Objectives

1) Describe the alterations in physiologic functioning of infants experiencing drug withdrawal.
2) Identify factors that can interfere with maternal/infant bonding.
3) Describe the attitudes of health care professionals toward woman who are dependent on drugs during pregnancy and strategies that may help.
Adaptation

A change in the way of life that allows people to survive in a particular environment.
Physiologic Changes:
1) Lungs fill with air
2) Change from fetal to adult circulation
3) Secretion of surfactant
4) Thermoregulation

Behavioral Changes:
1) Alert
2) Skin to skin
3) Explores the environment

Transition to Extrauterine Environment

“Golden Hour”

- Immediate skin-to-skin
- First physical exam while in skin-to skin
- Weighing, measuring, etc. – wait until after first feeding
- Mother & baby remain together through transition period

http://www.sanfordhealth.org/stories/the-golden-hour-giving-your-newborn-the-best-start
Adaptive Reflexes

- Sucking
- Rooting
- Grasping

Infant Adaptation

- Adaptation - Changes in bodily structure or function promotes an adequate “fit” with the environment
- Involves:
  - Organization
  - Integration
  - Harmony

Example

- **Organization** – have process used to survive & be successful
  - Involves individuals who form a unified body
  - Each person contributes to the functioning of the group
  - Each person works in harmony with the others to achieve a common goal

Infant Organization

- Infants – organization involved integrated functioning between physiologic & behavioral systems
- Organized infant - process external events without disrupting physiologic & behavioral functioning.
Physiologic Functioning

- Autonomic
  - Heart rate
  - Respiratory rate
  - Oxygen saturation levels
  - Temperature
  - Fluid balances
  - Enzyme & hormone production
  - Digestion and elimination

Behavioral Functioning

- Motor activities
  - Muscle tone
  - Posture
  - General body movements
- States of consciousness
  - Awake
  - Sleep states
Behavioral Functioning

- Attentional/Interactional system
  - Infants ability to process & respond to inputs from the environment

- Self-Regulating system
  - Infants ability to achieve & maintain a balance among & between all of the systems
  - Self-consoling behaviors

Factors that Influence Organized Functioning

- Maturation
- Caregiver-infant interactions
  - Synchronous
    - Infant behaviors become regulated to specific inputs from the environment
  - Outcome – synchrony with the environment (characteristic of the adaptation process)
- Healthcare provider interactions between mother and infant

AL's, 1982
Sander, 1969
Withdrawal & Infant Organization

- Signs of withdrawal
  - CNS hyperirritability
  - GI dysfunction
  - Respiratory distress
  - Disturbed sleep
- Lack integrated neurobehavioral functioning in response to environmental events

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Withdrawal & Infant Organization

- Imbalances in physiologic & behavioral functioning
  - Unorganized state regulation
  - Tremors & hypertonicity
  - Difficulty feeding
  - Frequent crying
- Unpredictable responses to stimulation
- Difficult to console or comfort
- Display unclear behavioral cues

Torrence & Horns, 1989; Soule, et al., 1974
Neurobehavioral Assessment

  - 77 babies
  - Polydrug exposure; methadone maintenance
  - Assessed on day 4
  - NNNS (Neonatal Network Neurobehavioral Scale) (Lester & Tronick, 2004)
    - Neurologic integrity (habituation, attention, handling, quality of movement, excitability, reflexes, arousal, hypertonicity)
    - Stress (50 signs of stress and abstinence)
    - Stress categories (physiologic, autonomic, CNS, skin, visual, GI & state)
  - Finnegan Scoring Tool

Velez, et al., 2004

- Results
  - Maternal methadone dose not correlated with NNNS variables (verified by other studies)
  - Infants requiring treatment with NNNS
    - Significantly higher scores for:
      - Arousal (p= 0.044)
      - Excitability (p=0.020)
      - Hypertonicity (p=0.016)
Velez, et al., 2004

