Australian Military Mental Health, PTSD and Suicide: How Does Risk Change Over Time”.

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Background

- A series of dataset that examine the prevalence and longitudinal course of mental health, PTSD and suicidality in the ADF
- Each attempts to not only identify rates of these mental health issues over time, but also the key risk factors as they emerge across key time points
- Key datasets
  - Longitudinal resilience study examining mental health and wellbeing from recruitment through to the first four years of service (2019)
  - Defence mental health prevalence study (2010)
  - Transition and wellbeing research program – tracking ADF members from the prevalence study through those who had discharged form the ADF in the previous 5 years (2015)
- The focus of this presentation will be what is identifiable at key transition points with the most substantial emphasis on the transition from military to civilian life

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Study #1
The Longitudinal ADF Study Evaluating Resilience (LASER-Resilience): Patterns and Predictors of Wellbeing in the Early Years of the Military Career

Investigator team:

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Professor David Forbes; Dr Lisa Dell, A/Prof Virginia Lewis (LaTrobe University); Dr Monique Crane (Macquarie University); Professor Meaghan O'Donnell; Ms Nicole Sadler; Dr Sean Cowlishaw; Dr Julia Fredrickson;

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Scientific Advisory Committee

Professor Alexander McFarlane, Professor Richard Bryant, COL Stephanie Hodson

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The Sample

Analytic sample of 5,329

At Time 1:

- Mean age 20 years
- Majority male 84.74%
- Army 65.65%
- Navy 19.74%
- Air Force 14.61%
- 23.63% reported prior military experience

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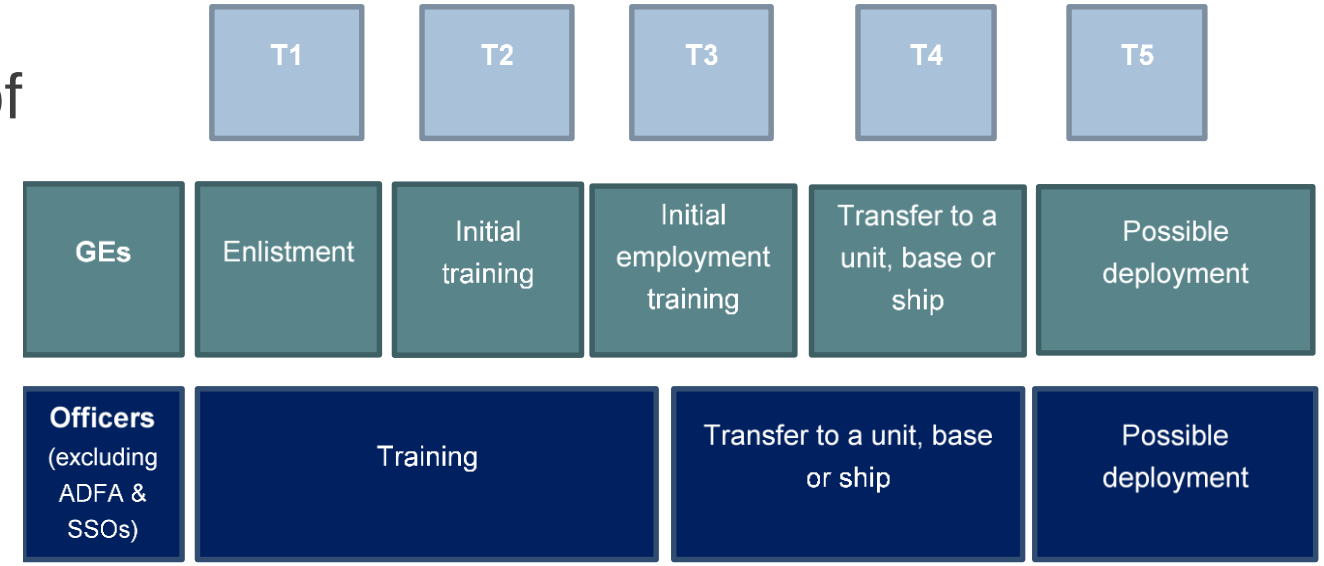
Methodology of the study

- Study employed a longitudinal panel design.
- Commenced at enlistment/appointment and followed participants through the early years of their military career, up to four years post-enlistment/appointment.
- General Enlistees (GEs) and Officer appointees in multiple cohorts were surveyed over five time points.



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What influences change at each time point?

Psychological distress and posttraumatic stress symptoms

- Sleep impairment (β = 0.40 to 0.60)
- High levels of self-reported anger (β = 0.40 to 0.55)
- More frequent use of self-blame coping (β = 0.34 to 0.44)
- Lower sense of morale (β = -0.18 to -0.37)
- Less social support from all sources (β = -0.06 to 0.30)
- More frequent use of risk-taking (β = 0.15 to 0.26)
- Being male (β = -0.08 to -0.11)

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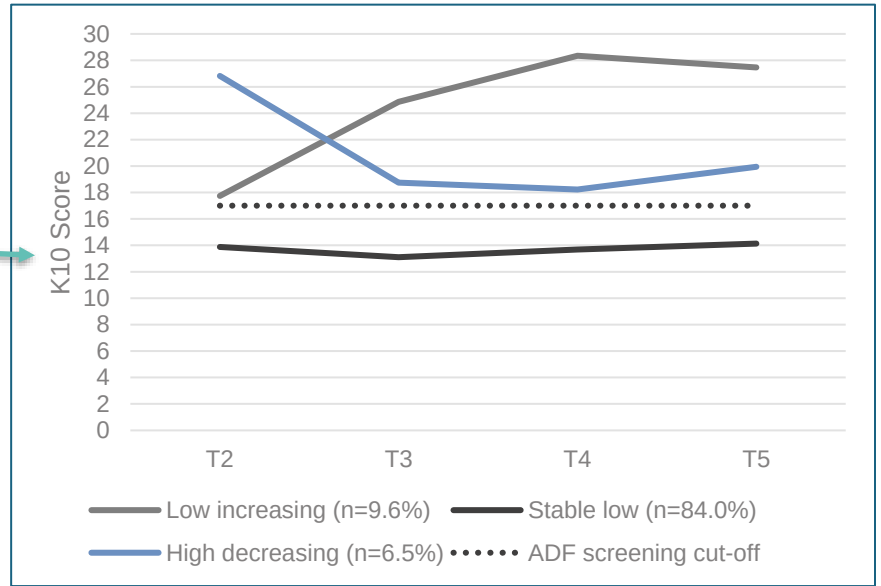
Factors associated with psychological distress over time

