



# Using decision science to drive behavior:

Strategies to increase participation  
in RETAIN programs

Jessica Fernandez, PhD  
University of Maryland, College Park

# Building on RETAIN program material

## Barriers to Return to Work

### A Research-to-Practice Brief From RETAIN Technical Assistance Provider

#### Common RTW Barriers

This brief presents key research highlights of four return to work (RTW) barriers that injured or ill individuals commonly experience: injury characteristics, individual perceptions of injury and other psychological characteristics, health care and rehabilitation issues, and workplace issues. This brief also provides an overview of strategies for overcoming these barriers.

#### Common RTW Barriers: Key Research Highlights

- Injury characteristics.** The nature and severity of injury can impact RTW outcomes.<sup>1</sup> Joint and muscle injuries and musculoskeletal diseases are common injuries associated with prolonged absence from the workforce.<sup>2</sup> The location of an injury (i.e., hands) can also influence the duration of workforce absences, particularly if the body part injured directly impacts the person's ability to do the job.
- Individual perception of injury and other psychological characteristics.** Individual perceptions of injury can inhibit RTW, even if the injury itself is not considered serious.<sup>3</sup> Injured or ill individuals who rate themselves as having poor health and high levels of pain are less likely to RTW.<sup>4</sup> Mental health is another psychological factor that can impede RTW. For example, mental health factors such as depression were found to be negatively associated with RTW after occupational injury.<sup>5</sup>
- Health care and rehabilitation issues.** Health care and rehabilitation interventions can improve RTW outcomes,<sup>6,7</sup> and a lack of access to beneficial medical and rehabilitation services may contribute to long-term absence from the workforce. A lack of physician awareness in RTW strategies could also be a barrier.<sup>8</sup>
- Workplace issues.** Workplace issues can inhibit RTW.<sup>9</sup> For instance, injured or ill workers who do not have supportive supervisors are much less likely to RTW in a timely fashion.<sup>9,10</sup> A lack of co-worker support has also been associated with prolonged work absences.<sup>11,12</sup> Similarly, workplace accommodations such as ergonomic adaptations<sup>13</sup> and the availability of modified work tasks<sup>14</sup> facilitate RTW – however, workers may face barriers if accommodations are not available.

## Operational Planning and Implementation Guidance Checklist

| 1. Planning for Scale-Up | Yes | No | In Progress or NA |
|--------------------------|-----|----|-------------------|
|--------------------------|-----|----|-------------------|

### Project Action Planning

Planning for the expansion of your RETAIN program involves clearly defining all components of your model (e.g., training, coordination, health care services, workforce services) to understand how these components will be implemented, by whom, and to understand the context under which the program will be implemented. The planning process should also determine what tools or resources and partnerships will be needed to support this work so that project teams can plan accordingly.

- Do you have an action plan that
  - Includes long- and short-term objectives with related benchmarks for all key elements of the project;
  - Specifies the pace of scale-up (gradual or rapid); and
  - Specifies how to build shared understanding, ownership, and buy-in for RETAIN among core project partners?
- Have you engaged Phase 1 stakeholders (providers, employers, participants, etc.) to address challenges in Phase 1 and develop plans for Phase 2?
- Do you have a plan for integrating lessons learned during Phase 1 into your plans for Phase 2?
- Have you identified which program elements must be implemented to maintain the fidelity of your model (i.e., non-negotiable) and which elements can be modified or adapted for various contexts (e.g., geographic locations, health care partners)?
- Have you conducted an environmental scan to determine if other regions would be appropriate for RETAIN?
- Have you assessed the local context (e.g., economic, cultural, linguistic, political, programmatic) of the new regions and organizational settings to which you are expanding in Phase 2 to determine whether programmatic adaptations might be needed or whether the scale-up strategy needs to be adjusted?
- Have you assessed existing and new regions and organizational settings for
  - Impending changes that could affect implementation, either positively or negatively, and
  - Potential constraints?
- Have you identified existing training mechanisms at new sites that can be leveraged for RETAIN training?
- Have you identified existing resources and infrastructure that could support implementation?

## Recruiting and Retaining RETAIN Participants

### Potential Challenges and Suggested Strategies

#### Overview

A critical aspect of RETAIN projects is the recruitment, enrollment, and retention of program participants. Effective recruitment and enrollment require planning, time, patience, and flexibility. However, this process is often more difficult than anticipated and generally takes longer than planned. Challenges in recruiting and enrolling participants can have implications for the project timeline, budget, and resources.

Recruitment and enrollment are the first steps for getting injured or ill workers involved in your RETAIN project. Retention is equally important. When participants drop out of the project, this leaves a shortfall in the target enrollment numbers and increases the recruitment burden.

There are several places along the pipeline where your project might lose participants (Figure 1). Understanding where these “leaks” occur and how to remedy the problem should be an integral part of your Continuous Quality Improvement (CQI) process. This issue brief discusses common challenges and pitfalls (sources of these leaks) that RETAIN grantees should be aware of and presents strategies for how to address these issues.

#### Box 1. Participant Recruitment and Enrollment and Retention Involves:

##### Recruitment

- Defining your target population and determining inclusion and exclusion criteria
- Identifying referral sources (e.g., health care providers and employers), disseminating information about the project, and ongoing stakeholder outreach
- Screening and identifying eligible participants

##### Enrollment

- Describing the project and obtaining informed consent
- Enrolling participants (i.e., assignment to the intervention or control group)

##### Retention

- Ensuring that participants attend scheduled visits
- Ensuring that participants' data are gathered throughout the project
- Putting steps in place to prevent dropout

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**RETAIN** Retaining Employment and Talent After Injury/Illness Network



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|  |                          |                          |                          |
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# Building on RETAIN program material

- ❑ What would motivate an injured or ill worker to participate in your project?
- ❑ What concerns might this population have about participating in your project?
- ❑ What are the barriers to participation (e.g., physical, psychosocial)?

Figure 1. Recruitment Pipeline



## Recruitment and Enrollment

### Common Challenges

**Estimating participant pool:** Optimistic recruitment, enrollment, and retention projections are common in research studies. Data used to estimate the pool of eligible participants may be inaccurate and can lead to poor planning and miscalculations about the level of effort required to attain a sufficient sample. Further, project teams often fail to consider the burden and motivation for participants and other project stakeholders to engage in their program. These factors generally result in a smaller pool of eligible participants than was originally anticipated.

