Using Structured Interview Questions During the Residency Selection Process

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Date: February 28, 2015
Disclosures

- No financial conflicts of interest to report
- We will not be discussing off-label use of medications
Agenda

● Resident Evaluation
● Resident Selection
● Why use Structured Interviews?
● Creating Your Own Structured Interviews
● Interview Role Play
● Research Opportunity
● Q&A
Residency Evaluation Today

- NAS - Next Accreditation System
- Move from Cognitive...
  - Patient Care
  - Medical Knowledge
- … to Non-Cognitive
  - Professionalism
  - Interpersonal and Communication Skills (ICS)
  - Practice-Based Learning and Improvement (PBLI)
Trainee Performance Domain

- Medical Knowledge
- Patient Care
- SBK
- ICS
- Professionalism
- PBLI
Problems

● How to assess all of these competencies reliably and validly in current trainees

● How to assess if applicants will excel on all of these competencies
Existing Toolbox

● What tools do you have to select residents?

● Typically…
  ○ AOA
  ○ Dean’s Letter
  ○ Grades
  ○ USMLE Scores
  ○ Interview
  ○ Letters of Recommendation
  ○ Personal Statement
Trainee Performance Domain

Which variables in your application package will predict these dimensions?

- Grades, USMLE Scores, AOA
- Grades, USMLE Scores, AOA, LOR
- Grades, USMLE Scores, AOA

Medical Knowledge
Patient Care
SBK
ICS
Professionalism
PBLI
Residency Selection Today

● Problem- we are not selecting residents on the core competencies we evaluate them on
  ○ Key personality traits unmeasured

● Solution
  ○ Measure them using structured interviews
Key Types of Structured Questions

1. Behavior Description
   - Consists of questions about a respondent’s past behaviors and experiences in job-related situations

2. Situational
   - Consists of questions that ask applicants what they would do in various hypothetical situations relevant to the job of interest
Sample Past-Behavior Question

Measures Job-Related Competency

Personal and Social Frustration

2. Tell me about the most difficult person you have had to deal with at work or school and describe how you handled your interactions with that person.

Situation: What was the situation? What made the person difficult to deal with?
Behavior: How did you react? What did you do about the situation? How did you feel in the situation?
Outcome: How was the conflict resolved? What was the outcome? What is your relationship with this person now?

Notes:

Each Candidate Measured on Same Scale

Behavioral Anchors

Standardized Scoring

Standardized Probes

Score:

Average Score:
Advantages of Structured Interviews

● **Standardization**
  ○ Every candidate gets same questions
  ○ Every candidate faces same opportunities and challenges

● **Job-Relatedness**
  ○ Questions target traits relevant to job

● **Behavior-Focused**
  ○ Past behavior is a good predictor of future behavior
  ○ Candidates evaluated on basis of behavior, not beliefs, values

● **Standard Evaluation Procedures**
  ○ Scoring key developed prior to interview
  ○ Candidates all evaluated against same standard
Advantages of Structured Interviews

- High criterion-related validity in predicting relevant organizational outcomes (Huffcutt, Conway, Roth, & Stone, 2001).
- Result in favorable applicant reactions (e.g., Hamill & Bartle, 1998; Steiner & Gilliland, 1996).
Creating Your Own Structured Interviews
Structured Interviews in 5 Steps

- Target traits to measure
- Write questions to target traits
- Create rating scale and scoring key
- Create probes
- Content validate questions
Targeting a Domain
Which Traits Should Be Targeted?

- Traits are relatively stable personality characteristics
  - Extraversion
  - Openness to Experience
  - Agreeableness

- Which traits will predict competencies?
Partial List of Important Traits

● Conscientiousness
  ● Dependability
  ● Planning/Organizing

● Teamwork
  ● Conflict Management
  ● Cooperation

● Stress Tolerance

● Adaptability

● Resilience

● Many More....
# Defining Traits

Consult the Occupational Information Network for Competencies:  
http://www.careeronestop.org/competencymodel/