Stable-low group (84%)	vs	High-decreasing group (6%)
Being male		High trauma exposure
High levels of social support from all sources		Negative social interactions
Use of acceptance coping style		Use of self-blame, avoidance and risk-taking coping styles
		High anger
		Sleep impairment
		Navy membership



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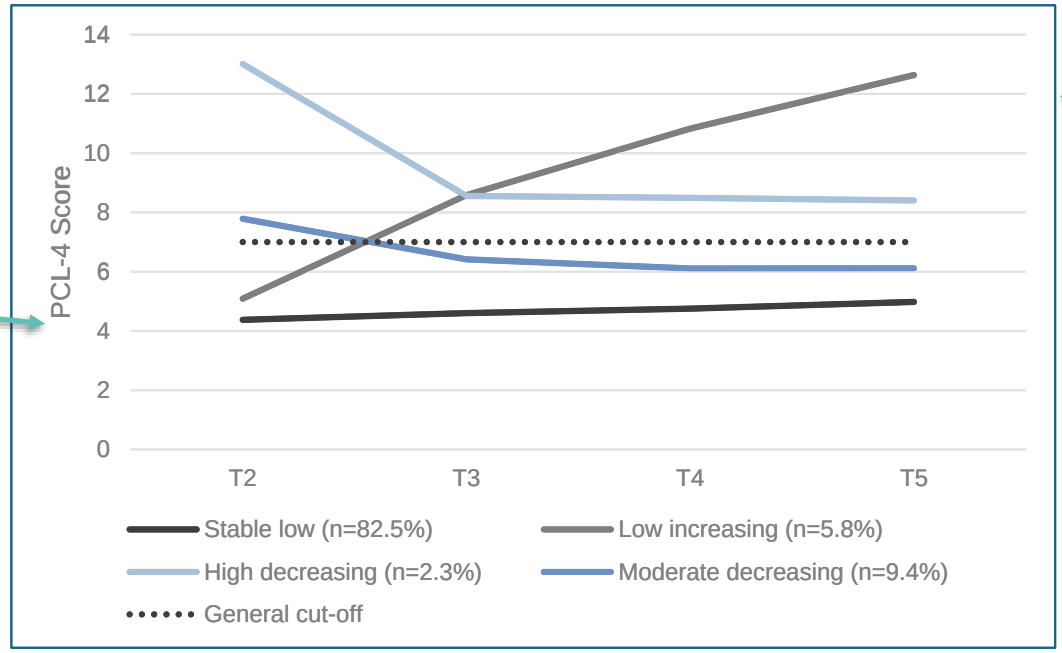
Factors associated with posttraumatic stress over time

Stable-low group (82%)	vs	Low-increasing group (6%)
Being male		High trauma exposure
Being an Officer		Navy membership
High levels of social support from family/friends and peers		Use of self-blame coping style
Use of acceptance and reappraisal coping styles		High anger
		Sleep impairment



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Studies #2 & 3. Transition wellbeing study - A large research and investigator Team

Investigator Team

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Australian Government
Department of Defence
Department of Veterans' Affairs

Data Sets

2015

The Transition and Wellbeing Research Programme: Mental Health and Wellbeing Transition Study

- Representative sample of all current serving Regular ADF members in 2015 (N=52,500)
- Representative Sample of all ADF members who transitioned from the Regular ADF between 2010-2014 (N=24,932)

2010

The 2010 ADF Mental Health Prevalence and Wellbeing Study (MHPWS)

- Representative All current serving Regular ADF members in 2010 (N=50,049)

Longitudinal Sample: N=8497
Transitioned ADF: **N=2334**
2015 Regular ADF: **N=6163**

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What is a Transitioned ADF member?

All regular service leavers,
including Ex-Serving ADF members and Active and Inactive/Standby Reservists who transitioned from Regular ADF service in the five-year period from January 2010 to December 2014.

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Key Take Home Messages

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Rates of Affective and Anxiety Disorders are higher in current serving ADF members compared to the Australian community

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12 Month Mental Disorder in the ADF v Australian Community

	ADF %	ABS %
(1) Any Anxiety Disorder	**14.8**	**12.6**
Panic Attack	7.1	6.5
Panic Disorder	**1.4**	**2.5 ***
Agoraphobia	2.5	1.9
Social Phobia	3.8	4.5
GAD	1.1	1.8
OCD	3.2	1.4
PTSD	**8.3 ***	**5.2**
(2) Any Affective Disorder	**9.5 ***	**5.9**
Depressive Episodes	**6.4 ***	**3.1**
Dysthymia	1.1	0.8
Bipolar Affective	2.8	2.5
(3) Any Alcohol Disorder	**5.2 ***	**8.3**
Alcohol Harmful Use	2.8	5.3
Alcohol dependence	2.3	3.0
Any Disorder	22.0	20.7

There is a picture of increasing severity of both mental and physical symptoms from service to civilian life

