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## The Satisfaction and Recovery Index

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### Citation of this paper:

This tool has been used in several publications, but the first one was <https://pubmed.ncbi.nlm.nih.gov/25320652/>

## The Satisfaction and Recovery Index

### User's Manual

Revision History: This version updates the prior manual dated 2014 using new knowledge

#### About the Satisfaction and Recovery Index (SRI) tool:

Measuring Patient reported outcomes are an essential part of patient centered care. However, many tools currently used assume that each item on a scale is equally important to all patients at all times, which does not appear to be the case. Intended as a more patient-centred measure, the Satisfaction and Recovery Index (SRI) was developed. This tool measures importance-weighted Health Related Satisfaction. It is intended as a metric for both the *process* and the *state* of recovery from deviations in health status (e.g., injury, illness, surgery). The use of importance weightings also permits users to identify the phenomenon of response shift, where priorities or importance of life domains shift over the course of a living with an adverse health state. Unlike many disability or function scales, it is oriented towards a positive or strengths-based perspective by focusing on patient's sense of recovery and satisfaction as opposed to pain or disability.

#### Development:

Items were generated through a triangulation approach, starting with a review of how prior research studies defined the idea of 'recovery', reported in [2009<sup>1</sup>](#). That work revealed that there was no consensus in how the state of 'recovery' is defined in much rehabilitation research. That led to the creation of a new theoretical framework that centred 'resumption of a satisfactory life trajectory' as the key indicator of what we will call 'recovery', published in [2010<sup>2</sup>](#). From there we went to the experts: people with pain (neck pain in this case). We asked them 'How will you know when you are recovered? That is, how will the recovered version of you differ from the current version of you?'. Focus group participants provided a rich description of what it will mean for them to be recovered, and those went far beyond just experiencing less intense pain. These included things like physical capacity that feels normal for their age and sex, mental sharpness, connections with other people, and a sense of optimism for the future. These results were published in [2013<sup>3</sup>](#). Using the results of the systematic review, our own theoretical framework, and what people in pain told us, we generated a prototype list of indicators of recovery that could become part of a scale for research use. Any symptom-focused indicator was first separated from the other indicators of satisfaction, and those symptoms become the [Multidimensional Symptom Index<sup>4</sup>](#) that is described in another manual. The remaining items were restructured and pulled together on a scale originally called the Satisfaction and Interference Recovery Index, or SIRI, while it was under development. Around that same time Apple released its own thing called SIRI, so we changed the named to just the Satisfaction and Recovery Index, or SRI.

One thing that we consistently heard (and continue to hear) is that people in pain found several questions on standardized surveys or clinical questionnaires not really relevant to them. For example, if they had no problems walking or didn't own a car, questions related to walking or driving and how those contributed to the

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<sup>1</sup> Walton DM. *Disability and Rehabilitation* 2009;31(12)

<sup>2</sup> Walton DM, MacDermid JC, Nielson W. *Disability and Rehabilitation* 2010;31(10)

<sup>3</sup> Walton DM, MacDermid JC, Taylor T, ICON. *The Open Orthopaedics Journal* 2013;7

<sup>4</sup> Walton DM, Marsh J. *European Journal of Pain* 2018;22(7)

way they were labelled 'disabled' or not, were problematic. So with the SRI we ask respondents (usually patients) to provide **two** scores for each item:

- First is a 0-10 ranking of how *important* that domain of life is for their own sense of satisfaction (0 = not important at all, 10 = extremely important)
- Second is a 0-10 rating of how *satisfied* they currently are in that domain of their life (0 = not at all satisfied, 10 = completely satisfied).

In this way, the scale score is more reflective of their personal sense of satisfaction based on only those life domains that are important to them. So if intimate connections with other people or spontaneity are less important, those domains get weighted lower in the total score than other more important domains. The importance ratings also provide an additional benefit for clinical interactions, allowing healthcare providers to focus on only those areas that are deemed of high importance, not wasting valuable time or resources on unimportant issues.