**Developing a recruitment and enrollment plan:** Predicting what strategies will be most effective in recruiting workers is challenging, but the lack of a clear recruitment and enrollment plan makes it more difficult to: 1) ensure consistent implementation of your project protocol, 2) anticipate potential challenges, 3) optimize your use of time and resources, and 4) make midcourse corrections when things don't go as intended.

**Understanding the target population:** Injured or ill workers will choose to participate or not participate in your project for a variety of reasons. Therefore, it is important to understand what some of these reasons are, and to plan for them if possible. Having a solid understanding of your population will allow you to anticipate participant needs and integrate them into your recruitment plan. This information will also help to inform your marketing approach.

### Box 2. Participant Profile: Questions to Consider

- What would motivate an injured or ill worker to participate in your project?
- What concerns might this population have about participating in your project?
- What are the barriers to participation (e.g., physical, psychosocial)?
- Where does this population get their information?
- What community organizations serve the population? How might you connect or partner with them to assist your recruitment or enrollment efforts and support their work?
- What cultural, linguistic, or contextual factors need to be considered in your recruitment, enrollment, and retention efforts?

# Goal: Increase participation in RETAIN programs

- 2022 focus: “how to” communicate

## Exploring the Role of Behavioral Science in Outreach and Recruitment

RETAIN | Re...

Writing for busy people

[Todd\\_Rogers@hks.harvard.edu](mailto:Todd_Rogers@hks.harvard.edu)

1. Direct attention with formatting, judiciously
2. Write for skimmers (navigable, clear purpose)
3. More is less
4. Write accessibly
5. Make response easy

# Goal: Increase participation in RETAIN programs

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- 2022 focus: “**how to**” communicate
- 2023 focus: “**what to**” communicate



# Key questions

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- How can we apply motivation models to understand workers' decisions to join the RETAIN programs?
- How can we tailor messaging about the RETAIN programs to workers' decision-making styles?
- What are some ways that injury and illness impact workers' decision-making?

# Workers' concerns following illness or injury

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Can I stay at work?  
Can I go back to work?  
Should I go back to work?

How much work is  
waiting for me?  
How can I catch up?

Will I be able to do my job?  
Can I change my schedule?  
What will I need to do my job?  
Should I stay at work if I'm not  
supported?

Will working make my injury worse?  
Will I reinjure myself?  
How will I make it through the  
workday feeling like this?

Can I drive?  
How will I get to work?

Will my medical providers  
understand my work duties?  
Will my supervisor trust my  
medical providers?

How am I going to attend all of  
my medical appointments?

Do I want to continue working?  
Am I ready to start a new job?

What will my coworkers say?  
Will my boss be understanding?



# Workers' concerns about the RETAIN program

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How long will signing up take?  
Do I have the time to attend  
regular check-ins?

Does my supervisor know about this  
program?

Should I release my medical  
information?  
Can I trust this program?

Will my supervisor listen to a  
return-to-work coordinator?

How much does this  
program cost?

Why would I participate in a research study?  
What is a “control group?”

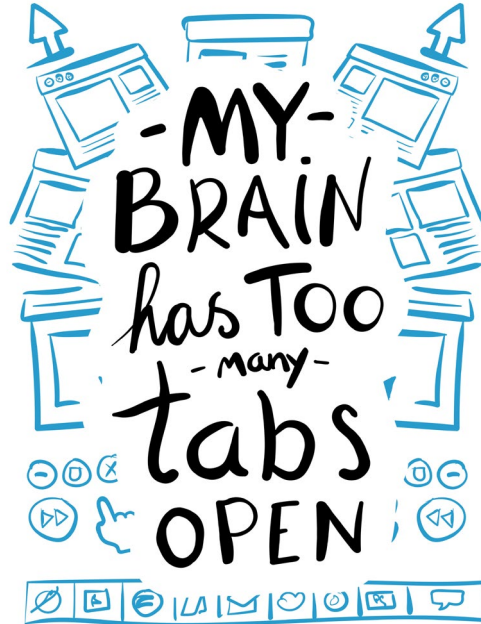
Will the program  
coordinators understand  
my job?

How will this program  
benefit me?

Am I well enough to enroll in this  
program?

Wow! That's a lot. . .