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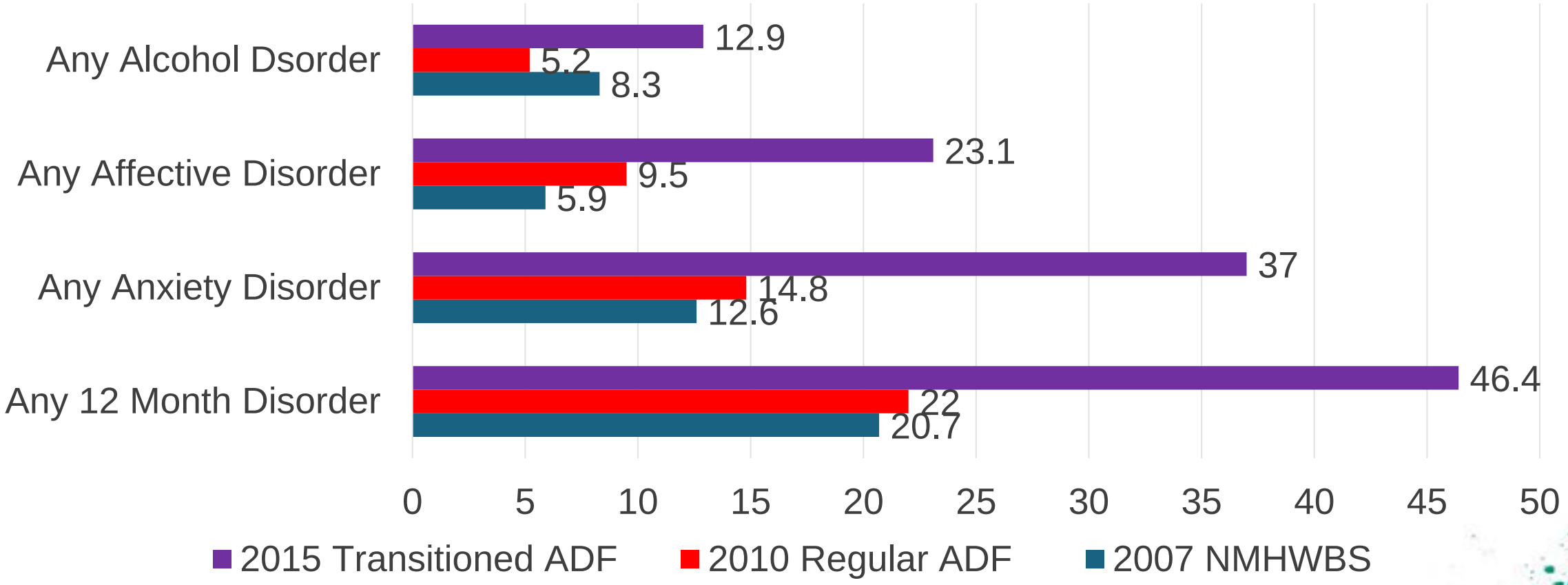
The Prevalence of 12-month ICD-10 Disorder



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12 month ICD-10 Disorder	2010 Regular ADF (N=50,049)			2015 Transitioned ADF (N=24932)		
				N	**%**	**95% CI**
Panic Attack	3537	7.1	5.6-8.6	4244	17	13.8, 20.8
Panic Disorder	709	1.4	1.0-1.9	1344	5.4	3.6, 8.0
Agoraphobia	1261	2.5	1.8-3.2	2975	11.9	9.1, 15.5
Social Phobia	1919	3.8	3.0-4.7	2738	11	8.4, 14.3
Specific Phobia	3011	6.0	4.8-7.3	1936	7.8	5.8, 10.3
Generalised Anxiety Disorder	533	1.1	0.7-1.5	917	3.7	2.2, 6.0
Obsessive Compulsive Disorder	1581	3.2	1.1-5.2	1029	4.1	2.6, 6.6
Posttraumatic Stress Disorder	**4169**	**8.3**	**6.1-10.6**	**4408**	**17.7**	**14.5, 21.3**
Depressive Episodes	3182	6.4	5.1-7.7	2783	11.2	8.6, 14.3
Dysthymia	526	1.1	0.6-1.5	1140	4.6	3.1, 6.7
Bipolar Affective Disorder	1401	2.8	0.9-4.7	2443	9.8	7.0, 13.5
Alcohol Harmful Use	1420	2.8	1.6-4.1	948	3.8	2.3, 6.3
Alcohol Dependence	1171	2.3	1.7-3.0	2271	9.1	6.4, 12.8

Self Reported Physical Health

- Similar to the mental health findings, the Transitioned ADF also reported poorer physical health than the 2015 Regular ADF including:

- more physical health symptoms,
- more service-related injuries,
- increased lifestyle risk factors,
- poorer self-perceived health,
- satisfaction and quality of life,
- a greater risk of circulatory condition, high blood pressure, a musculoskeletal or connective tissue condition, chronic low back pain, a nervous system condition and hearing loss.

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12 month Suicidality higher in Transitioned

	Transitioned ADF 2015 n = 24,932			2015 Regular ADF n = 52,500		
	Weighted n	%	95% CI	Weighted n	%	95% CI
Felt life not worth living	7208	28.9	27.3, 30.6	6927	13.2	10.7, 16.2
Felt so low thought about committing suicide	5294	21.2	19.8, 22.8	4493	8.6	6.4, 11.3
Made a suicide plan	1965	7.9	6.9, 8.9	950	1.8	1.0, 3.3
Attempted suicide	505	2.0	1.6, 2.6	311	0.6	0.2, 1.6
Any suicidality†	5342	21.7	20.2, 23.3	4533	8.8	6.7, 11.6

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There are a number of observable early indicators of emerging disorder that can be used to predict poorer outcomes in Service members over time

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Early Observable Indicator #1: Subsyndromal Mental Health Symptoms

Mental Health and Wellbeing Transition Study

Results from the Transition and Wellbeing Research programme showed that a substantial proportion (20-50%) of Transitioned ADF scored equal to or above the screening cut-offs on the self reported mental health measures with these subsyndromal symptoms placing them at significant risk of later disorder:

- Depression (PHQ) 48.61%
- Psychological Distress (K10) 40.63%
- PTSD (PCL) 33.53%
- Alcohol (AUDIT) 30.22%
- Generalised Anxiety (GAD-7) 2.4%

