



Occupational Stress Injury Resilience (OSIR) Index

Screening Solution for OSI Risk in First Responders and Healthcare Workers

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SESSION OBJECTIVES

- Understand the need for targeting prevention efforts
- Review OSIR framework and research
- Outline the path forward to applying the OSIR Index
- PSHSA resilience solutions
 - R2 for Leaders
 - R2 for Workers
 - ResilientMe



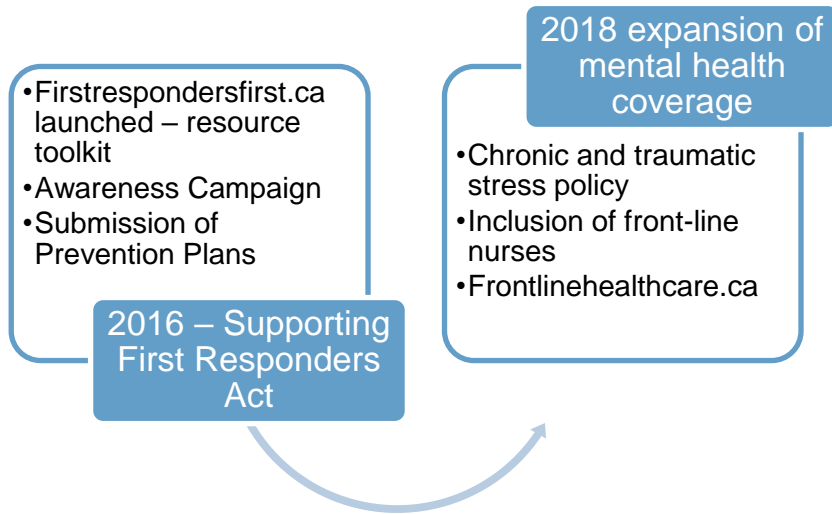
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UNDERSTANDING THE NEED





UNDERSTANDING THE NEED

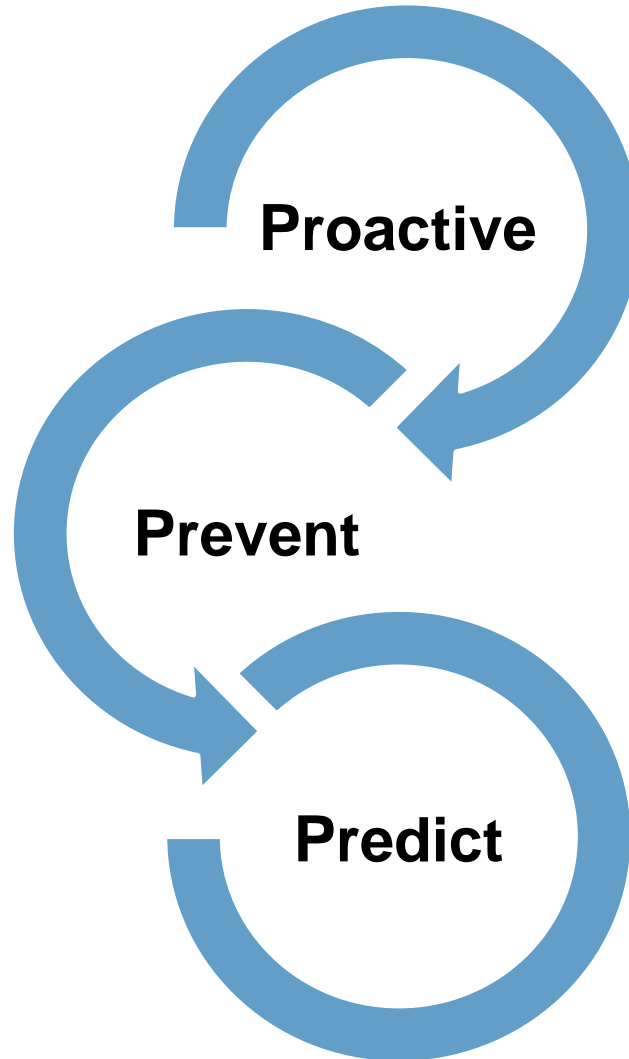


- Significant efforts have been made to understand the prevalence of PTSD and mental health disorders among first responders and healthcare workers in Canada
- A gap remained in understanding preventative actions that employers and workers could undertake, which may reduce the workplace's mental harm risk
- Employers and workers identified that support was needed to know how they might be able to target their prevention efforts



PSHSA APPLYING INTELLIGENT SAFETY

Reduce or eliminate risk by understanding the need and targeting prevention efforts.



Stay ahead of the curve and find new ways to execute our mandate.

Leverage data and improve predictive capabilities.



SURVEY PARTICIPANTS – WSIB PTSD POLICY DEFINITION OF A FIRST RESPONDER

- First Responders means:

- Full-time firefighters.
- Part-time firefighters.
- Volunteer firefighters.
- Fire investigators.
- Police officers.
- Members of an emergency response team.
- Paramedics.
- Emergency medical attendants.
- Ambulance service managers.
- Workers in a correctional institution.
- Workers in a place of secure custody or place of secure temporary detention.
- Workers involved in dispatch.
- Nurses who directly provide patient care.
- Provincial bailiffs.
- Probation officers.
- Workers who directly supervise probation officers.
- Special constables.



