The Science & Power of Hope

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Disclosures / Conflicts of Interest

▶ Under guidelines established by the Accreditation Council for Pharmacy Education, disclosure must be made regarding financial relationships with commercial interests within the last 12 months.

▶ I have no relevant financial relationships or affiliations with commercial interests to disclose.
Learning Objectives

- At the completion of this activity, pharmacists and pharmacy technicians will be able to:
  - Summarize the hope theory
  - Classify the components of hope to nurturing well-being
  - Recognize hope-based coping strategies related to various stressors

Pre-Assessment Question - #1

Which of the following is the **BEST** definition of “hope” according to Charles “Rick” Snyder’s theory of hope?

- (A.) A transient emotional state marked by contentment that occurs when one’s life situation is properly aligned with one’s expectations
- (B.) A way of setting lofty and unrealistic goals and subsequently attaining them
- (C.) Positive cognitive appraisal of intrapersonal assets and motivations as well as external factors when pursuing a desired goal
- (D.) A personality trait that is unable to be learned or modified without major changes in one’s psychological disposition
Pre-Assessment Question - #2

Susan is a 68-year-old female who is the primary caregiver for her two young grandchildren. Although she retired three years ago, Susan finds herself overwhelmed on a daily basis. Her husband passed away five years ago, and her daughter was recently incarcerated. Susan gained custody of her grandchildren after her daughter was sentenced to 15 years in prison. Given her situation, Susan does not feel socially supported and often believes that many of her goals are unattainable.

According to hope theory, social support represents which of the following for Susan?

(A.) Agentic reinforcement
(B.) Pathway
(C.) Asset
(D.) Downstream goal

Pre-Assessment Question - #3

Chronic work-related stress is an unfortunate reality for many different professionals, and if not properly dealt with, it can lead to burnout and other negative consequences.

Which of the following is a potential strategy to leverage hope in order to mitigate the effects of work-related stress?

(A.) Investing more energy in work-related tasks to overcome barriers
(B.) Slacking off / procrastinating at work to avoid stressful activities
(C.) Ignoring work-related obstacles and focusing on other aspects of work
(D.) Evaluating barriers to personal goals, seeking out actionable solutions to those barriers, & setting goals outside of work that are consistent with one’s purpose
Learning Objective #1

- Summarize the hope theory
- Classify the components of hope to nurturing well-being
- Recognize hope-based coping strategies related to various stressors

Brief History of Positive Psychology & Hope Theory

- In 1998, Martin Seligman, APA President, made “positive psychology” the focus of his term of office.
  - Seligman emphasized the importance of eudaimonia & flourishing.
- In 1991, Charles “Rick” Snyder published seminal paper on hope theory.
  - Snyder described hope & its operational components.
- In recent years, hope theory has been studied in a number of different populations, including patients with specific conditions.
  - Ex: mental disorders, cancer, spinal cord injuries, etc.
Questions for the Audience

What is hope?
What gives you hope?

What is Hope?

- Hope is the belief that your future will be better than today and that you have the power to make it so.

- Hopeful individuals identify one or more pathways toward their goal and can focus their agency (willpower) toward their goals and the pathways.

Hope is being able to see that there is light despite all of the darkness.
Desmond Tutu
Framework of Hope Theory

- Will Power (Agency)
- Way Power (Pathways)
- Desired Goals

...agency without pathways is a wish!

Hope Theory is Parsimonious

- Only three parts
  - Goals
  - Pathways
  - Agency / Willpower
- Mnemonic: G-P-A
What do we mean by goals?

- Goals = cognitive endpoints of purposeful behavior
  - Can be either short- or long-term in nature
  - Must be of sufficient value to motivate behavior

What do we mean by pathways?

- Pathways = mental roadmaps to goal attainment
  - Ability to consider potential barriers with workable solutions
  - Ability to identify multiple pathways
What do we mean by agency?

- **Agency** = mental energy to your pathway pursuits
  - Ability to self-regulate thoughts, emotions, & behaviors
  - Focus your attention & intention on goal pursuits

Summary of Hope Theory

- Hope is based in cognition, not emotion.
  - There are affective elements of hope theory that result from hopeful thinking.
- **Definition**: positive cognitive appraisal of intrapersonal assets and motivations as well as external factors when pursuing a desired goal
  - **Red** = agency thinking; **Blue** = pathways thinking; **Purple** = goal orientation
- The double arrows between agency and pathways thinking = interaction
  - Increased thinking in one area increases thinking in the other
- Hope begets hope, and this process is driven by directed mental energy.
  - Consider our species’ instinctive drive to conserve energy
Learning Objective #2

- Summarize the hope theory
- **Classify the components of hope to nurturing well-being**
- Recognize hope-based coping strategies related to various stressors

Study #1: CDC-Kaiser Adverse Childhood Experiences (ACE) Study

- Original ACE Study = Kaiser Permanente from 1995-1997
- More than 17,000 HMO members from Southern California completed surveys about childhood experiences & current health status + health behaviors
- **Graded dose-response** relationship between ACEs & negative health-related outcomes
ACE Categories