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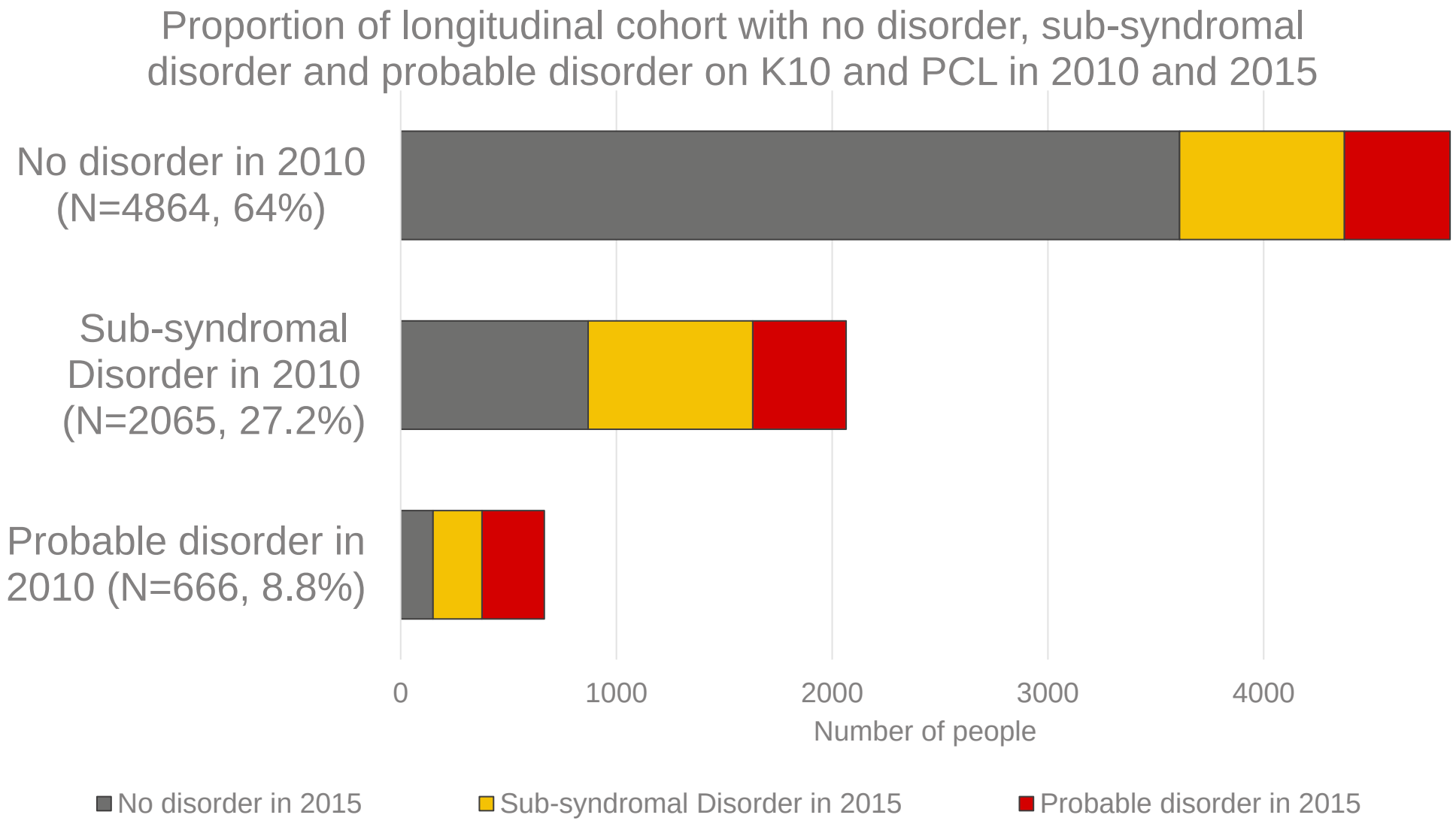
K10 and PCL– Longitudinal Cohort (N=7948)



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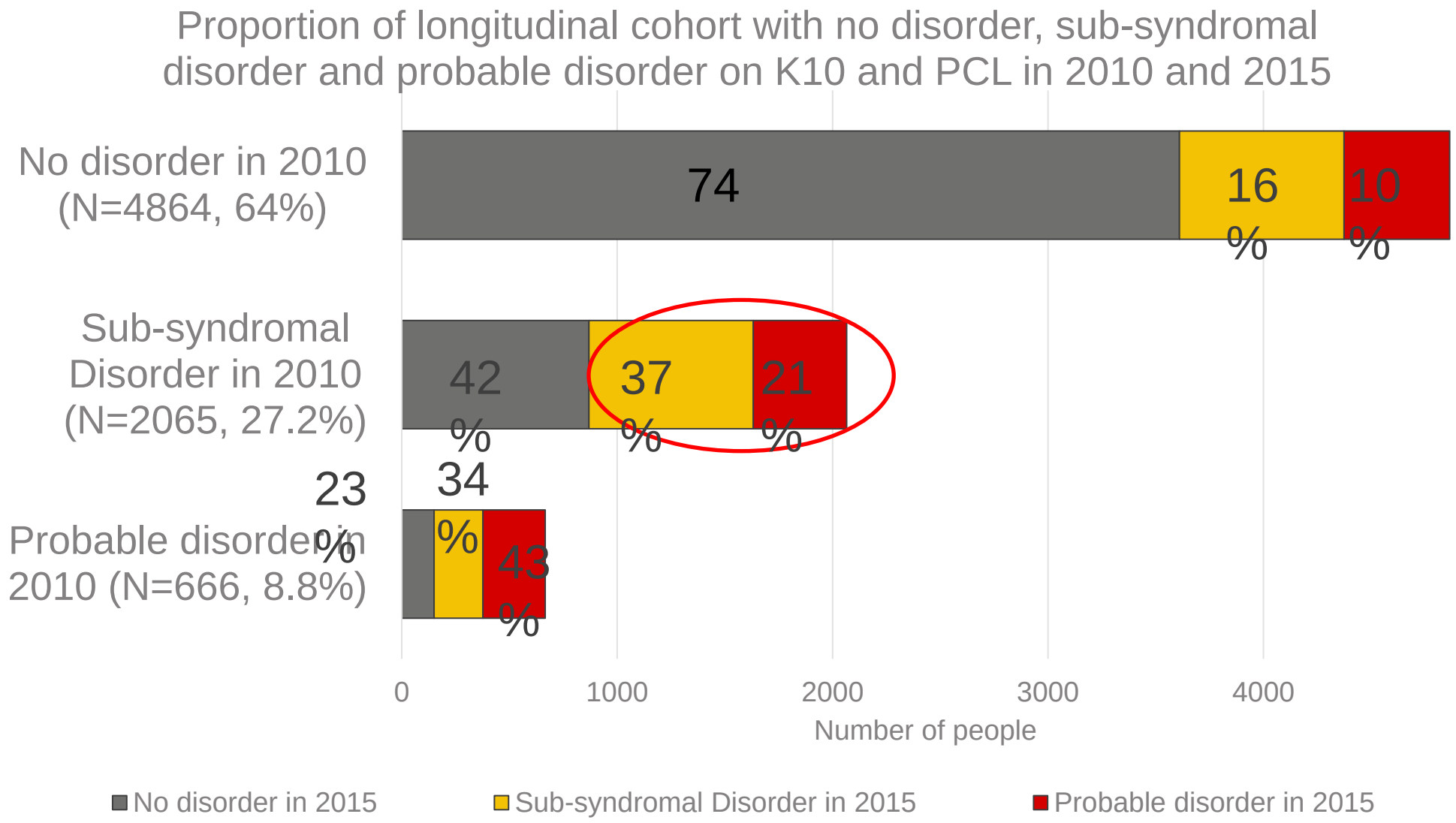