OCCUPATIONAL STRESS INJURY

- This is a non-clinical, non-medical term referring to a persistent psychological difficulty caused by traumatic experiences or prolonged high stress or fatigue while performing the first responders job function.
- This stress can accumulate overtime.



ACTION TO ADDRESS RESEARCH QUESTION

- What, if any, relationships are there among employer supports, employee experience and employee behaviours, and risk of vulnerability for occupational stress injuries?
- Purpose of Project:
 - To develop a solution that can predict resiliency or vulnerability for OSI.
 - To provide employees and employers with a way to evaluate programs and policies impact to reduce OSI risk.



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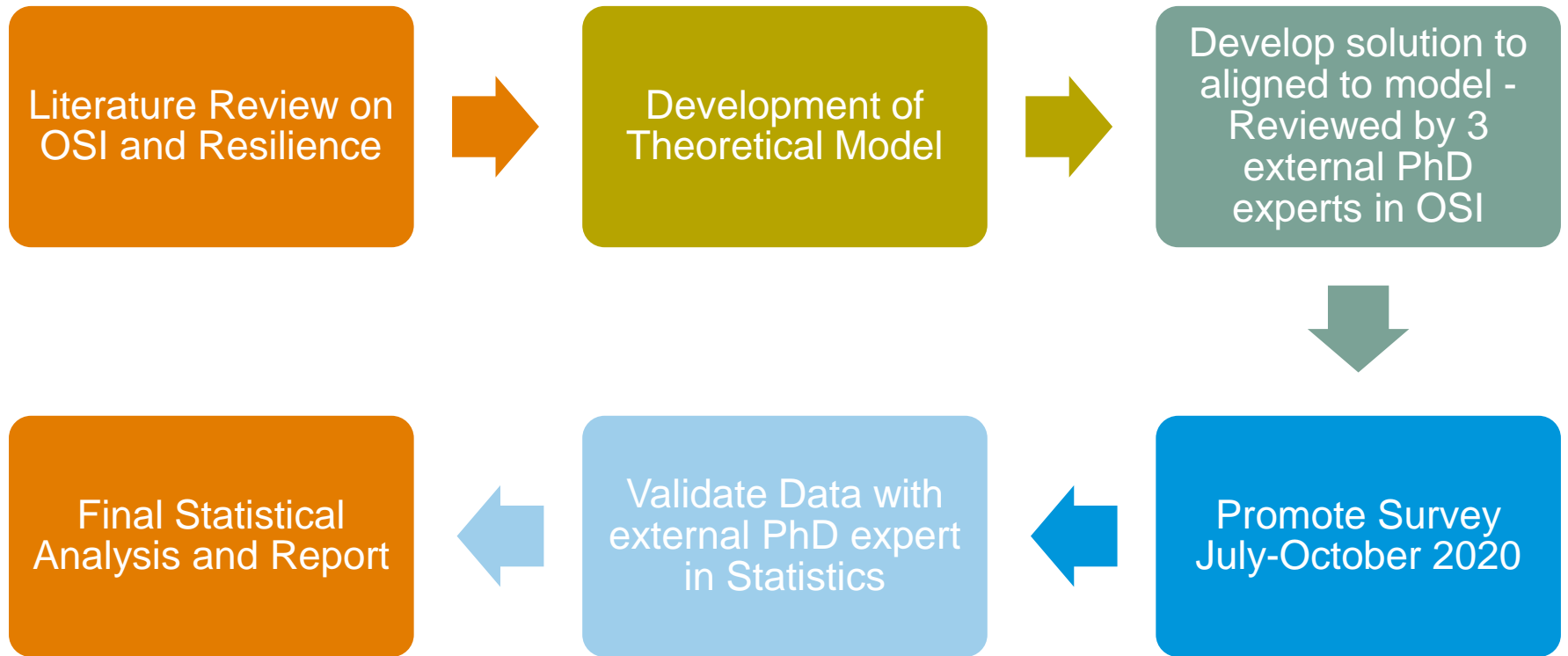
OSIR FRAMEWORK AND RESEARCH

Screening for Risk





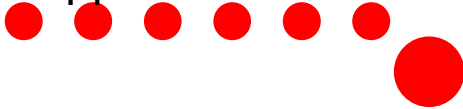
METHODOLOGY





THEORETICAL FRAMEWORK FOR DEVELOPING OSI RESILIENCY INDEX

Employer Supports



Employee Perceptions



Employee Behaviours



+/- Psycho social factors

+/- Psycho social hazards

+/- Resiliency



Predictive resiliency score for occupational stress injury risk

Thriving
Ok
Concern
Challenge



OVERVIEW OF SURVEY

- Launch Date: June 23, 2020
- Close Date: October 5, 2020
- Total N*: 620 responses

- Key Demographic Findings:
 - The largest groups of respondents were police officers (n=222), paramedics (n=133), and firefighters (n=101), nurses (n=41), and workers involved in dispatch (n=37).
 - Majority (84 per cent) were from Ontario, while 9 per cent were from Alberta, and 5 per cent were from British Columbia.
 - Majority (63 per cent) were males.
 - Majority (40 per cent) indicated they dedicated 21+ years of service.