<table>
<thead>
<tr>
<th>ABUSE</th>
<th>NEGLECT</th>
<th>HOUSEHOLD DYSFUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical</td>
<td>Physical</td>
<td>Mental Illness</td>
</tr>
<tr>
<td>Emotional</td>
<td>Emotional</td>
<td>Incarcerated Relative</td>
</tr>
<tr>
<td>Sexual</td>
<td></td>
<td>Mother treated violently</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Substance Abuse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Divorce</td>
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</table>

Prevalence of ACE in United States

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>CDC Findings</th>
</tr>
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<tbody>
<tr>
<td>0</td>
<td>36.1%</td>
</tr>
<tr>
<td>1</td>
<td>26.0%</td>
</tr>
<tr>
<td>2</td>
<td>15.9%</td>
</tr>
<tr>
<td>3</td>
<td>9.5%</td>
</tr>
<tr>
<td>4+</td>
<td>12.5%</td>
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</table>

Average ACE = 1.61
**Average ACE Scores**

<table>
<thead>
<tr>
<th>Consider A Few Comparisons:</th>
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<tbody>
<tr>
<td>CDC National Data</td>
</tr>
<tr>
<td>Children Exposed to DV</td>
</tr>
<tr>
<td>Juvenile Offenders</td>
</tr>
<tr>
<td>Foster Children</td>
</tr>
</tbody>
</table>

**Importance of Understanding ACE**

![Diagram of an iceberg with "Behavior" and "Trauma (ACES)" sections]
What if, in our attempt to better respond to childhood trauma, we also began to ask:

“**What is right with you?**”

Is there a psychological strength that allows children, adults, families, and communities to thrive?

Can this strength be easily measured?

Can this strength be nurtured?
A “Hope-Informed” Approach

Study #2: Camp HOPE Study

- Camp HOPE America = summer camp program targeting school-aged children exposed to domestic violence
- 229 school-aged children participating in Camp HOPE America included in study
- Outcome of Interest = changes in hope
Prevalence of Adverse Childhood Experiences.

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>CDC Study (N=17,337)</th>
<th>Camp HOPE Children (N=180)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>36.1%</td>
<td>5.6%</td>
</tr>
<tr>
<td>1</td>
<td>26.0%</td>
<td>13.9%</td>
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<tr>
<td>2</td>
<td>15.9%</td>
<td>12.8%</td>
</tr>
<tr>
<td>3</td>
<td>9.5%</td>
<td>12.2%</td>
</tr>
<tr>
<td>4+</td>
<td>12.5%</td>
<td>55.6%</td>
</tr>
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</table>

Average Number of ACE = 4.40*

Prevalence of Adverse Event by Type

<table>
<thead>
<tr>
<th>Type</th>
<th>Percent (%)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abuse:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal</td>
<td>49.8</td>
<td>77.9</td>
</tr>
<tr>
<td>Physical</td>
<td>38.6</td>
<td>41.2</td>
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<tr>
<td>Sexual</td>
<td>20.3</td>
<td>42.5</td>
</tr>
<tr>
<td>Neglect:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Illness</td>
<td>38.5</td>
<td></td>
</tr>
<tr>
<td>Emotional</td>
<td>47.1</td>
<td>44.7</td>
</tr>
<tr>
<td>Physical</td>
<td>17.9</td>
<td></td>
</tr>
</tbody>
</table>
The Power of Hope: Prime Example

Changes in High ACE Children Hope

29
28
27
26
25
24
23
Pretest
Posttest
30 Day F/U

25.38
27.51
28.67

Main Takeaways from Two Studies

- Hope is malleable, which means it is amenable to intervention.
- Since hope is based in cognition, we can learn how to think more hopefully by re-establishing expectations.
- Trauma does not preclude hope-building interventions from being effective.
- Hope can help to explain nonadherence to medical advice & instructions in part.
Learning Objective #3

- Summarize the hope theory
- Classify the components of hope to nurturing well-being
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Applying Hope Theory

How well can you manage your willpower?

Selected Pathway → → → → → → Identified Goal

Attention Detractors

Unmitigated trauma / stress is a hope ROBBER!
The Loss of Hope

Goals are unclear...

Pathways are uncertain or no longer viable...

Willpower is spread thin...

Question for the Audience

What is the \textbf{opposite} of hope?
The Loss of Hope (Cont.)

- **Hope**
  - Goal is significantly blocked.

- **Anger**
  - Goal is significantly blocked.

- **Despair**
  - Unable to adjust goal.
  - Pathways are unavailable.

- **Apathy (Hopeless)**
  - Loss of Motivation

Relative Hope Level

High

Low

The Psychology of Hope

Does hope predict adaptive outcomes?

Does hope buffer the negative effects of stress and adversity?

Can hope be improved by intervention and sustainable?
At the heart of change is your ability to understand the way things are and to imagine the way things could be.