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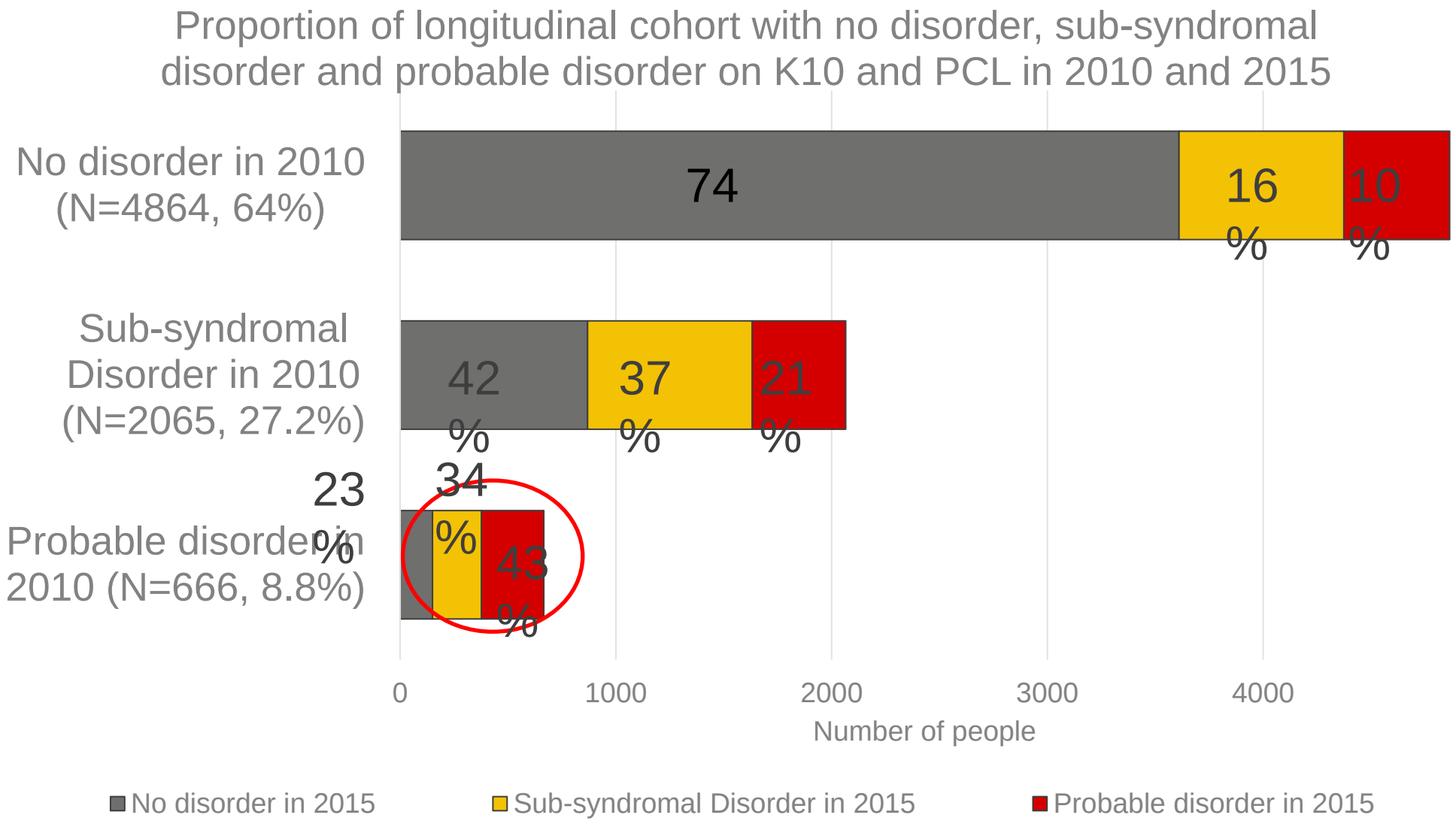