Finally, this importance-weighting has the effect of influencing change scores, such that change in important domains reflect a greater overall scale score change than does change in less important domains.

### **Research:**

The SRI has now been used in at least 7 published articles by our group alone, that [can be accessed here](#). We are aware of other ongoing work in which the SRI is used as a primary or secondary outcome in recovery-focused treatment. In one of the [most recent studies](#)<sup>5</sup> we evaluated only the importance ratings and how relative importance of the different domains changed over a year following an acute painful injury. In this analysis we found that early in the acute post-injury phase people tended to rank things like meeting their basic needs and being physically capable the most important, but that as time went on and the initial severe symptoms subsided, the domains related more to self-actualization, like autonomy, interpersonal connections, and optimism became more important. We believe findings like these should have an influence on treatment pathways for those who work with recently injured people.

### **Using the SRI:**

Ask patients to fill out the form periodically over the course of their recovery. This can be done in under five minutes. While we believe it is important that patients fill out both satisfaction and importance columns each time they are tested (as priorities can shift over the course of recovery), we found that for routine re-evaluation the effect of the importance weightings are small and unlikely to affect intervention decisions. Accordingly, the importance weightings can be skipped in the interest of time efficiency for routine re-evaluations, though we encourage their use at 1-2 month intervals at least.

Dummy items (Enter a "4" in this column) were included to serve as a dependency check. If patients fail to fill in the correct number other methods may be required to assess their state of recovery. Dummy items should not be included in the calculations.

### **To obtain the SRI Score:**

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<sup>5</sup> Modarresi S, Walton DM. *Musculoskeletal Science and Practice* 2021:102300

1. Calculate weighted scores for each individual item (excluding the dummy items) using the following formula:

$$\text{Weighted Score per item} = (\text{Satisfaction} \times \text{Importance}) / 10$$

This will ensure that the patient's satisfaction with each domain is weighted according to how important it is in their lives.

2. Calculate the overall SRI score using the following formula

$$[(\text{Sum of Weighted Scores as calculated above}) / (\text{Sum of Importance Scores only})] \times 100$$

This will ensure that items of greater importance are weighted heavier in the overall score. In addition, changes in areas of importance will lead to a greater change in the overall score than changes in areas of lesser importance.

### **Interpreting the Results:**

A change of 14% can be considered clinically important. While the SRI may be more valuable as an evaluative tool for capturing the *process* rather than *state* of recovery, and responses to individual items are likely to be more useful than overall score, clinicians can be confident that in *most* cases a total SRI score <70% indicates a non-recovered state (positive likelihood ratio = 4.76) while a score >86% is likely to indicate a recovered state (PLR = 2.28).<sup>6</sup>

### **Languages available:**

The SRI is available in English, French-Canadian, Persian, and Japanese versions.

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<sup>6</sup> Modarresi S, Walton DM. *Musculoskeletal Science and Practice* 2021:102300

**English**

**Satisfaction and Recovery Index**

Below are 10 areas of life that other people in pain have identified as influencing recovery and satisfaction. For each row, please indicate 1: how *important* that area is to you personally, and 2: how *satisfied* you currently feel in that area considering any interference from your injury or symptoms. Note that it is possible to feel satisfied in an area that is not important to you, or to feel dissatisfied in an area that is important to you. Use the following scale:

**Importance:**

0 1 2 3 4 5 6 7 8 9 10  
 Not important to me at all Moderately important to me Extremely important to me

**Satisfaction:**

0 1 2 3 4 5 6 7 8 9 10  
 Not satisfied at all (complete interference) Completely satisfied (no interference)

