
<td>‘I think it actually helps me to focus and I think that anger is more like in my own hands.’</td>
</tr>
<tr>
<td>Intersubjective</td>
<td>‘. . . like headaches and stomachache.’</td>
<td>‘It’s supposed to like balance out something in your brain.’ [negative]</td>
<td>‘I don’t want to take it trying to help something else and then it messes up another thing.’</td>
</tr>
<tr>
<td>Cognition/Thought</td>
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<tr>
<td>Body</td>
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<tr>
<td>Management</td>
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Reference: Floersch et al., 2009