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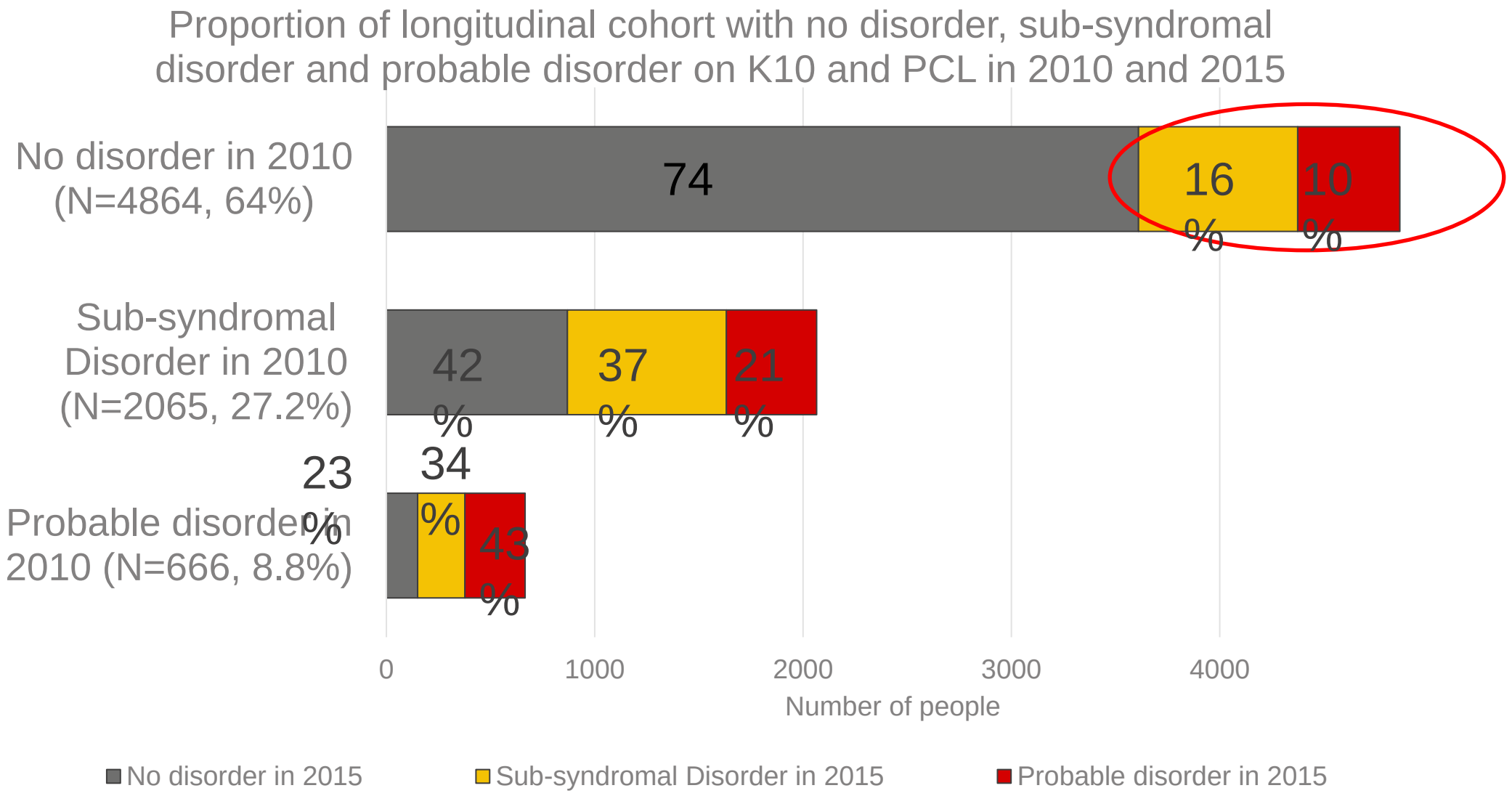

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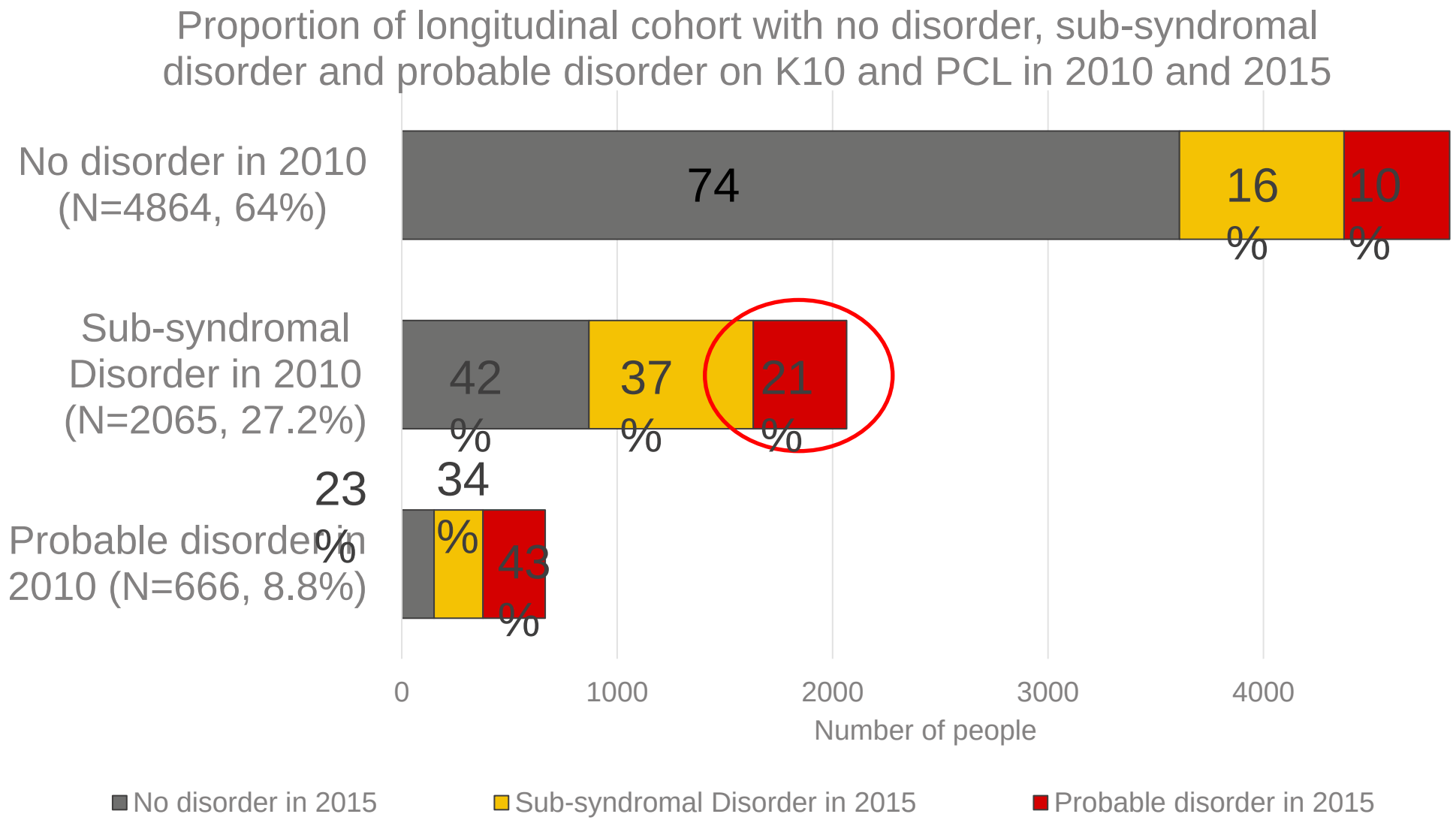