	Importance (0-10)	Satisfaction (0-10)
1. Meeting your most basic needs (e.g., eating well, good sleep, good personal hygiene, etc...)		
2. Being mentally sharp (i.e., your ability to concentrate, remember or think quickly)		
3. Being physically fit (eg., strong, energetic or flexible) compared to other people of your age and sex		
4. Fulfilling your 'life roles' (e.g., being a spouse, friend, parent, coworker and/or volunteer)		
5. Intimate relationships, whether they be physical relationships or close personal relationships above the level of normal friendship		
6. For validation purposes, place a '4' in the Importance column, and a '6' in the Satisfaction column in this row		
7. Being independent (e.g., making your own decisions and being in control of your own life)		
8. Being spontaneous (doing things without having to plan)		
9. Feeling positive emotions (e.g. happiness, joy, self-esteem)		
10. Feeling like you've got the potential to achieve new or greater things in the future		

**Scoring:**

Individual item weighting = (importance x satisfaction) / 10

Percent Health-Related Satisfaction = (Sum of weighted scores / Sum of importance scores) x 100

Score range: 0% (completely unsatisfied) to 100% (completely satisfied)

## French-Canadian

Voici 10 domaines de la vie identifiés par d'autres personnes en douleur comme influençant la récupération et la satisfaction. Pour chaque ligne, s'il vous plaît indiquez 1: *l'importance* que vous accordez personnellement à cet aspect, et 2: à quel point vous êtes *satisfait* vis-à-vis cet élément, compte tenu de votre blessure ou de vos symptômes. Notez qu'il est possible de se sentir satisfait dans une zone qui n'est pas importante pour vous, ou de se sentir insatisfait dans une zone qui est importante pour vous. Utilisez l'échelle suivante:

### Importance:

0	1	2	3	4	5	6	7	8	9	10
Pas important du tout pour moi				Modérément important pour moi			Extrêmement important pour moi			

### Satisfaction:

0	1	2	3	4	5	6	7	8	9	10
Pas du tout satisfait (interférence totale)						Entièrement satisfait (aucune interférence)				

	Importance (0-10)	Satisfaction (0-10)
11. Répondre à vos besoins les plus élémentaires (par exemple, bien manger, bien dormir, avoir une bonne hygiène personnelle, etc ...)		
12. Être mentalement fort (par exemple, votre capacité à vous concentrer, mémoriser ou réfléchir rapidement)		
13. Être en bonne forme physique (par exemple, fort, énergique ou souple) par rapport à d'autres personnes de votre âge et du même sexe		
14. L'accomplissement de vos «rôles de vie» (par exemple, en tant que conjoint, ami, parent, collègue, bénévole)		
15. Les relations intimes, qu'elles soient physiques ou des relations personnelles étroites au-dessus du niveau de l'amitié normale		
16. À des fins de validation, inscrivez <b>4</b> dans la colonne <b>Importance</b> et <b>6</b> dans la colonne <b>Satisfaction</b> de cette rangée.		
17. Être indépendant (par exemple, prendre vos propres décisions et être en contrôle de votre propre vie)		
18. Être spontané (faire des choses sans avoir à les planifier)		
19. Ressentir des émotions positives (par exemple, le bonheur, la joie, l'estime de soi)		
20. Le sentiment d'avoir le potentiel de réaliser de nouvelles choses ou de grandes choses dans le future		

## شاخص رضایت و بهبودی

نام و نام خانوادگی: .....  
تاریخ: .....

در پائین ۱۰ حوزه از زندگی را افراد دارای درد به عنوان عوامل تاثیر گذار روی بهبودی و رضایتمندی شناسایی کرده اند.

برای هر ردیف، لطفا مشخص کنید: ۱: این حوزه برای شخص شما چقدر اهمیت دارد و ۲: هم اکنون با در نظر گرفتن هر گونه تاثیر از طرف آسیب یا علائمتان، در این حوزه چقدر احساس رضایت دارید .  
توجه داشته باشید که ممکن است احساس رضایتمندی در یک حوزه را داشته باشید که برای شما مهم نیست، یا احساس ناراضی در حوزه ای داشته باشید که برای شما مهم است. از مقیاس زیر استفاده نمایید:

اهمیت:

بسیار برایم مهم است	۱	۲	۳	۴	۵	۶	۷	۸	۹	۱۰
در حد متوسط برایم مهم است										
اصلا برایم مهم نیست										