Hope makes change appear more feasible and more worth one’s energy.
### Hope Theory Construct Example Questions for Patients

<table>
<thead>
<tr>
<th>Hope Theory Construct</th>
<th>Example Questions for Patients</th>
</tr>
</thead>
</table>
| **Agency Thinking**   | • How capable do you feel you are in making this change?  
                        |   • How motivated are you to change this behavior?  
                        |   • What do you understand about how this change will benefit your health?  
                        |   • How much success have you had in the past in making a similar change? |
| **Pathways Thinking** | • To what extent are you supported by others in achieving your health-related goals?  
                        |   • Do you have the necessary resources, including money and transportation, to make the changes we have discussed?  
                        |   • Have you experienced any difficulties in identifying ways to achieve your goals? |
| **Goal Setting**      | • What health-related goals have you set for yourself?  
                        |   • What gives your life meaning?  
                        |   • What short-term and long-term goals have you set for your health?  
                        |   • How successful have you been in achieving them? |

### Study #3: Oklahoma Medical Student Hope & Burnout Study

- Cross-sectional study of 236 OU medical students
- OSU & OU medical students included in the study → only OU data will be presented
- Primary measures = dispositional hope, perceived stress, & burnout
Question for the Audience

What is burnout?

Operational Definition of Burnout

- Exhaustion + Depersonalization + Diminished Professional Efficacy

- Chronic Stress + Lack / Depletion of Protective Psychological Factors → Burnout
Validated Measures

- **Hope**
  - Adult Dispositional Hope Scale *(Range = 8 - 64)*

- **Burnout**
  - Oldenburg Burnout Inventory *(Range = 16 - 80)*

- **Stress**
  - Perceived Stress Scale *(Range = 10 - 50)*

Study Participants: OU Data Set

236 respondents completed the survey out of 652 eligible participants (response rate = 36.2%)

<table>
<thead>
<tr>
<th>Year in Medical School</th>
<th>MS-1</th>
<th>MS-2</th>
<th>MS-3</th>
<th>MS-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS-1</td>
<td>64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS-2</td>
<td>105</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>MS-3</td>
<td>56</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MS-4</td>
<td>46</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ANOVA: Stratified Means = NOT STATISTICALLY DIFFERENT

Biological Sex

- Male: 53%
- Female: 47%
Average Scores

<table>
<thead>
<tr>
<th>Variable of Interest</th>
<th>Average Score ±SD</th>
<th>Reference Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hope</td>
<td>52.8 ± 6.7</td>
<td>8 - 64</td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>26.2 ± 7.2</td>
<td>10 - 50</td>
</tr>
<tr>
<td>Burnout</td>
<td>43.0 ± 10.0</td>
<td>16 - 80</td>
</tr>
</tbody>
</table>

Correlation Matrix

<table>
<thead>
<tr>
<th>Scores</th>
<th>Hope</th>
<th>Perceived Stress</th>
<th>Burnout</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hope</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Stress</td>
<td>- .5770*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Burnout</td>
<td>- .4816*</td>
<td>.6386*</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes: * p < .01 (2-tailed). Pearson correlation coefficients (n=236).
About 43% of the variation in medical student burnout can be explained by perceived stress and hope, leaving about 57% of the variation unexplained.

Although not shown, 3% of the variation in burnout was uniquely accounted for by just hope.

Post-Assessment Question - #1

Which of the following is the **BEST** definition of “hope” according to Charles “Rick” Snyder’s theory of hope?

(A.) A transient emotional state marked by contentment that occurs when one’s life situation is properly aligned with one’s expectations

(B.) A way of setting lofty and unrealistic goals and subsequently attaining them

(C.) Positive cognitive appraisal of intrapersonal assets and motivations as well as external factors when pursuing a desired goal

(D.) A personality trait that is unable to be learned or modified without major changes in one’s psychological disposition

Hope = learned → cognition → appraising internal + external factors
Post-Assessment Question - #2

Susan is a 68-year-old female who is the primary caregiver for her two young grand-children. Although she retired three years ago, Susan finds herself overwhelmed on a daily basis. Her husband passed away five years ago, and her daughter was recently incarcerated. Susan gained custody of her grandchildren after her daughter was sentenced to 15 years in prison. Given her situation, Susan does not feel socially supported and often believes that many of her goals are unattainable.

According to hope theory, social support represents which of the following for Susan?

(A.) Agentic reinforcement  
(B.) Pathway  
(C.) Asset  
(D.) Downstream goal

Hope theory = G - P - A \rightarrow Pathways = human & non-human resources

Post-Assessment Question - #3

Chronic work-related stress is an unfortunate reality for many different professionals, and if not properly dealt with, it can lead to burnout and other negative consequences.

Which of the following is a potential strategy to leverage hope in order to mitigate the effects of work-related stress?

(A.) Investing more energy in work-related tasks to overcome barriers  
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(C.) Ignoring work-related obstacles and focusing on other aspects of work  
(D.) Evaluating barriers to personal goals, seeking out actionable solutions to those barriers, & setting goals outside of work that are consistent with one's purpose

Leverage hope = find alternative pathways & diversify goal-directed energy
Conclusions

- Hope theory describes the interaction of pathways thinking & agency thinking when pursuing a desired goal.
- Hopeful thinking can be learned, despite a history of trauma and/or chronic stress.
- Specific “hope-informed” questions & approaches can be explored when encouraging behavior change.