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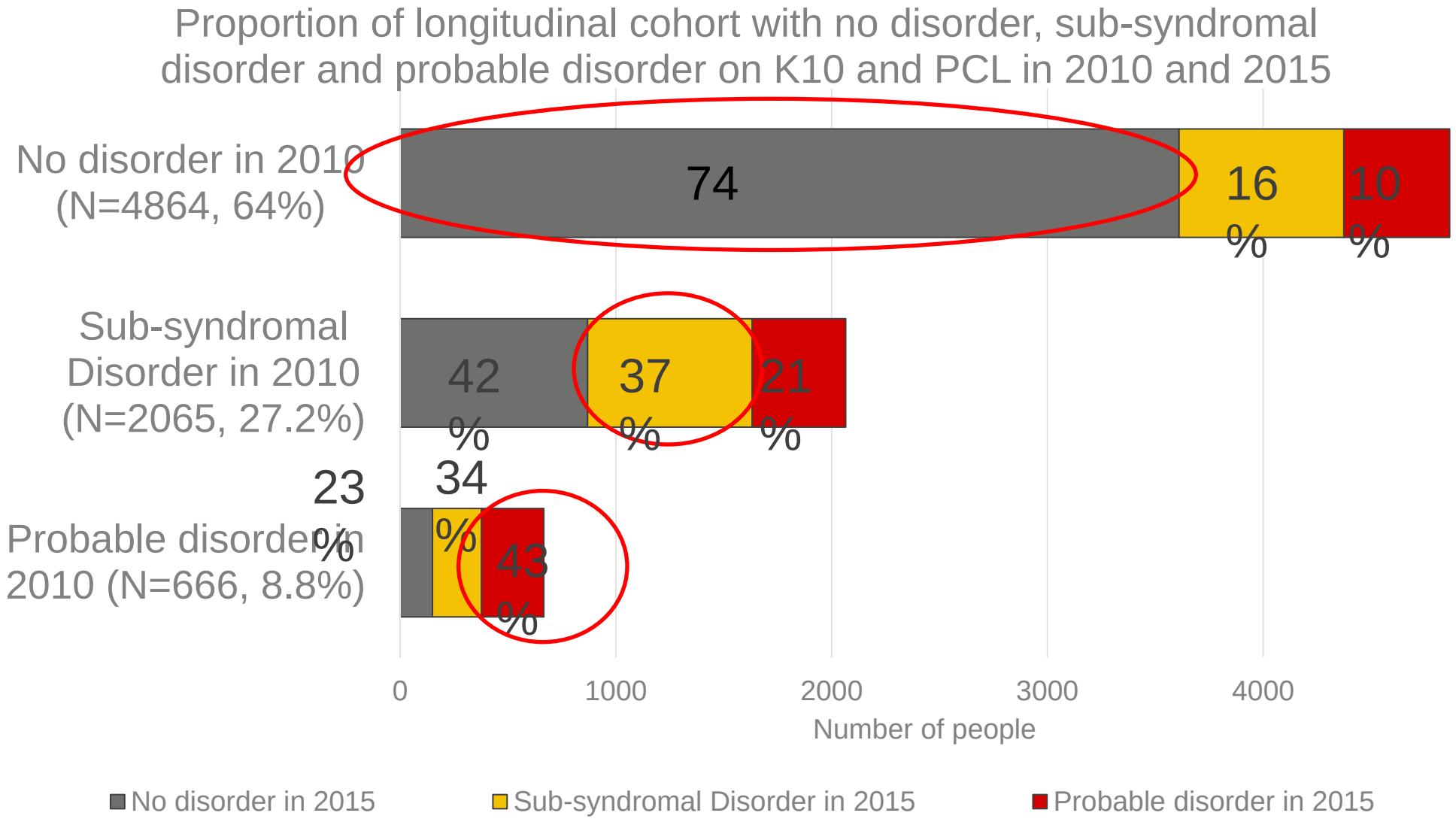

Other early indicators of emerging disorder: problematic anger and cumulative trauma and number of deployment exposures.

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Predicting symptom EMERGENCE

Lower Rank: NCO (OR=1.56), OR (1.45)
Problematic Anger: (OR=2.48)
High No. Deployment exposures: (OR=1.87)
4+ Lifetime Traumas: (OR=3.17)
Service: Army (OR=1.41)
Resilience: (OR=**0.88)**

No Disorder 2010

Sub-syndromal Disorder 2015

Probable Disorder 2015

Lower Rank: NCO (OR=1.73), OR (2.41)
Problematic Anger: (OR=1.99)
High No. Deployment exposures (OR=1.89)
4+ Lifetime Traumas (OR=2.16)
12mth Suicidality (OR=3.11)

Predicting symptom EMERGENCE

Lower Rank: NCO (OR=1.56), OR (1.45)
Problematic Anger: (OR=2.48)
High No. Deployment exposures: (OR=1.87)
4+ Lifetime Traumas: (OR=3.17)
Service: Army (OR=1.41)
Resilience: (OR=**0.88)**

No Disorder 2010

Sub-syndromal Disorder 2015

Probable Disorder 2015

Lower Rank: NCO (OR=1.73), OR (2.41)
Problematic Anger: (OR=1.99)
High No. Deployment exposures (OR=1.89)
4+ Lifetime Traumas (OR=2.16)
12mth Suicidality (OR=3.11)

Predicting symptom PROGRESSION

Problematic Anger: (OR=1.58)
High No. Deployment exposures: (OR=1.78)
4+ Lifetime Traumas: (OR=3.13)
2-3 Lifetime Traumas: (OR=1.59)
Resilience: (OR=0.86)