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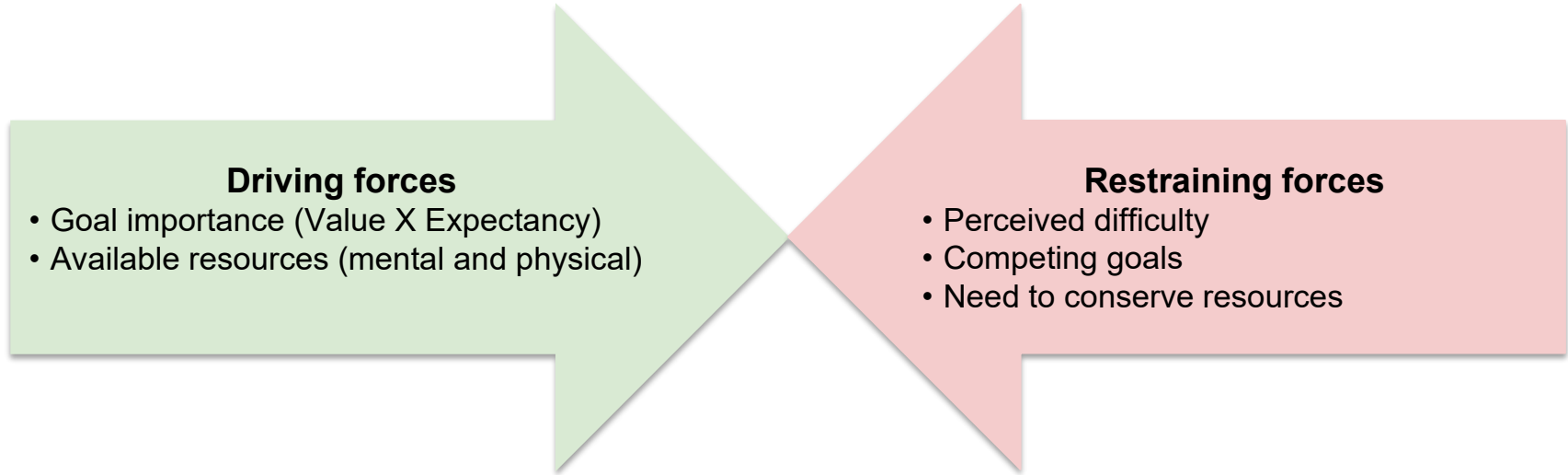
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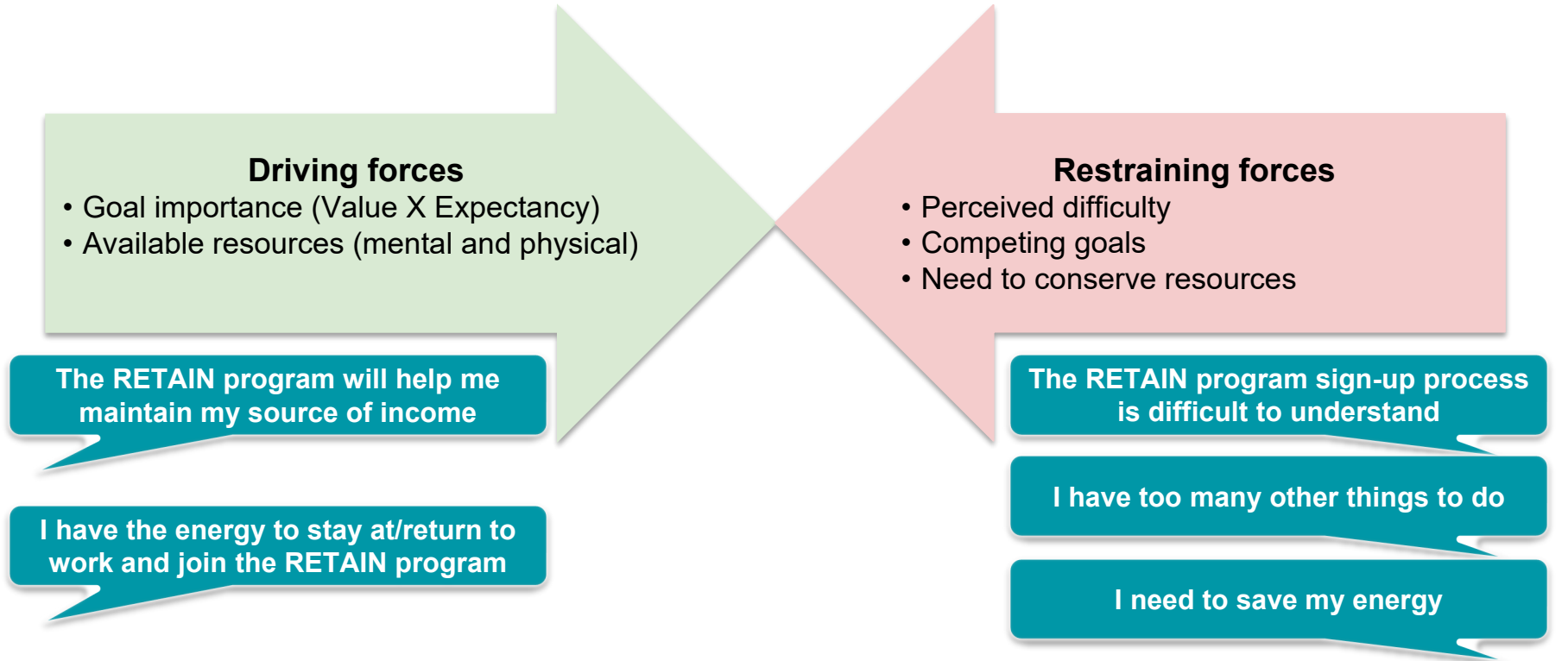
# A model of behavior

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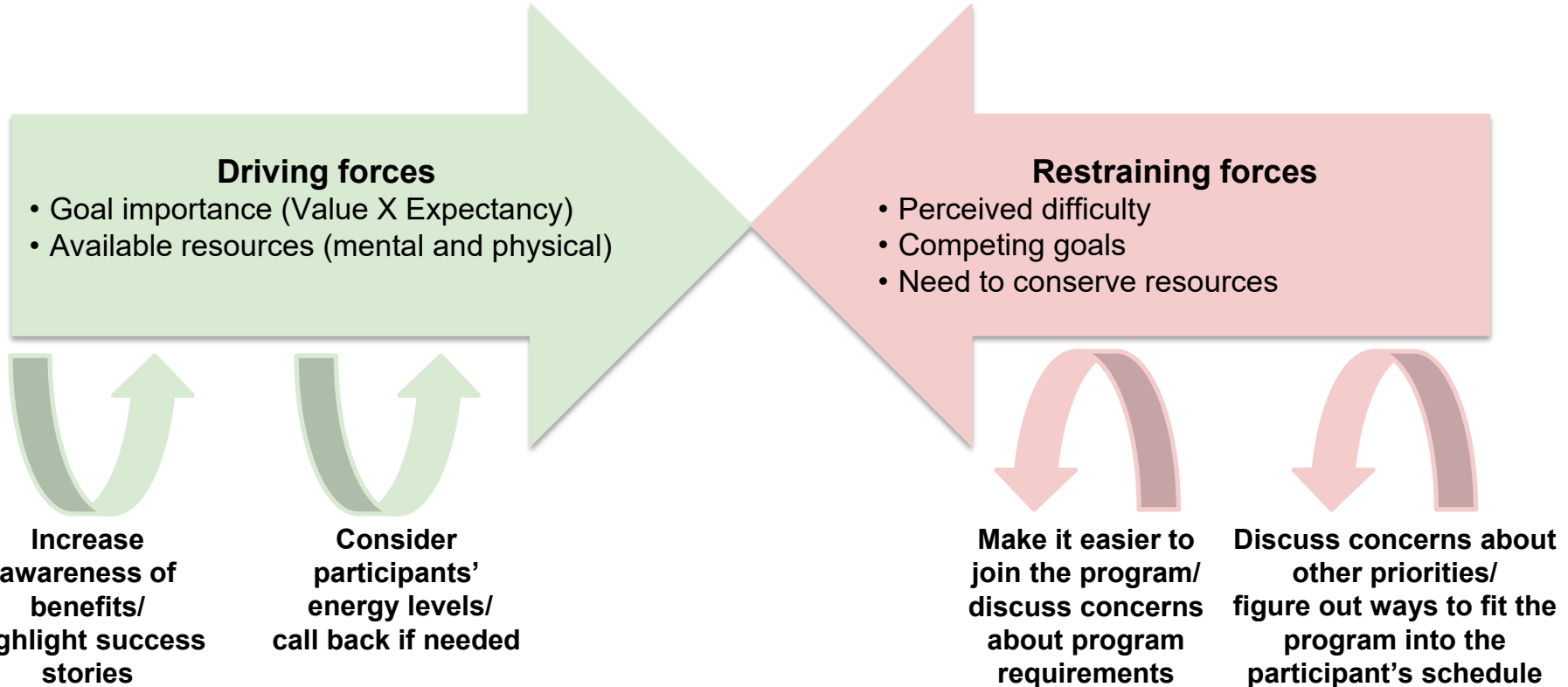