COMPOSITE OSIR INDEX

- The three sub-scales made up an **overall OSI resiliency index**, ranging from 0 to 160, that could outline OSI risk.
- This scale provided a resiliency score that could be **divided into four different vulnerability profiles or buckets**.
 - 108-160 – **Thriving**
 - 94-107 – **Ok**
 - 79-93 – **Concern**
 - 0-78 – **Challenge**
- **Note:** This OSI resiliency index showed that with higher scores, there was greater resiliency (or less vulnerability).



OSIR THREE SUB SCALES

Employer Supports

- 12 Items that assess workplace supports in place
- “I have been provided valuable resilience training”
- Sub scale mean = 24.0

Employee Experience

- 15 items – items assess job fulfillment, social connections, and manager/employee relationships
- “I enjoy the team I work with.”

Employee Behaviours

- 13 items – assess sleep hygiene, physical fitness, and mental fitness
- “I get at least seven hours of quality sleep every day.”



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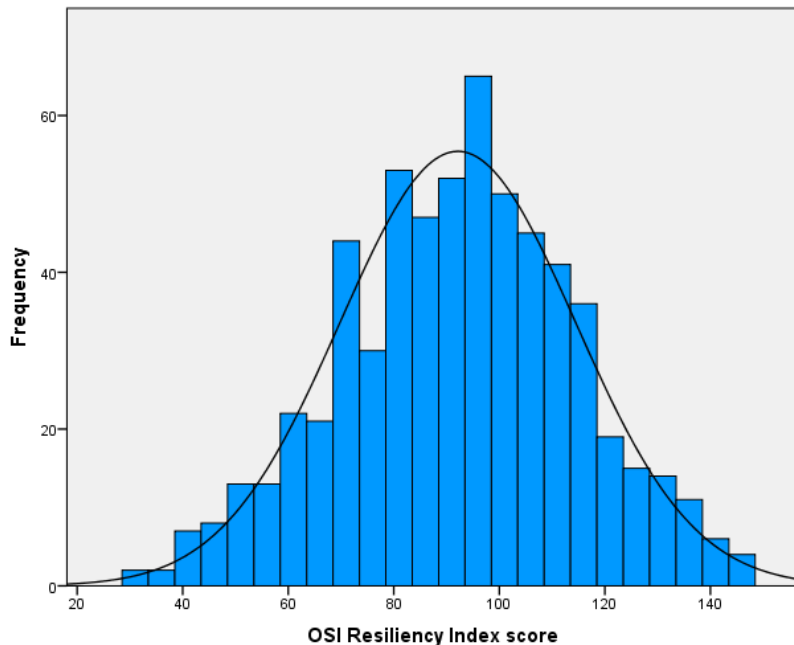
THE RESULTS