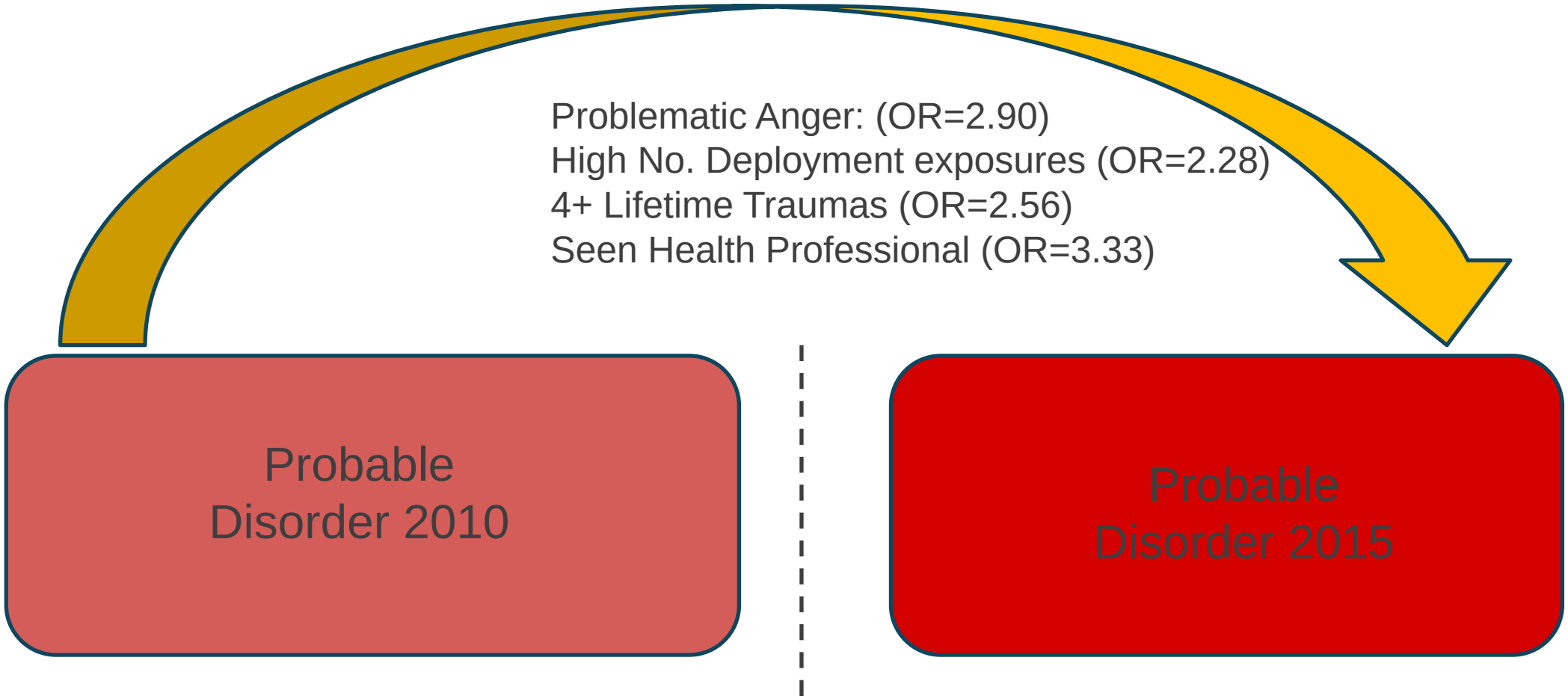
Sub-syndromal Disorder 2010

Sub-syndromal Disorder 2015

Probable Disorder 2015

Problematic Anger: (OR=2.14)
High No. Deployment exposures (OR=2.97)
4+ Lifetime Traumas (OR=2.96)
Resilience: (OR=0.88)
Rank: NCO (OR=1.79), OR (3.91)

Predicting symptom MAINTENANCE



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RESEARCH ARTICLE Open Access

Magnitude of problematic anger and its predictors in the Millennium Cohort

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Abstract

Background: Problematic anger is intense anger associated with elevated generalized distress and that interferes with functioning. It also confers a heightened risk for the development of mental health problems. In military personnel and veterans, previous studies examining problematic anger have been constrained by sample size, cross-sectional data, and measurement limitations.

Methods: The current study used Millennium Cohort survey data ($N = 90{,}266$) from two time points (2013 and 2016 surveys) to assess the association of baseline demographics, military factors, mental health, positive perspective, and self-mastery, with subsequent problematic anger.

Results: Overall, 17.3% of respondents reported problematic anger. In the fully adjusted logistic regression model, greater risk of problematic anger was predicted by certain demographic characteristics as well as childhood trauma and financial problems. Service members who were in the Army or Marines, active duty (vs. reserves/national guard), and previously deployed with high levels of combat had increased risk for problematic anger. Veterans were also more likely to report problematic anger than currently serving personnel. Mental health predictors included posttraumatic stress disorder (PTSD), major depressive disorder (MDD), and comorbid PTSD/MDD. Higher levels of positive perspective and self-mastery were associated with decreased risk of problematic anger.

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Transition, Service and Demographic risk factors

1. Years Since Transition ↑ 1 and 3 years post transition
2. Discharge type ↑ Medical discharge
3. DVA Client Status ↑ DVA clients
4. Transition Status ↑ Ex-Serving
5. Service Characteristics ↑ Lower rank, Army
6. Sex ↑ M v F (suicide attempts, alcohol disorders) M v F (suicide attempts) F vs M (anxiety)
7. Years of Service ↑ Early Service Leavers (i.e. PTSD highest in 4-7.9 years of service)

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Conclusions

1. Insight into both current and ex-serving military members is pivotal to understanding the true magnitude of the mental and physical health impacts of service.

2. Factors influencing trajectories evident from an early stage

3. Importantly many represent modifiable factors – such as sleep, anger and social support (both within and outside of military service networks)

4. Role to recognise and intervene at each transition point – into military, from basic training to employment training, from employment training to first posting, deployments

5. Major transition point is discharge to civilian life where we see considerable escalation of mental health difficulties emerging over the first 5 years

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Conclusions

6. There are a number of risk factors and protective factors (i.e. sub-syndromal symptoms, problematic anger, suicidal ideation, cumulative lifetime and deployment related trauma exposure and social support) known to influence the emergence and progression of disorder

7. Identify clear problem and time point targets for early intervention

8. Leadership factors - story for another day….

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