Kruglanski, A. W., Bélanger, J. J., Chen, X., Köpetz, C., Pierro, A., & Mannetti, L. (2012). The energetics of motivated cognition: A force-field analysis. *Psychological Review*, 119(1), 1.

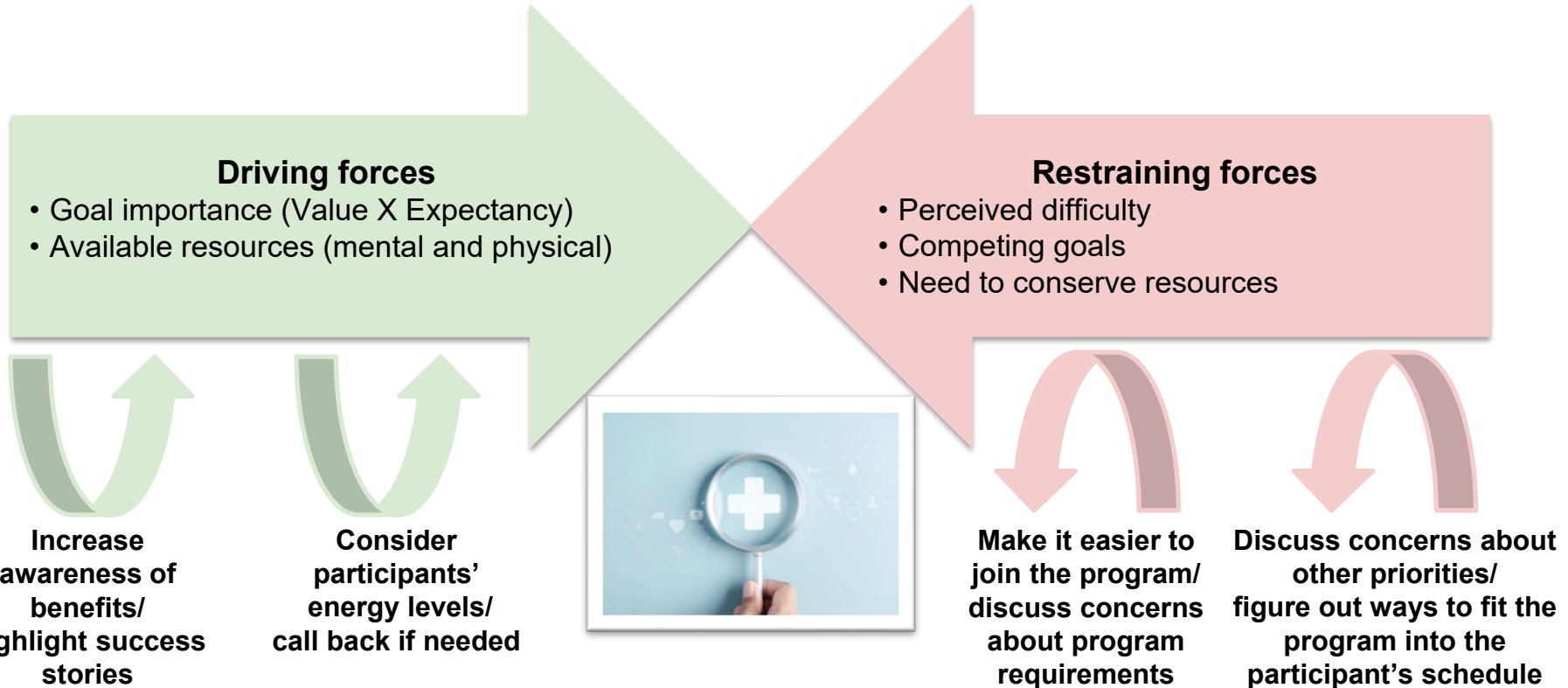
# Applying the basics to RETAIN program participation



