Parents influence their child before and during the course of orthodontic treatment.

- Socialize their child for life in general
- Transmit family values
- Establish daily routines
  - Eating behaviors
  - Oral hygiene practices

Before stepping into your office, parents are invested in the quality of their child's orthodontic experience!

Support their child throughout treatment:
- Promote patient coping with difficult appointments
- Facilitate diet compliance
- Supply hygiene products / reminders
- Remind, assist and encourage cooperation with removable appliances and elastics

Decide when their child should see an orthodontist:

- Choose an office offering orthodontia
- Decide between a dentist or orthodontist for treatment
- Arrange, finance, and usually bring their child to appointments
• Arrive on time for appointments
• Reschedule with adequate notice
• Are courteous to entire orthodontic team
• Facilitate child compliance
  • Bring out the best in their child
• Support their child during / after difficult appointments
• Make timely payments for services
• Refer new patients to the practice
• Post positive reviews on social media

• Cooperative during appointments
• Positive attitude with orthodontic team
• Oral hygiene superstar
• Avoid destructive food / drink / candy
• Wear removable appliances and elastics as prescribed

• Arrive late for appointments
• Reschedule on short notice
• No show for appointment
• Demanding and rude to orthodontic team
• Reward child non-compliance
  • Model negative behaviors
• Undermine efforts of orthodontic team
• Past due account
• Post poor reviews on social media

How can we understand behavior of a parent and child during the course of orthodontic treatment?

How can we respond to problem behaviors effectively and professionally?
Culture Influences Human Behavior

- Social customs
- Language
- Family life
- Social order and values

In a diverse society, orthodontists should expect to work with families whose cultural traditions and values are different from their own!

Socialization

- Process by which people learn to adopt the norms, values, attitudes and behaviors accepted and practiced by the ongoing system

Social Customs

- What is the proper personal space?
- What is frequency of social touching?

Social Customs

- What behaviors are considered rude?
- How does one show respect?
- What parts of the body must be covered?
- How many meals are customary?
- What type of food is eaten?
- What is the attitude toward punctuality?
- Is it acceptable to praise and acknowledge accomplishments?

Family Life

- What are duties of men and women?
- Who functions as caregivers?
- Who makes decisions about children?
- How is good behavior encouraged?
- How is bad behavior discouraged?

Social Order and Value Systems

- What is the role of children?
- What is attitude towards adults?
- What is attitude towards elders?
- What is attitude towards professionals?
- What is more valued
  - Competition or cooperation
  - Politeness or honesty

- Arrive late for appointments
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Is it culture?  
Is it parenting style?

- Classification of occlusion – 19th C:
  - Describes relationship between maxillary and mandibular teeth
  - Relationship of MB cusp of maxillary 1st molar to buccal groove of mandibular 1st molar

- Classification of parenting styles – 1970’s:
  - Describes a philosophy toward the child that creates the emotional context in which parent behaviors occur
  - Affection and behavior controls

Could be cultural  
Could be parenting style

- Baumrind’s classification of parenting styles
  - Parental responsiveness – degree to which parent responds to child’s needs
  - Parental demandingness – extent to which parent expects mature responsible behavior from child

<table>
<thead>
<tr>
<th>Reinforcer</th>
<th>Examples</th>
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<tbody>
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<td>Positive Social Attention</td>
<td>Praises, Compliments, Playing games, Put on the back</td>
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<td>Treats, Stickers, Prizes</td>
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<td>Tokens</td>
<td>Money, Stickers, Checkmarks on chart</td>
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<td>Negative Reinforcement</td>
<td>Breaks from chores, Breaks from homework</td>
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### Punishment
Adapted from AAP Developmental and Behavioral Pediatrics Table 4.3

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<tr>
<th>Punishment Type</th>
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<tr>
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<td>Child experiences outcome of their poor choice</td>
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- Whines or is uncooperative during appointments
- Negative interactions with orthodontic team
- Consumes destructive diet that breaks brackets and wires
- Chronically poor oral hygiene
- Loses or breaks removable appliances
- Irregular use of removable appliances and elastics

Could be socialization and/or parenting style
Could be stage of brain maturity

- Brain Development
  - Not fully matured until mid 20s
  - Maturation occurs back to front
    - Prefrontal cortex is last to mature
  - Children and adolescents often do not perform at a level that reflects their cognitive abilities

- Brain Systems
  - Rational brain
    - Prefrontal cortex
  - Social – emotional brain
    - Limbic structure, ventral striatum
  - Both systems are always working

BOTH HAVE VALUE
Either can mislead
**Rational Brain**
- High level reasoning
- Decision making
- Impulse control
- Assessment of consequences
- Planning, organizing, strategizing
- Setting priorities
- Estimating probabilities

**Emotional Brain**
- Prefrontal cortex
  - Situation
  - Assess
  - Plan
  - Respond
- Limbic system
  - Ventral striatum
  - Situation
  - Emotion – feeling
  - Respond

**Implications**
- More likely to engage in risky, impulsive, and sensation-seeking behavior
- Over-value short term benefits and rewards
- Less capable of controlling impulses
- More easily distracted from goals

**Implications**
- More emotionally volatile, susceptible to stress and peer influence
- Very sensitive to environmental cues, affective elements, rewards and punishments

**Adolescent Culture**
- Egocentric
- Peer dependent
- Distinct language and dress
- Influenced by popular culture
- Ongoing search for identity
- Hyper alert to messages that minimize or discount their experiences

**Respecting the Early Adolescent Patient**
- Involvement in discussions and decisions
- Recognize developing abilities
- Recognize the kinds of situations in which decision making may be flawed
- Provide limits and direction
Orthodontics and the Developing Brain

- Compliance with oral hygiene, diet, removable appliances requires use of prefrontal cortex
- When with their friends, social emotional brain system overrides prefrontal cortex

Orthodontic Non Compliance

- Generally is not due to lack of understanding by the adolescent patient
  - Education is not a sufficient response
- Difficult for the developing brain to sacrifice immediate desire for a benefit with long time horizon

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### Behavioral Reinforcers

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<td>Orthodontic Rewards Card</td>
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<td>Breaks from chores, Breaks from homework</td>
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<td>Comments, Reprimands</td>
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Recruiting Parents to Help Adolescent Orthodontic Patients

- Educate
- Ask what best motivates their child
  - Encourage culturally consistent rewards
- Request their support in specific areas
  - Hygiene products and routines
  - Diet compliance
  - Loving reminders: appliances, elastics, hygiene

Applying Science to Help Adolescent Orthodontic Patients

- Prevalence of white spot lesions 18 – 88%
- Fluoride varnish application q 6 weeks is the most reliable current method to decrease white spot lesions
Parent / Child Management

Insights from Contemporary Psychology

Barbara Sheller DDS, MSD  February 7, 2015