رضایتمندی :

کاملا راضی هستم (بدون تاثیر از علائم و آسیب)	۱	۲	۳	۴	۵	۶	۷	۸	۹	۱۰
اصلا راضی نیستم (کاملا متأثر از علائم و آسیب)										

رضایتمندی ۰-۱۰	اهمیت ۰-۱۰
	توانایی در انجام دادن کارهای روزمره زندگی (مانند: خوب غذا خوردن، خوب خوابیدن، بهداشت مناسب فردی و غیره)
	داشتن توانایی عقلی (مانند: توانایی تمرکز، به یاد آوردن، یا سریع فکر کردن)
	داشتن تناسب بدنی (مانند: قوی بودن، با انرژی بودن، با انعطاف بودن) در مقایسه با سایر افراد همسن و همجنس
	ایفای نقشهای زندگی (مانند همسر، دوست، پدر/مادر، همکار و یا داوطلب)
	روابط صمیمانه چه از نظر جسمی و چه روابط نزدیک فرائر از سطح دوستی
	به منظور سنجیدن اعتبار، در این ردیف عدد ۴ را در ستون اهمیت و عدد ۶ را در ستون رضایتمندی قرار دهید
	عدم وابستگی (مانند گرفتن تصمیمهای شخصی و داشتن کنترل روی زندگی شخصی)
	خودجوش بودن (انجام کارها بدون برنامه ریزی قبلی)
	داشتن عواطف مثبت (مانند شادی، لذت، عزت نفس)
	احساس داشتن توانایی برای به دست آوردن چیزهای جدید و بهتر در آینده

نمره دهی:

وزن دهی هر مورد = (اهمیت × رضایتمندی) / ۱۰

درصد رضایتمندی از سلامتی = (مجموع نمرات وزن دهی / مجموع نمرات اهمیت) × ۱۰۰

دامنه نمره: صفر درصد کاملاً ناراضی تا ۱۰۰٪ کاملاً راضی

## Japanese

以下は痛みを抱える他の方々が回復程度や満足度に影響を与えた生活にかかわる10個の分野です。それぞれの行で、1：「どの程度あなた個人にとって重要か?」と、2：「怪我や症状による影響を考えた上でどの程度現在満足しているか」について教えてください。あなたにとっては重要ではない分野でも満足していることもあるでしょうし、あなたにとって重要な分野で不満に感じていることもあり得ます。以下の尺度をお使いください。

### 重要性

0	1	2	3	4	5	6	7	8	9	10
私にとって全く重要ではない					私にとってまあまあ重要である					私にとって極めて重要である

### 満足度

0	1	2	3	4	5	6	7	8	9	10
全く満足していない(完全に阻害されている)									完全に満足している(全く支障ない)	

	重要性 (0-10)	満足度 (0-10)
1. あなたにとって最も基本的なニーズを満たしている(例えば、きちんと食べる、きちんと寝る、きちんと衛生管理をする など)		
2. 意識がはっきりしている(すなわち、集中力、記憶力、あるいは素早く考える力)		
3. 同性の同じ年の人と比べて年相応に身体的に健康である(例えば、力がある、元気がある、柔軟性がある)		
4. 社会生活において、自分の役割を果たすことができる(例えば、妻や夫として、友人として、親として、同僚として、ボランティアとして)		
5. 誰かとの深いつながり・関係性(普通の友人以上の親密な関係、または、肉体関係)		
6. あなたが適当にこのアンケートに答えていないかを確認したいので、右の欄だけ、重要性のところを「4」、満足度のところを「6」と記入してください		
7. 自律している(例えば、自身で意思決定ができ、自身の生活をコントロールできていること)		
8. 痛みや薬や約束などのようなことをあれこれ考えずに、気の向くままに行動できる		
9. 前向きな気持ち(例えば、幸福感、喜び、自尊心)を感じている		
10. 将来、なにか新しいことやより大きなことを成しえる可能性を感じる		