# Applying the basics to RETAIN program participation



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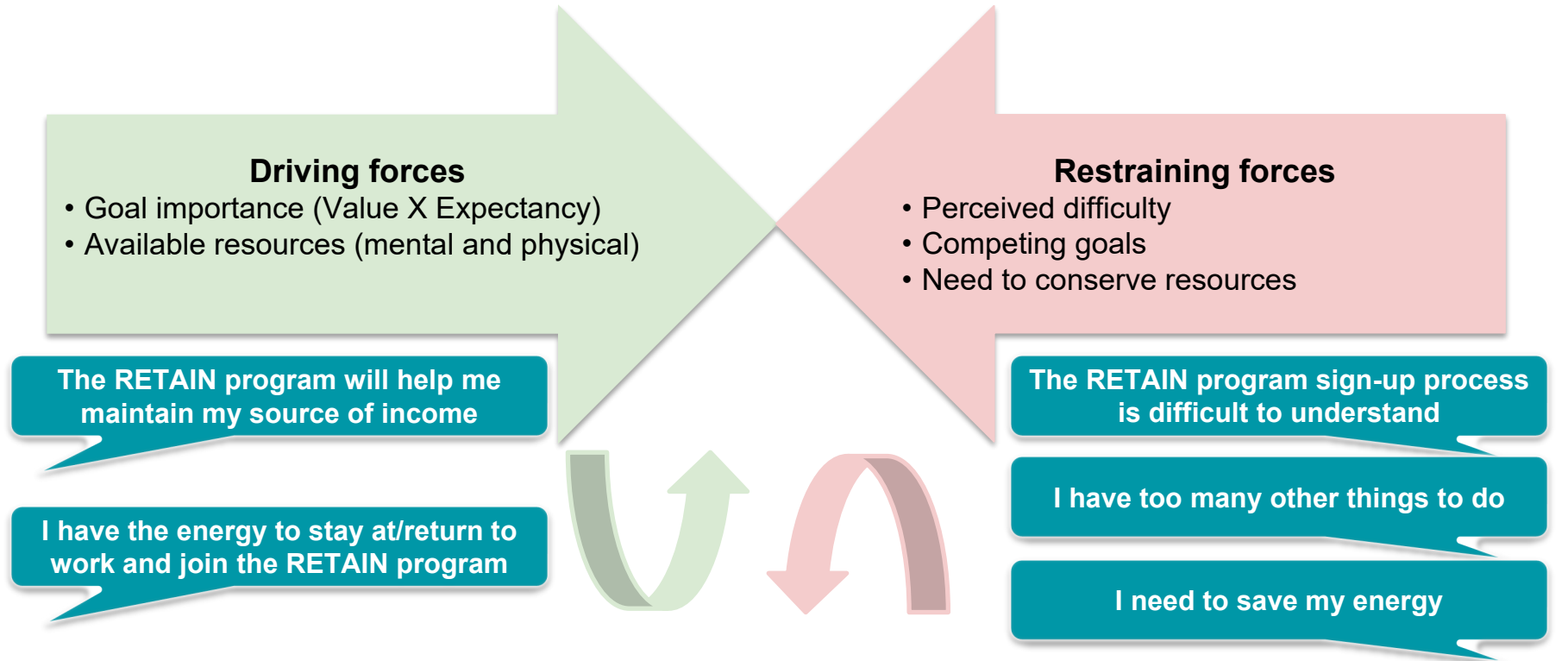
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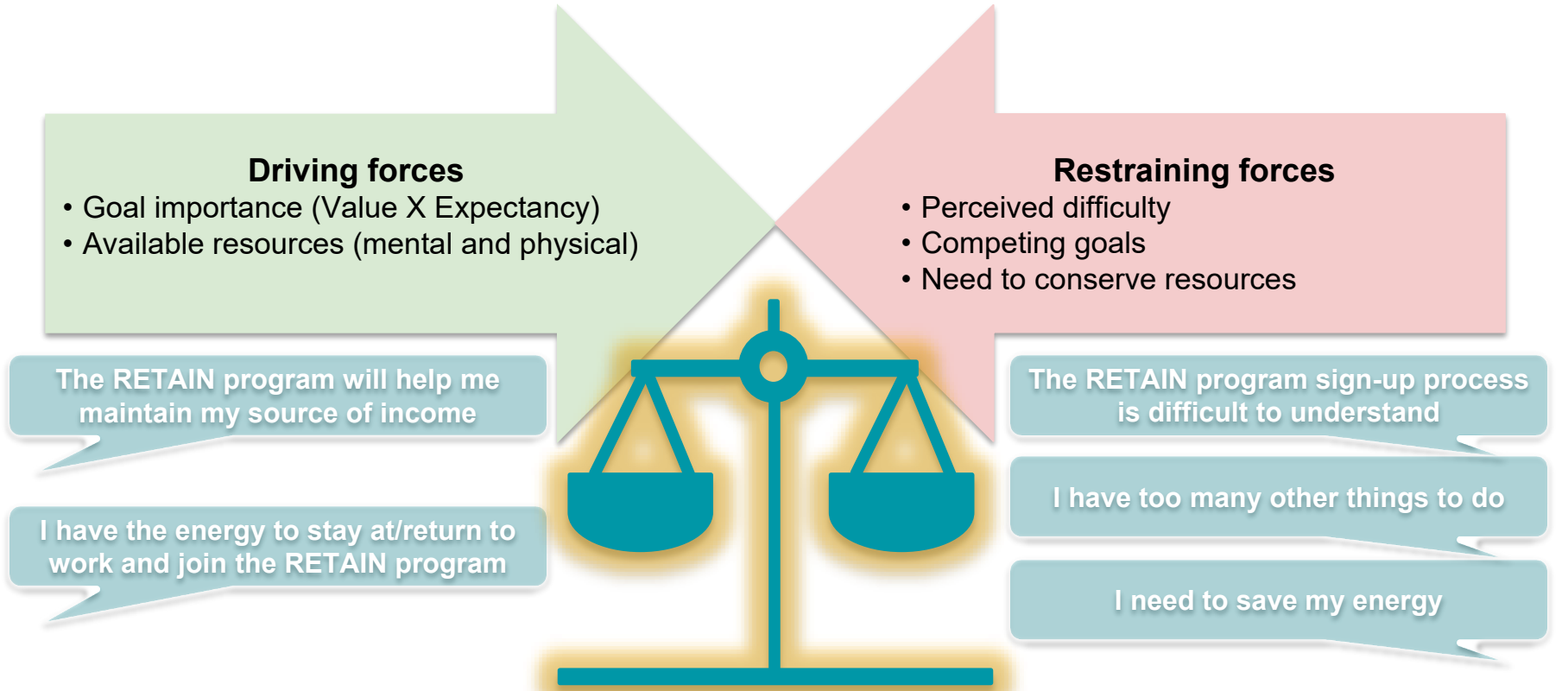
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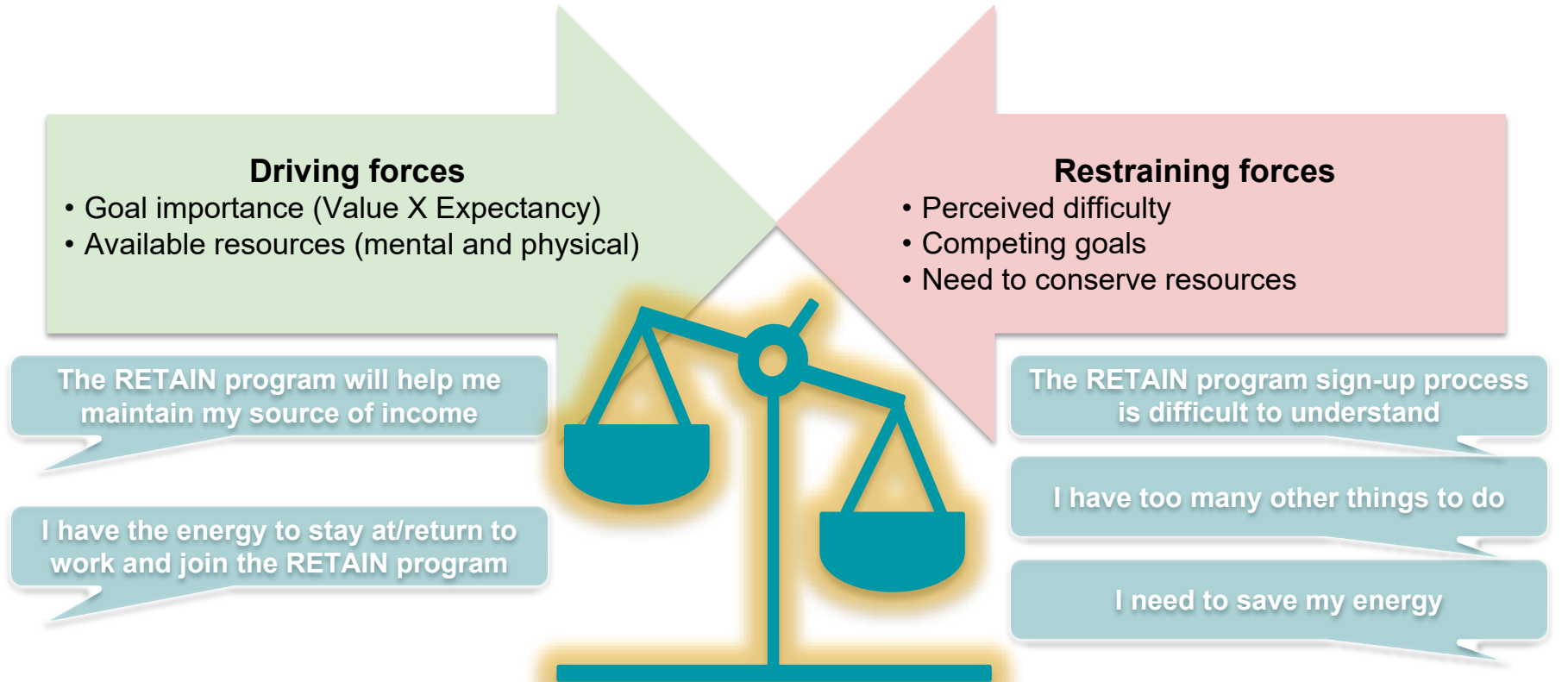
# Tailoring messages about the RETAIN program