Factors for Prevention





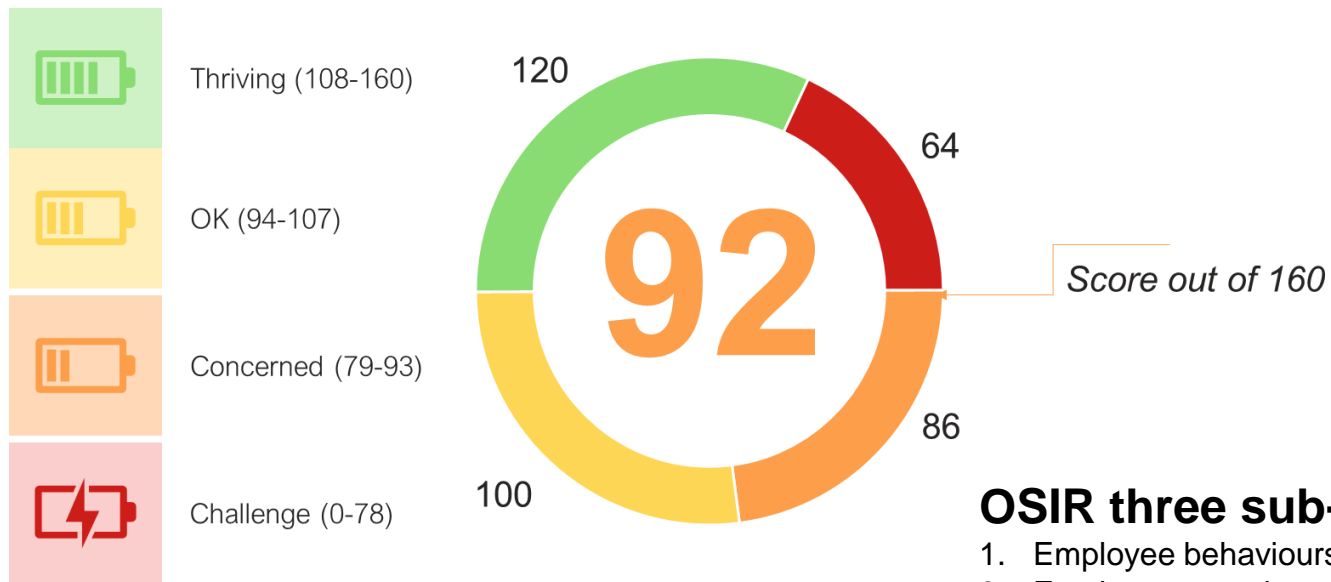
OSIR FREQUENCY DISTRIBUTION HAS AN EXCELLENT BELL CURVE



- An excellent bell curve is vital in ensuring that valid comparisons can be made between individuals or groups with different scores along the OSIR. It shows that the majority of scores fall within one standard deviation of the mean.



OCCUPATIONAL STRESS INJURY RESILIENCY (OSIR) INDEX



OSIR three sub-scales:

1. Employee behaviours
2. Employee experience
3. Employer supports

Values rounded to nearest whole number

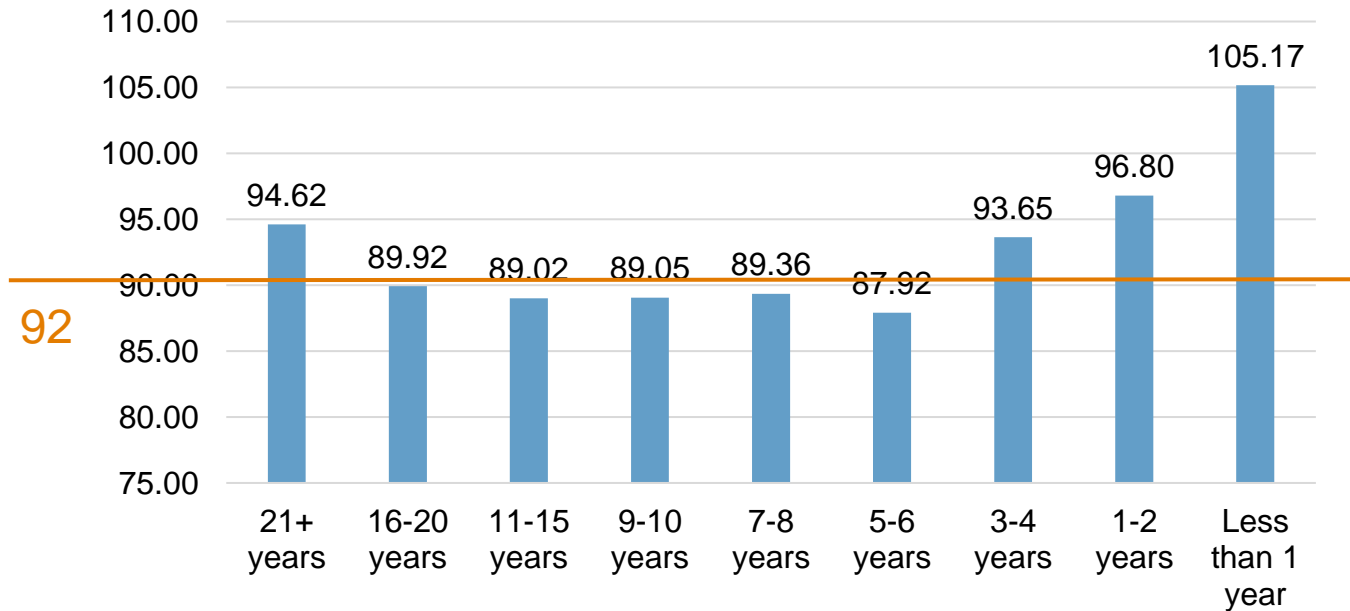


AVERAGE OUTCOME MEASURE SCORES BY VULNERABILITY BUCKETS

	OSIR Score*	Absenteeism (days)*	Feeling unwell at work (days)*	Percentage of motivation*
Thriving	120.4	1.78	1.61	10.18
Ok	100.1	2.01	1.86	9.68
Concern	86.1	2.22	2.46	8.97
Challenge	63.7	2.85	3.23	8.17