- Results
  - Correlations with the Finnegan Scoring Tool
    - Significantly correlated with:
      - Arousal (p=0.007)
      - Self-regulation (p=0.006)
      - Quality of movement (p=0.017)
      - Excitability (p=0.001)
      - Hypertonicity (p=0.001)
      - Stress/Abstinence (p=0.006)
      - CNS stress (p=0.006)
      - Stress state (p=0.02)

Confirmation

- Infants with NAS
  - difficulty maintaining physiologic & behavioral functioning when interacting with the environment
  - Disorganization – interfere with the development of a healthy maternal-infant bond
- Can lead to later developmental & interactional problems for mother/infant:
  - Especially in women who also have depression, anxiety, feelings of guilt or insecurity
Support Organization/Adaptation in Infants with NAS

- Pharmacologic management
- Non-Pharmacologic Management
  - Swaddling
  - Quiet environment
  - Pacifier
  - Dim lighting
  - Holding/rocking
    - Vertical

(Lauridsen-Hoegh, 1991; Wilson, 1975; Valez & Jansson, 2008)

Support Organization/Adaptation in Infants with NAS

- Facilitate maternal-infant bonding
  - Critical to the infant’s health & well-being
  - Benefits the infant’s social, emotional & cognitive development
- Poor maternal-infant bonding
  - Childhood mood disorders & learning difficulties

Ainsworth, et al., 1978; Mundal, et al., 1991
Parenting Among Drug-Dependent Mothers’

- At risk for parenting deficits
- Lead to loss of their children to foster care
- Poor sensitivity & response to infant needs
  - Less eye-to-eye contact
  - Less affectionate touch
  - Focus less attention on the infant

Mundal, et al., 1991

Key Factors that Affect Bonding

- **Depression** – correlated with poor mother-fetal bonding during pregnancy & post-partum bonding (Alhusen et al, 2012; Goecke, et al., 2012)
- **Anxiety** – inverse relationship between perceived stress & maternal-fetal bonding (Cranley, 1981)
- **Drug & alcohol use** - ↓ in post-partum bonding
  - Drug abuse or experiencing domestic violence during pregnancy negatively impact maternal-infant bonding (Quinlivan & Evans, 2005)
Key Factors that Affect Bonding

- **Early family environment**
  - Dysfunctional family
  - Poor communication
  - Parents – emotionally distant and overcontrolling
  - Parenting Problems:
    - Not a function of drug use alone
    - Psychosocial & psychological issues

(Torresani, et al., 2000)

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Key Factors that Affect Bonding

- **Social support**
  - Buffer for parents who suffer from sociodemographic adversities (Cochran & Niego, 1995).
  - Limited social supports – Stay in relationships: physical, emotional and sexual abuse (Ducan, et al., 1996)
  - Perceptions
    - Maternal disruption in early bonding with her caregiver - predispose drug-dependent mothers to avoid attaining support from others (Anan & Barnett, 1999).
Summary

- Post-partum bonding can be hindered by:
  - Depression, anxiety & drug & alcohol use (especially when there is domestic violence) can interfere with post-partum bonding
  - Mother’s interaction with her mother
  - Limited social support – stay in abusive relationships; lead to drug dependence which can affect bonding

Important Point!

- Clinical practice
  - Need for:
    - More drug treatment programs that focus on women and their drug abuse
    - Psychological problems
    - Help women seek and sustain emotional support systems in their family and social networks
      - More attached to others
Drug Dependence may bring an individual to treatment, but abstinence from drug use will only occur if a person experiences “self” in an interpersonal context.

Factors that Result in Drug Dependence

- Anxiety
- Depression
- Physical abuse
- Sexual abuse
Depression

- 1 in 8 women have depression in their lifetime
  - Stress
  - Physical & Sexual Abuse
  - Poverty
  - Lack of support
  - Genetics – 25% risk first generation relatives

National Alliance on Mental Illness, 2009

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Depression

- In US population in general depression is more common among women
- Range is 2:1 to 4:1
- Could be a risk factor for drug abuse

Weissman & Klerman, 1977; Psychology Information Online, 2010
Anxiety

- Cognitive or personality style
- Fear that anxiety will cause
  - Physical illness
  - Social embarrassment
  - Loss of mental control
  - Some combination of these
- Use of Alcohol and Benzo’s