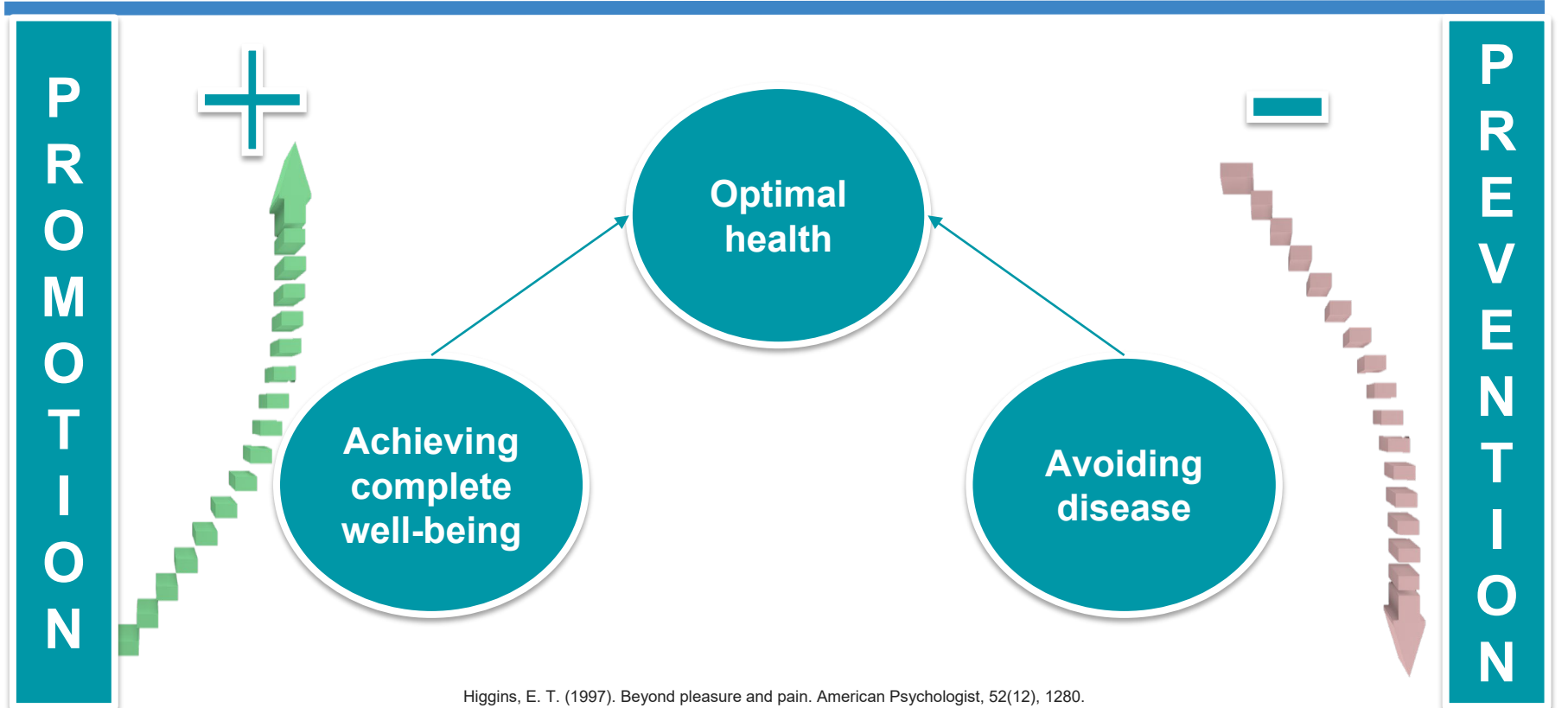
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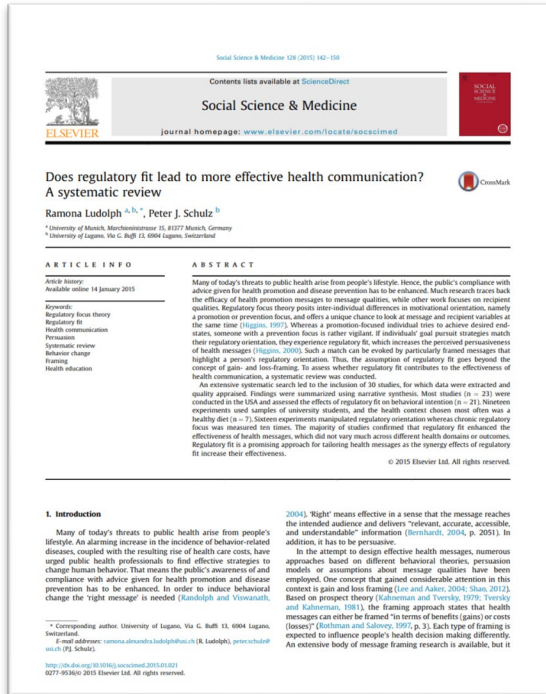