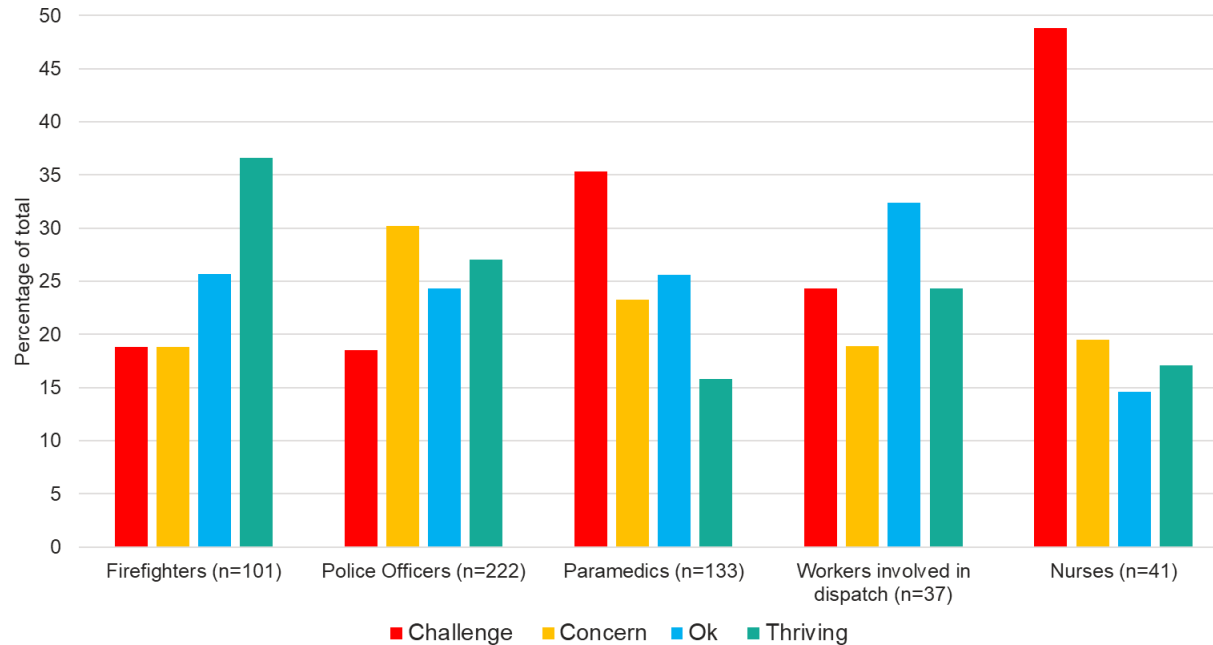


MEAN OSI RESILIENCY INDEX SCORE BY YEARS OF SERVICE





BY VOCATION PERCENTAGE OF FIRST RESPONDERS IN EACH OSIR PROFILE

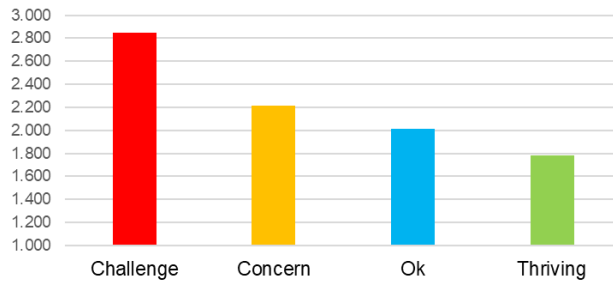




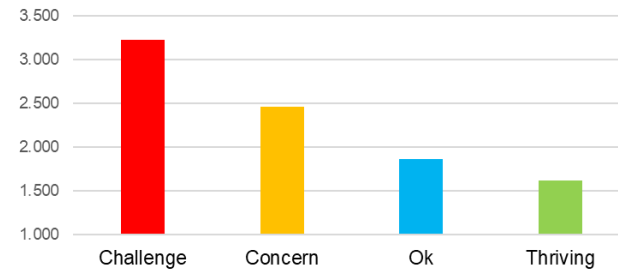
OSIR INDEX MATTERS IN PREDICTING HEALTH OUTCOMES

ANOVAs found differences between the **Thriving group** and the Challenge and Concern groups

Absenteeism – number of days missed work due to illness.



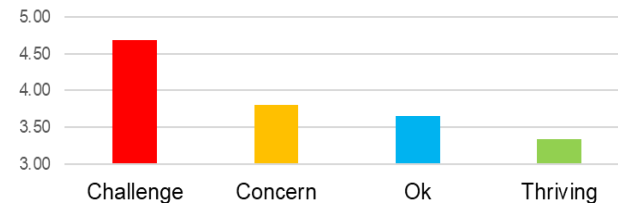
Feeling unwell at work – average number of days per month you come to work feeling unwell.



Motivation – on a typical day, what percentage of your best efforts do you believe you can provide to your workplace?