<table>
<thead>
<tr>
<th>Sample Target Interview Dimensions</th>
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</thead>
<tbody>
<tr>
<td><strong>Conscientiousness</strong></td>
<td>2 questions</td>
</tr>
<tr>
<td>a. Discretion: to respect confidentiality of information; to discuss sensitive subjects with tact and diplomacy</td>
<td></td>
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<tr>
<td>b. Dutifulness: to accept authority and follow orders; to obey laws both on and off duty; to be trustworthy</td>
<td></td>
</tr>
<tr>
<td>c. Integrity: to be honest and do what is right and ethical</td>
<td></td>
</tr>
<tr>
<td><strong>Stress Tolerance</strong></td>
<td>2 questions</td>
</tr>
<tr>
<td>a. Interpersonal Stress Tolerance: to maintain self-control, diplomacy, and tact when others are belligerent, confrontational, or violent</td>
<td></td>
</tr>
<tr>
<td>b. Situational Stress Tolerance: to think clearly and take effective action in stressful or emergency situations; to take control of a stressful situation and calm others; to tolerate stressful circumstances</td>
<td></td>
</tr>
<tr>
<td><strong>Interpersonal Skills</strong></td>
<td>2 questions</td>
</tr>
<tr>
<td>a. Compassion: to understand others’ needs and feelings; to treat others with courtesy and respect; to demonstrate concern for others; to have a genuine interest in people and their welfare</td>
<td></td>
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<tr>
<td>b. Objectivity: to be open minded about alternatives and other points of view; to be free of bias; to treat every person fairly and impartially without letting personal feelings interfere; to work effectively with a diverse group of people</td>
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</tbody>
</table>
Writing Questions
Exercise

- Write two past behavior questions
- Integrity
- Situational Stress Tolerance

- Good questions target intended trait
- Likely to elicit information relevant to trait
Writing Questions- What To Do

Example: Situational Stress Tolerance
“Tell me about a time in medical school when you encountered an emergency situation and needed to remain calm in order to complete the task”

- Give context (medical school)
- Focus on construct (remaining calm)
- Answer likely to elicit relevant information
Writing Questions - What Not To Do

● Yes/ No questions
  ● Example: “Have you ever encountered an emergency situation and needed to remain calm in order to complete the task?”

● Lacking Structure
  ● Example: “Describe a time when you have remained calm”
Rating Scales and Scores
Rating Scales

- Many types of scales and scoring systems
- Purpose to make scoring objective
- Behaviorally anchored scales do this
  - Focus on key behaviors at low, moderate and high levels of performance
Sample Past-Behavior Question

**Personal and Social Frustration**

2. Tell me about the most difficult person you have had to deal with at work or school and describe how you handled your interactions with that person.

**Situation:** What was the situation? What made the person difficult to deal with?

**Behavior:** How did you react? What did you do about the situation? How did you feel in the situation?

**Outcome:** How was the conflict resolved? What was the outcome? What is your relationship with this person now?

**Notes:**

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**Dimension 1: Frustration**

- Low: Refrained from becoming frustrated with the other person, even after multiple difficult interactions.
- Moderate: May have become somewhat frustrated with the other person.
- High: Became frustrated with little or no provocation during interactions with the other person.

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**Dimension 2: Composure**

- Low: Retained composure and refrained from displaying anger, even during difficult interactions with the other person.
- Moderate: Worked through difficulties with the other person over time.
- High: Did not work through difficulties with the other person.

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Harbored no ill will or resentment following difficult interactions with the other person.

May have felt some short-lived anger or resentment following multiple difficult interactions with the other person.

Felt extremely angry and resentful following difficult interactions with the other person.

---

**Score:**

- 

**Average Score:**

---

Each Dimension Scored
Exercise

● For each question, write behavioral anchors for one dimension

● Target low, moderate, and high-level behaviors that measure trait
Writing Rating Scales: What To Do

- **Name Dimensions**
  - Name dimensions after distinct sets of behavior likely to be elicited by question

- **Example: Stress Tolerance**
  1. Composure?
  2. Clear thinking?
  3. Took effective action?

- **Be realistic**
  - Anchor with behaviors you can detect with probes
Writing Rating Scales - What Not To Do

- Be vague
  - Example: “High integrity/Low integrity”

- Be too extreme
  - Don’t give examples too poor/too strong they are unlikely to come up
Sample Past-Behavior Question

Personal and Social Frustration

2. Tell me about the most difficult person you have had to deal with at work or school and describe how you handled your interactions with that person.

Situation: What was the situation? What made the person difficult to deal with?

Behavior: How did you react? What did you do about the situation? How did you feel in the situation?

Outcome: How was the conflict resolved? What was the outcome? What is your relationship with this person now?

Notes:

Score:

Low

Moderate

High

1

2

3

4

5

Refined from becoming frustrated with the other person, even after multiple difficult interactions.

May have become somewhat frustrated with the other person.

Became frustrated with little or no provocation during interactions with the other person.

Retained composure and refrained from displaying anger, even during difficult interactions with the other person.

May have displayed low-level anger when provoked.

Readily displayed anger during interactions with the other person.

Quickly worked through frustration with the other person.

May have felt some short-lived anger or frustration after really difficult interactions with the other person.

Felt extremely angry and resentful following difficult interactions with the other person.

Harbored no ill will or resentment following difficult interactions with the other person.

Harbored ill will or resentment following difficult interactions with the other person.