# Types of motivation: Promotion/Prevention mindsets



Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52(12), 1280.

# Types of motivation: Promotion/Prevention mindsets



*Aligning health messages with promotion or prevention mindsets enhanced the effectiveness of the health messages across a variety of health behaviors*

Ludolph, R., & Schulz, P. J. (2015). Does regulatory fit lead to more effective health communication? A systematic review. *Social Science & Medicine*, 128, 142-150.

# Types of motivation: Promotion/Prevention mindsets

## Eating fruits and vegetables



**“increased energy, better moods, and a general sense of happiness and fulfillment”**

*Promotion oriented individuals had greater intentions to eat fruits and vegetables when presented with the promotion message*



**“produce substances from within [to protect the body] from the physical demands of the world we live in (pollution, daily stress, bad weather, etc.)”**

*Prevention oriented individuals had greater intentions to eat fruits and vegetables when presented with the prevention message*

Cesario, J., Grant, H., & Higgins, E. T. (2004). Regulatory fit and persuasion: Transfer from “feeling right.”. *Journal of Personality and Social Psychology*, 86(3), 388

# Types of motivation: Promotion/Prevention mindsets

## Using sunscreen



**“You can do it! It’s as easy as 1-2-3. You can put a bottle of sunscreen by your toothpaste so that you use it every morning”**



**“Research shows that sunscreen works against aging, sunburn and skin cancer even if you spend short amounts of recreational time in the sun”**

*Promotion oriented individuals had greater intentions to use sunscreen when presented with the promotion message*

*Prevention oriented individuals had greater intentions to use sunscreen when presented with the prevention message*

Keller, P. A. (2006). Regulatory focus and efficacy of health messages. *Journal of Consumer Research*, 33(1), 109-114

# Types of motivation: Positivity/Negativity mindsets

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# Types of motivation: Positivity/Negativity mindsets

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- Study 1: Intentions to engage in physical activity
- Study 2: Increased physical activity during two-week messaging intervention

# Types of motivation: Positivity/Negativity mindsets

## Physical activity

“Exercise **means**  
**a lot** to you”

“You have **high** energy”

“Exercise **does not**  
**mean a lot** to you”

“You have **low** energy”

“The exercise routine is  
**easy** to complete”

“You **do not have** other  
conflicting goals”

“The exercise routine is  
**difficult** to complete”

“You **have** other  
conflicting goals”

*Participants with higher negativity mindsets were more sensitive to differences in high versus low restraining forces (perceived difficulty and competing goals)*

# Types of motivation: Positivity/Negativity mindsets

## Physical activity

**“Improve your health”**

**“Maximize your peak energy”**

**“It’s easy to do”**

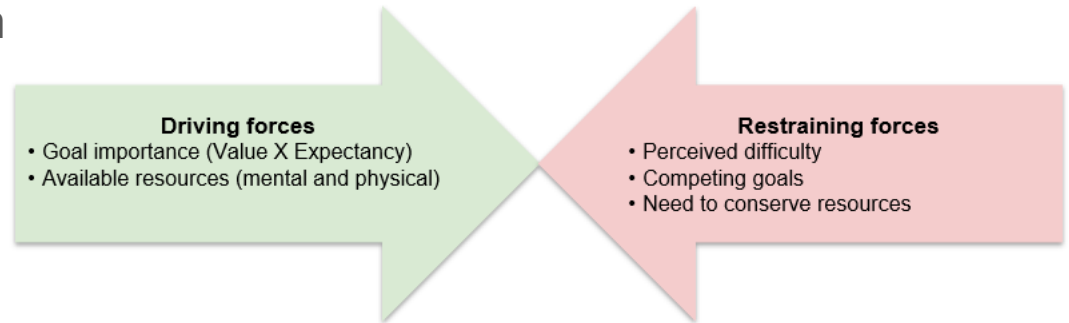
**“You can do it while completing other tasks”**

*Participants with higher positivity mindsets who were exposed to messages framed in driving forces had greater increases in physical activity during messaging intervention*

# Tailoring RETAIN program information

- **Implications**

- Consider driving and restraining forces when structuring RETAIN programs, outreach, and recruitment
- Consider assessing promotion/prevention mindsets (using simple survey items or discussions) to help guide conversations and program material
- Think carefully about the reasons participants report being hesitant to join the RETAIN program



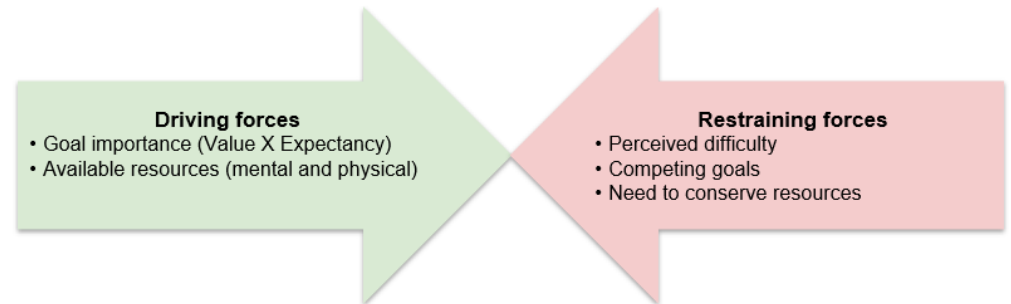
# Key questions

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# How injury and illness may affect types of motivation