Stewart, 1996

Physical Abuse

- Two-thirds of women in treatment for drug abuse reported being neglected or abused as children
- More than one-third of adolescent girls who report abuse or neglect have a problem with substance abuse before their 18th birthday

Swan, 1998; Wilson et al, 2012
Sexual Abuse

- 1 in 4 girls is sexually abused before the age of 18
- 30-40% of victims are abused by a family member
- Young girls who were sexually abused are 3X more likely to have psychiatric disorders or alcohol and drug abuse in adulthood

CDC Adverse Childhood Experiences Study, 2008; Kirpatrick et al, 2003; Kendler. et al.,2000

Sexual Abuse

- Young girls who were sexually abused are 3 times more likely to develop psychiatric disorders or alcohol and drug abuse in adulthood.
- 70-80% of sexual abuse survivors report excessive alcohol and drug use

Day et al, 2003; Voeltanz et al, 1999
Environmental

- Friends
- Peers
- Family members
- Parents
- Schools
- TV & Media

Mrug, et al., 2010; Bahr et al., 2005; McCutcheon, et al., 2013; Bauman & Ennett, 1998

Triggers

- Physical & emotional stress
- Conflicts with significant others
- Fear
- Loneliness
- Parenting responsibilities
- Isolation from family
Comorbidity

- Mental Illness and Drug Abuse or Dependence
  - Involve similar brain areas
  - Dopamine
    - Transmission altered by
      - Stress leading to future drug abuse
      - Mental Illness (depression, schizophrenia, other psychiatric disorders)

Comorbidity

- Mental Health Disorders
  - Women
    - Mood or anxiety – 2X as likely to suffer from drug abuse or dependence
  - Men
    - More anti-social disorders

https://www.drugabuse.gov/sites/default/files/rcomorbidity.pdf
Drug Abuse & Dependence Among Individuals with Mood/Anxiety Disorders

Prevalence of Mood & Anxiety Disorders

Conway, et al, 2006
Smoking Among Persons with Mental Disorders

![Graph showing smoking rates among persons with mental disorders](image)

Conway, et al, 2006

Drug Use During Pregnancy and the Law

- Since 1980’s policy makers have debated about how to deal with the problem of substance abuse during pregnancy
- States differ on their opinion
- 18 states view substance use during pregnancy as child abuse

Drug Use During Pregnancy and the Law

- 15 states require healthcare professionals to report suspected prenatal drug abuse
- 4 states require prenatal testing during pregnancy if drug abuse is suspected
- 19 states have drug treatment programs specifically for pregnancy women


Tennessee

- “Fetal Assault” bill
- Empowered prosecutors to arrest women who abuse heroin or pain pills during pregnancy if babies born dependent.
- Two year trial (July, 2014 – July, 2016)
- Rescinded after one year (March 21, 2016)
  - Scared of being arrested
  - No prenatal care
First Woman Charged on Controversial Law that Criminalizes Drug Use During Pregnancy in Tennessee

Mallory, 26, is the first woman charged under a new Tennessee law that criminalizes narcotic drug use, while pregnant.
Why Criminalize?

- Arguments:
  - Threat of incarceration will decrease the abuse of alcohol and drugs
  - Force women to go into treatment
- What is the outcome?
  - Women do not get prenatal care
  - Don’t trust healthcare providers for fear of reporting

What We Know?

- Interview of 29 inmates arrested for drug use after release
  - Relapse was common
    - Poor social support
    - Exposure to drugs in their living environment
    - Medical co-morbidities
    - Poor financial resources
- Incarceration does not work!!
- Drug Treatment can work!!

Reality

☐ Drug abuse and dependence is a disease
☐ Long term treatment is required
☐ Putting people in jail is not the answer
☐ Negative attitudes inhibit successful rehabilitation

Legal Issues Surrounding Screening

☐ Should all pregnant women receive mandatory screening for alcohol and drug use (screening questions and biological testing)?
☐ Very controversial
☐ What are the dilemmas?