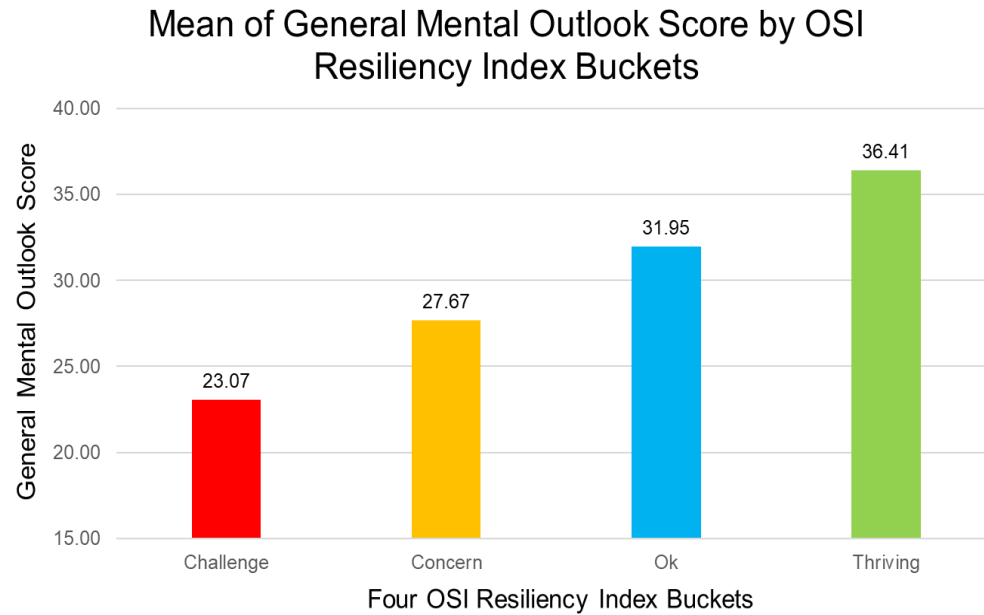
Exposure to stress/trauma – estimate how many events have you deal with that you have found traumatic/very stressful in the past 12 months.





OSIR INDEX WAS FOUND TO PREDICT MENTAL WELL-BEING

Note: higher General Mental Outlook scores = better mental health



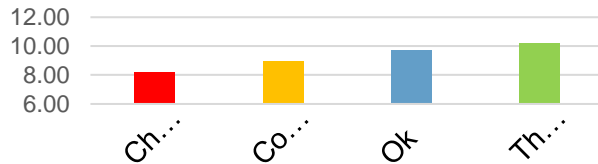
*. ANOVA, $F = 201.7$, $p\text{-value} < 0.000$. Post-hoc, Tukey HSD, $p\text{-value} < 0.000$ differences between all buckets.



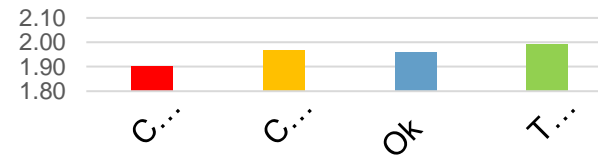
OSIR INDEX MATTERS IN PREDICTING WORKPLACE OUTCOMES

ANOVAs found differences between all groups for motivation. ANOVAs found differences between the **Thriving group** and the Challenge groups for STD and WCC.

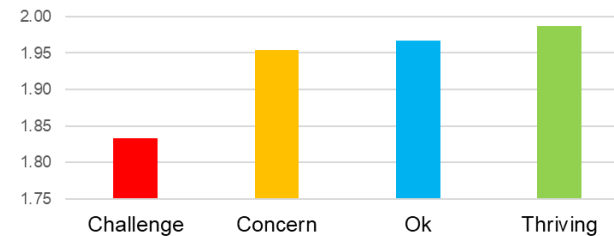
Motivation – on a typical day, what percentage of your best efforts do you believe you can provide to your workplace?



Worker's compensation claim – Over past 12 months, have you made a worker's compensation claim related to an Operational...



Short term disability – Over past 12 months, have you been off work for a mental health-related matter? (2=No/1=Yes)





EMPLOYER SUPPORT FACTORS RANKED IN ORDER OF MOST IMPORTANCE

Employer Supports subscale (Scale 3)		Factor loadings
1.	We have a helpful trauma management support program.	0.828
2.	We have a useful mental health strategy in place.	0.748
3.	I have been provided meaningful mental health education programs.	0.743
4.	We have a beneficial surveillance program that helps me monitor my stress and how I am coping.	0.678
5.	We have an impactful peer support program in place.	0.677
6.	I have easy access to psychological support (e.g., psychologist) if needed.	0.634
7.	I have been provided valuable resiliency training.	0.625
8.	We have valuable critical incident protocols and appropriate debriefing processes in place.	0.610
9.	We use annual health risk assessment (HRA) to assist us to evaluate and monitor our physical and mental health.	0.530
10.	We have a beneficial Employee and Family Assistance Program (EFAP)	0.386
11.	I feel safe and confident if I need help in this culture to ask.	0.169
12.	I have my direct manager regularly check in on me to ensure I am coping and managing the demands of my work.	0.070