Average Score:
Probes
Probes

- There are three pieces of information you are trying to obtain for each question
  - Description of the situation
  - Description of the candidate’s behavior
  - Description of the outcome or result
- Important step in preventing vague or general answers
- **Purpose to allow you to rate dimensions**
Sample Past-Behavior Question

**Personal and Social Frustration**

2. Tell me about the most difficult person you have had to deal with at work or school and describe how you handled your interactions with that person.

**Situation:** What was the situation? What made the person difficult to deal with?

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**Notes:**

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**Score:**

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<th>Low</th>
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<th>High</th>
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<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Refained from becoming frustrated with the other person, even after multiple difficult interactions.  
May have become somewhat frustrated after several difficult interactions with the other person.  
Became frustrated with little or no provocation during interactions with the other person.

Retained composure and refrained from displaying anger, even during difficult interactions with the other person.  
May have displayed low-level anger when repeatedly prompted.  
Readily displayed anger during interactions with the other person.

Quickly worked through difficulties with the other person.  
Worked through difficulties with the other person over time.  
Did not work through difficulties with the other person.

Harbored no ill will or resentment following difficult interactions with the other person.  
May have felt some short-lived anger or resentment following multiple difficult interactions with the other person.  
Felt extremely angry and resentful following difficult interactions with the other person.

**Average Score:**

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Exercise

- Write probes for two questions you wrote
- Target situation, behavior, outcome

- Ask open ended non-leading questions
- Ask clarifying question about example
- Remember purpose to allow you to rate behavior in this situation
Writing Probes- What To Do

- Focus in on target trait
  - Example: *What steps did you take to keep others calm?*

- Ask probes that will help you distinguish between scale ratings
Writing Probes - What Not To Do

● Off topic
  ● Example: Why were you able to remain calm?

● Targeting different competency
  ● Example: What steps did you take to involve others in solving this problem?

● Yes/No questions
  ● Example: Did you solve the problem?
Practice

● Pick partner
  ○ Each ask other one question
  ○ Other answers
  ○ Score on dimension

● What was hard about doing this?

● Training in use of scales is key!
Example from Project

“In medical school and in residency, we all have multiple responsibilities to balance. Tell me about a time when you had many conflicting tasks to accomplish, but had a limited amount of time in which to complete them.”

A. Difficulty of situation (check one and GO TO B):
   ___ 1. Extremely difficult; many tasks in short time
   ___ 2. Moderately difficult; many tasks in reasonable time
   ___ 3. Not difficult; few tasks in expected amount of time

B. Planning/Organizing in the situation:
   ___ 1. Extremely effective; planned/organized to finish all tasks
   ___ 2. Moderately effective; planned/organized to finish majority of the tasks on time, while needing more time to finish others
   ___ 3. Not effective; did not plan and organize well, finished few tasks on time, while most were not finished by the expected time

C. Candidate didn’t give an answer:
   ___ 1. Candidate could not think of an answer
   ___ 2. Candidate said this has never happened to him/her
Video Training

- Two videos
- First is ineffective interviewing
- Second is effective interviewing

- Try to rate interviewee using scale

- What was ineffective about first interview?
- What was effective about second interview?
Content Validation
Content Validation

- Two key objectives
  - Demonstrate that questions measure traits
  - Demonstrate that questions important for successful performance in residency

- Accomplished using rating task with SMEs
Sample CV Rating Task

**Content Validity Ratings: Orthopaedic Surgery Residency Interview**

The purpose of this exercise is to rate the relevance and overall value of the new interview questions in terms of the Orthopaedic Surgery Milestones and Future Job Performance.

**Rating for Milestone Relevance:**

To what extent will the interview question elicit information relevant to this Milestone?

1 = Not at all  
2 = To a little extent  
3 = To a moderate extent  
4 = To a great extent

**Rating Scale for Overall Value for Job Performance:**

To what extent will the interview question elicit information *necessary* and *valuable* for evaluating candidates’ potential to perform the job successfully.

1 = Not at all  
2 = To a little extent  
3 = To a moderate extent  
4 = To a great extent

<table>
<thead>
<tr>
<th>NEW Interview Questions</th>
<th>Milestone</th>
<th>Milestone Relevance (1-4)</th>
<th>Job Performance (1-4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. Tell me about a time when you had many conflicting tasks to accomplish, but had a limited amount of time in which to complete them.</td>
<td><strong>Professionalism 2</strong> Exhibits basic professional responsibilities (e.g., delivering patient care)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Using SI Scores in Selection Process

- How do you weight these questions with other selection criteria?
- Need to conduct predictive validation study
- Indicate weight to give all variables
- Until then, use as tiebreaker
Research Opportunity

● We have developed 18 unique questions
  ○ 3-4 minutes per question

● Conducting ongoing criterion validation study
  ○ What is incremental validity of interview questions over and above USMLE scores, grades, LOR
  ○ Milestone scores
  ○ “Problem” residents

● Can use questions if provide data