Recommendations

- **Washington State Department of Health**
  - Screen pregnant women at each encounter, and minimally, once each trimester
  - Screening should be interview based or self-administered
  - Universal screening may ↑ the likelihood of:
    - identifying substance users
    - allow for early referral for treatment

WSDH, 2012

Recommendations

- **Urine toxicology may be useful to follow up a positive interview screen**
  - Negative results do not rule out substance use
  - Women may avoid detection by abstaining 1-3 days prior to testing
  - False positive results can be devastating for a drug free patient

WSDH, 2012
Indications for Lab Testing

- Little or no prenatal care
- Inappropriate behavior
- Physical signs of abuse or withdrawal
- Smell of alcohol or chemicals
- Recent history of substance use or treatment

Dilemma

- ACOG
  - Universal screening slow to implement
  - Physicians lack knowledge
  - Takes time to discuss & make referrals
  - Physicians concerned about mandatory reporting
  - Medical records may not be safe from inappropriate disclosures
  - Prevent women from getting prenatal care
Dilemma

- **Ferguson v. City of Charleston, 2001**
  - Involuntary drug testing of pregnant women violate a person’s 4th amendment right (unreasonable search and seizure)

- Supreme Court also realizes that addiction is an illness and criminalization is a violation of the 8th Amendment which prohibits cruel and unusual punishment

(Ferguson vs City of Charleston, 2001; Harris & Paltrow, 2003)

Dilemma

- **For Lawmakers, the issue is:**
  - Balancing a woman's right to bodily integrity with society's interest in ensuring healthy pregnancies
  - Question of whether punitive approaches will foster—or hinder—healthy outcomes for women and children.

- **Answers:** Criminalize women or terminate parental rights

http://www.guttmacher.org/pubs/tgr/03/6/gr030603.html
Dilemma

- Patients understanding –
  - Testing associated with treatment can be turned over to police;
  - However, they should not expect that doctors would perform tests for the sole purpose of obtaining evidence for criminal sanctions.

- Hospitals that fail to inform patients of their rights may be open to civil liability for monetary damages

http://www.guttmacher.org/pubs/tgr/03/6/gr030603.html

Dilemma

- States deriving own rules
  - Tennessee only state to put women in jail for using drugs during pregnancy
  - 18 states say that substance abuse during pregnancy is child abuse
  - 15 states require mandatory reporting
  - 4 states require mandatory testing
  - 11 states that give treatment priority to pregnant women

State Policies in Brief, Substance Abuse in Pregnancy, 2014
Attitudes of Health Professionals

- Clients are stigmatized
- Tainted
- Weak personality
- Failing character

Moodley-Kunnie, 1998; Cannon & Brown, 1988; Sheehan, 1992; Greenwood, 1992

Attitudes & Perceptions

- Negative perception not directed at the illness but strikes at the essence of the drug users personality
- Viewed as corrupt and flawed
- Unwilling to change
- Unable to deal with their problems

Greenwood, 1992; Forrester & Murphy, 1992
Where do these attitudes and perceptions come from?

- Society
  - Crime
  - War against drugs
  - Economic cost - $180.9 billion in 2002
- Clinical literature
  - Describes client as immature, psychopathic, inadequate
- Our Experiences
  - Negative (lie, manipulative, unpleasant)

Effects of Our Negative Attitudes

- Our attitudes block client’s ability to change
  - Inappropriate care
  - Expect them to conform to our negative stereotype
  - Our attitudes further marginalize them

National Drug Intelligence Center, 2006; Romney & Bynner, 1972
Scrambler, 1991; Miller, 1983; McLaughlin & Long, 1996
Understanding Drug Abuse

- Viewed as a social problem
- Drug abusers should be able to just stop taking drugs if they are willing to change
- Drug abuse is a complex issue
  - Disease that impacts the brain
  - Stopping is not just a matter of willpower

Drug Addiction

- Chronic relapsing brain disease
- Causes compulsive drug seeking
- Abuse of drugs leads to changes in structure and function of the brain
- Initial decision is voluntary

NIDA InfoFacts, 2009
Drug Addiction

- Over time causes changes in brain that affect self-control and ability to make sound decisions
- Intense impulses to take drugs
- Difficult to change due to brain changes

NIDA InfoFacts, 2009

What do Mothers Have to Say?