EMPLOYEE EXPERIENCE FACTORS RANKED IN ORDER OF MOST IMPORTANCE

Employee Experiences Subscale (Scale 2)		Factor loadings
1.	I am supported by my direct manager/leader.	0.962
2.	I feel comfortable talking to my direct manager about anything.	0.908
3.	I trust my leadership.	0.761
4.	I get regular and meaningful feedback.	0.685
5.	I work in a psychological safe workplace.	0.503
6.	I get the training I need to do my job.	0.483
7.	I trust the team I work with and feel I can speak with another about a mental health issue in a confidential manner.	0.470
8.	I enjoy the team I work with.	0.433
9.	I have no concerns about bullying or harassment in the workplace.	0.417
10.	I have healthy and positive social connections inside work.	0.240
11.	I get the time off work I require to rest (e.g., breaks, vacation, etc.).	0.233
12.	I am motivated and look forward to going to work most days.	0.216
13.	My moral values are not in conflict with my job requirements	0.190
14.	I would describe myself in the workplace as an optimistic person.	0.034
15.	I can leave my job at the end of the day and am able to focus on my personal life.	-0.056



EMPLOYEE BEHAVIOUR FACTORS RANKED IN ORDER OF MOST IMPORTANCE

Employee Behaviours Subscale (Scale 1)		Factor loadings
1.	I am in a positive mood when I come to work most days.	0.743
2.	I am kind to myself in most situations	0.663
3.	I have hobbies and passions I enjoy responsibly outside of work.	0.476
4.	I have routine I follow to maintain my physical fitness.	0.437
5.	I have my finances in order.	0.430
6.	I eat a healthy and nutritional diet every day.	0.398
7.	I fully engage and participate in all programs and supports provided to support mental health.	0.365
8.	I have no concerns with addictive behaviours such as drug use, shopping, gambling, working out too much, and other similar behaviours.	0.358
9.	I have at least one authentic social connection outside of work.	0.356
10.	I will ask for help if I am struggling with stress or trauma (e.g., peer and if need be mental health professionals)	0.314
11.	I get at least seven hours of quality sleep every day.	0.299
12.	I practice resiliency strategies to support my mental health. (e.g., diaphragmatic breathing, SMART goals, mindfulness, journalling, etc.)	0.268
13.	I drink less than eight alcoholic drinks per week.	0.172



SUMMARY OF FINDINGS

- Key takeaway – first responders are at high risk for OSI and this solution can **proactively** identify those who may be struggling to then employ resources to help mitigate risk
- The OSIR Index
 - was found to have strong psychometric properties to be useful in screening for OSI
 - Can assist first responders to self evaluate their vulnerability for an OSI
 - Can be used by employers to assess their employees overall average OSIR index to evaluate how effectively their Prevention Plans are working/mitigating risk for OSI
 - Can assist in creating an evidence-based approach to preventing mental harms and OSI



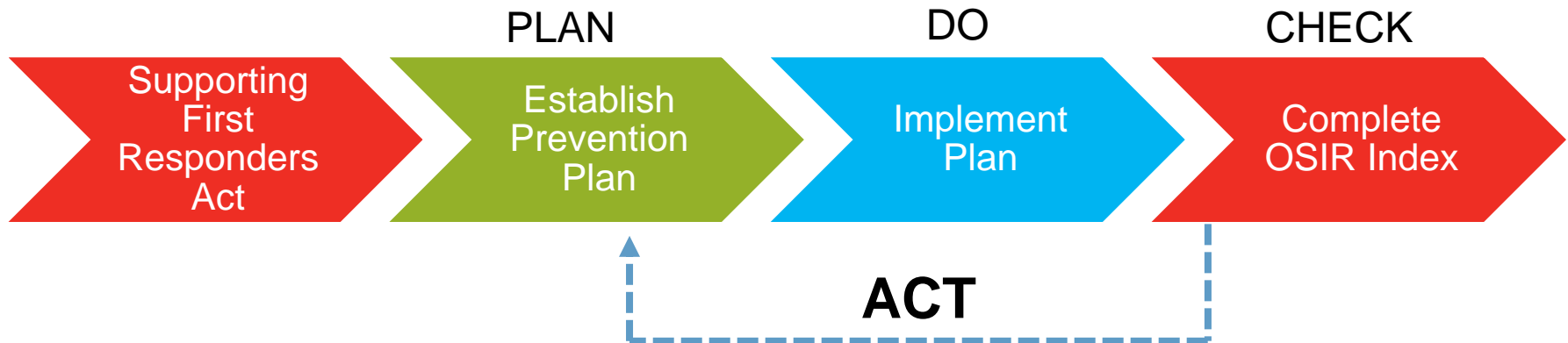
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APPLYING THE OSIR INDEX