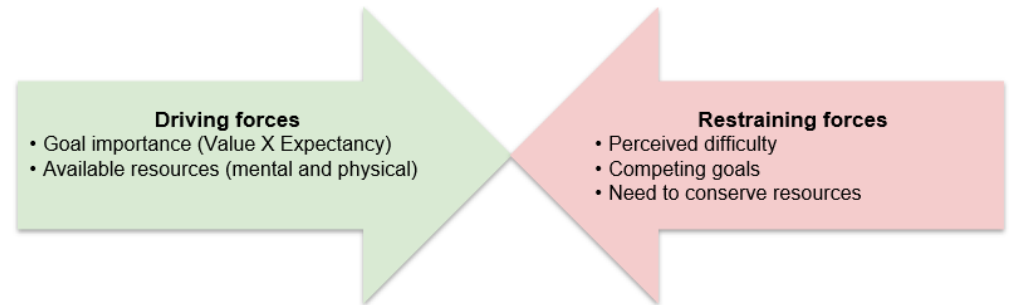
- Pain has been associated with the way people think about time
  - Pain → preference for immediate, smaller over future, larger rewards<sup>1</sup>
- Implications
  - Messages may need to focus value on more immediate benefits rather than longer term benefits



<sup>1</sup>Koppel, L., Andersson, D., Morrison, I., Posadzy, K., Västfjäll, D., & Tinghög, G. (2017). The effect of acute pain on risky and intertemporal choice. *Experimental Economics*, 20, 878-893.e

# How injury and illness may affect decision-making

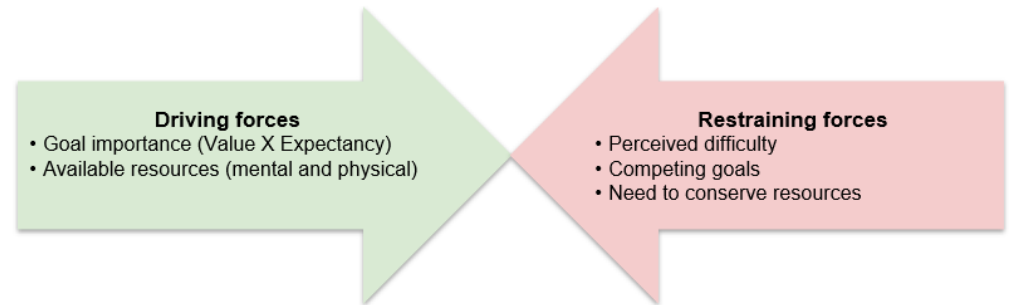
- Pain and illness often disrupt sleep and reduce mental and physical energy<sup>1</sup>
- Implications
  - May need to be especially attuned to cues that participants are fatigued
  - Try to time calls or meetings when participants report having the most energy in their days



<sup>1</sup>Finan, P. H., Goodin, B. R., & Smith, M. T. (2013). The association of sleep and pain: an update and a path forward. *The Journal of Pain*, 14(12), 1539–1552

# How injury and illness may affect decision-making

- Pain → interpreting neutral information as negative information<sup>1</sup>
- Depression → greater attention to negative information<sup>2</sup>
- Implications
  - Target populations of potential participants may already be in higher negativity mindsets and strategies to address restraining forces may be particularly important



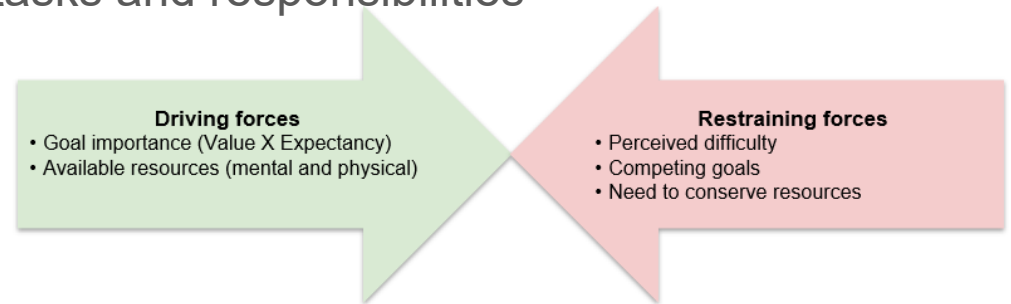
<sup>1</sup>Khatibi, A., Sharpe, L., Jafari, H., Gholami, S., & Dehghani, M. (2015). Interpretation biases in chronic pain patients: an incidental learning task. *European Journal of Pain* (London, England), 19(8), 1139–1147.

<sup>2</sup>Mennen, A. C., Norman, K. A., & Turk-Browne, N. B. (2019). Attentional bias in depression: understanding mechanisms to improve training and treatment. *Current Opinion in Psychology*, 29, 266–273.



# How injury and illness may affect decision-making

- Depression and pain → greater likelihood of remembering negative events<sup>1,2</sup>
- Implications
  - Use priming techniques: “Recall a time you felt good at work”
  - But remember, some participants may not have had good working conditions prior to their illness or injury – use the opportunity to reevaluate the workplace, tasks and responsibilities



<sup>1</sup>Dillon, D. G., & Pizzagalli, D. A. (2018). Mechanisms of Memory Disruption in Depression. Trends in Neurosciences, 41(3), 137–149.

<sup>2</sup>Quenstedt, S. R., Sucher, J. N., Pfeffer, K. A., Hart, R., & Brown, A. D. (2021). Autobiographical memory and future thinking specificity and content in chronic pain. Frontiers in Psychology, 11, 624187.

# Final takeaways

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- Injured or ill workers consider many factors when deciding to stay at or return to work and when deciding whether to join the RETAIN program
- Tailoring information to participants' motivation styles may help increase participation in the RETAIN programs
- Consider how being injured or ill can affect decision-making and mindsets

# Thank you!

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- **Contact information:**  
[jrfern14@terpmail.umd.edu](mailto:jrfern14@terpmail.umd.edu)



# Questions?

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