- Secondary analysis
  - Interview – 5 women (mean age 32 (range 22-37); recovering from addiction; on methadone
  - Themes
    - “Try not to judge”
    - “Scoring” the baby
    - “Share with me”
    - “I'm the mother here”

(Cleveland & Gill, 2012)
“Try Not To Judge”

- All mothers felt judged by the NICU staff because of their drug history
- Resented being judged as “bad” mothers
  - Mothers could hear nurses whispering “that one used drugs”
  - Needed to gain nurses approval – see me in a different light
  - Feeling judged – feeling of being watched

“Scoring the Baby”

- Scores had great significance for the mothers
- Indication of the infant’s readiness for discharge
- Viewed scores as highly subjective
  - Score depended on the nurse caring for her baby & whether they liked the mother

(Cleveland & Gill, 2012)
“Share With Me”

- Mothers wanted personal communication with the nurse
- A little about their personal life
- Nurse knew something about the woman; the woman knew something about the nurse
- Made nurse seem more “human”
- Liked when nurse asked her how she was doing, talk about the weather that day

(Cleveland & Gill, 2012)

“I’m The Mother Here”

- Mother needed to assert herself as her child’s mother
  - “I’m the mother here! I know what I’m doing.”
- Resentment & frustration
- Ask permission to touch her baby
  - “I didn’t feel like I could be a mother to my child” when this happened
- Didn’t want their baby to think that the nurse was their mother

(Cleveland & Gill, 2012)
What Nurses Have to Say?

- Working with the babies is stressful (Macguire, et al., 2012)
- Challenging; Hard to console a constantly crying baby
- Did not belong in the NICU (Macguire, et al., 2012)

Mothers ability to cope with baby at home (Murphy-Oikonen, et al., 2010; Macguire, et al., 2012).
- Irritability
- Crying
- Worried about infant safety

What Nurses Have to Say?

- Difficult to interact with family
  - Defensive attitude
  - Being threatened with violence
  - Lacked necessary education in mental health & substance addiction

Macguire, et al., (2012); Fraser, et al., 2007).
ANA Code of Ethics

- Nurses are to practice in a manner that demonstrates respect for the human dignity of all individuals. “unrestricted by considerations of social or economic status, personal attributes or the nature of health problems”
- Importance of nurse/patient relationships without prejudice related to lifestyle decisions.

Epstein & Turner, 2015

Strategies

- Increase education
- Welcome mom’s when they come to the unit
- Give positive feedback
- Ask about their treatment program
Strategies

- Give positive reinforcement for women who are in treatment
- Provide referral information for those who are not
- Be honest
- Let mom participate in care

Strategies

- Rooming-In Program
  - Mothers on pediatric floor in private room
  - Educated all healthcare providers
  - NAS training for scoring
  - Babies stayed until needed pharmacologic treatment

Results (n=24)

- Pharmacologic management ↓ from 83% to 14%
- LOS ↓ from 25 days to 8 days (p=0.001)

Strategies

- **Understand**
  - Being a drug user is humiliating and discrediting for the client
  - Drug addiction is a disease – can’t just stop

Essential When Providing Care

- Non-judgmental
- Non-confrontational
- Non-punitive
- Care based on cooperation and acceptance
- Provide a framework for change and recovery
- Better understanding of mother’s experiences

Miller, 1983
Remember

- Professionals negative views blocks the client’s ability to change
- We lock client’s into stereotypical attitudes by believing they can not or are unwilling to change

Addiction

- A chronic, relapsing, disease involving drug-seeking and abuse by long-lasting chemical changes in the brain

- Uncontrollable craving, seeking, and use of a substance such as a drug or alcohol

Lyttle, 1986; Miller, 1983

National Institute on Drug Abuse, 2012
ARE INFANTS BORN ADDICTED TO DRUGS?
References


References

- Ferguson v. City of Charleston, s32US 67 (2001)
References


References

References

- Psychology Information Online: www.psychologyinfo.com/depression/women.htm

References

References