USING OSIR INDEX FOR PREVENTION

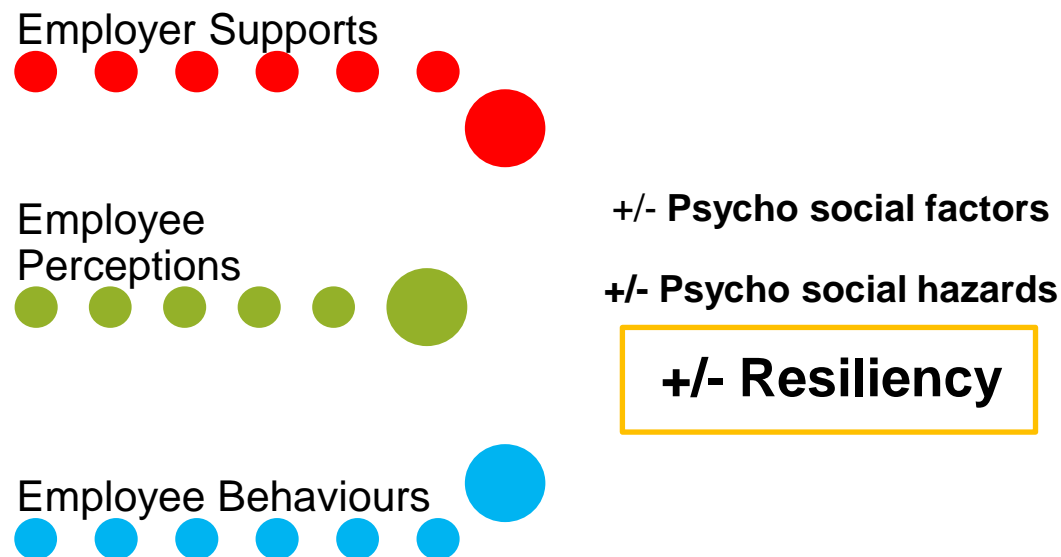


- Use Results to Improve Prevention Plan
- Address Identified Areas of Impact
- Take Action and Implement Solutions



BUILDING RESILIENCE

- Resilience is a key element for modifying employee behaviour, employee perceptions, and is something employers can offer as support.





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PSHSA RESILIENCE SOLUTIONS

Call to Action





R2 FOR LEADERS

- This one-day program helps organizational leaders understand what resilience is and how qualities for resilience can be used to increase organizational capacity and integrated within prevention programs to build a resilient organization.





R2 FOR WORKERS

- Designed as an eLearning module to increase understanding of resilience and develop a personalized plan to improve key qualities of resilience

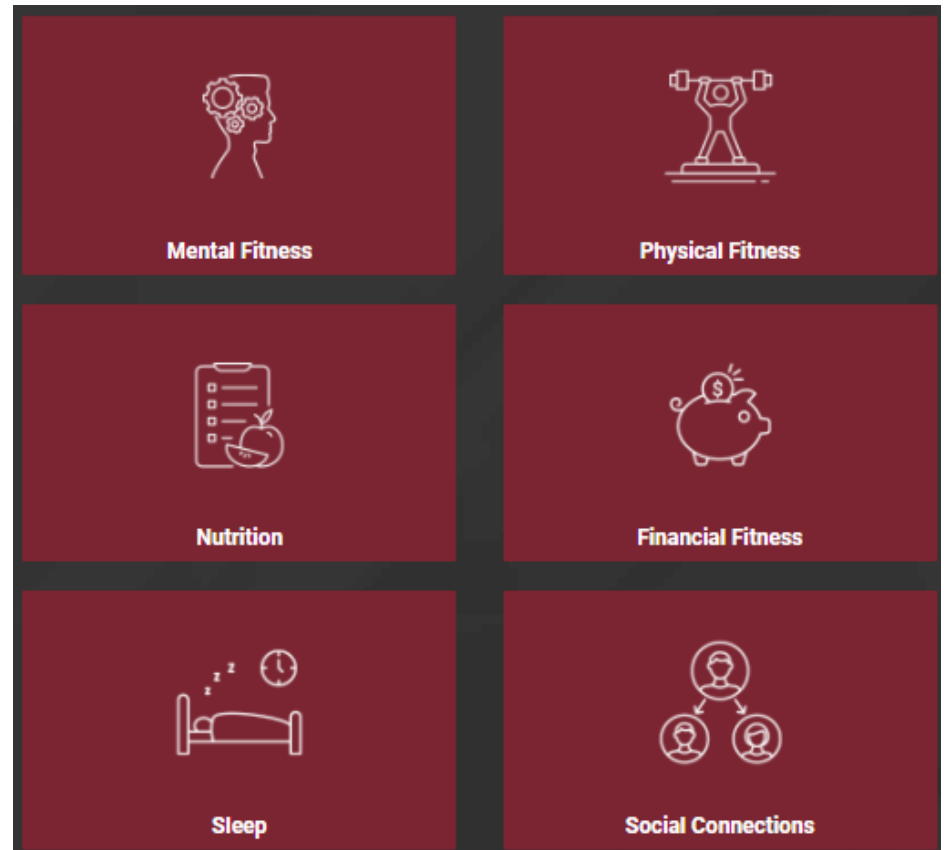




RESILIENT ME

- ResilientME is a free, 30-minute self-guided microlearning program that focuses on 6 areas: mental fitness, physical fitness, nutrition, financial fitness, sleep and social connections. It incorporates highly effective strategies and tools designed to increase your capacity for resilience.

Resilient **ME**





R2 for
Leaders

Available
Now

www.pshsa.ca

R2 for
Workers

Summer
2021 Launch

ResilientME

Available
Now

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OSIR

Pilot with
interested
organizations

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Thank You

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