

Determination of action threshold of psychosocial risk based on mental health score

6th International COPSOQ Workshop
Santiago de Chile

SUSESO/ISTAS21 Questionnaire y2016

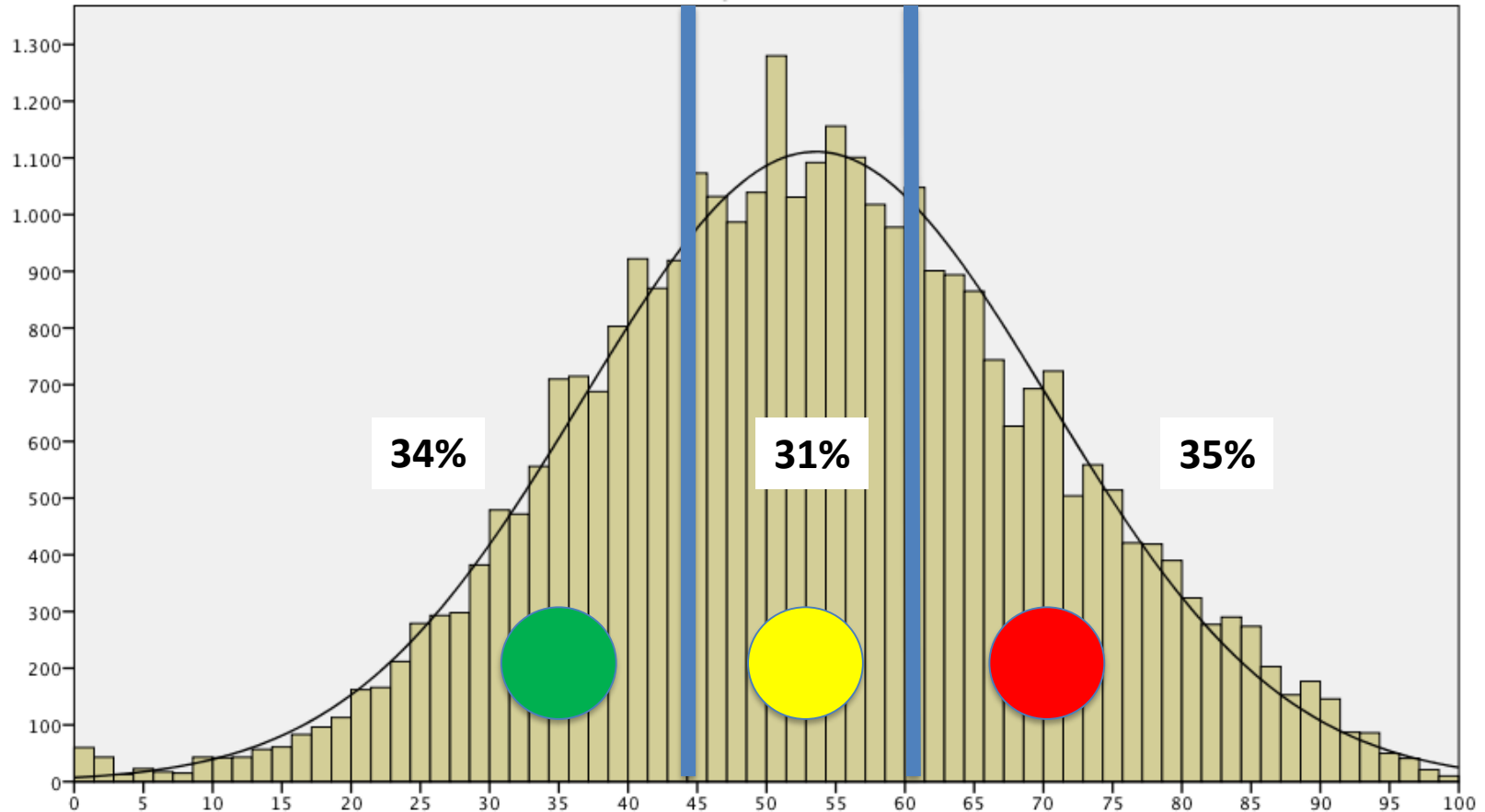
González-Guzmán D., Pérez-Franco J., Candia-Tapia M.

COPSOQ in Chile

- COPSOQ in its medium version, adapted to Chile, began its application in 2009 and since 2013 is mandatory in all types of institutions and companies.
- The exposure to psychosocial risk was set at three levels (high, medium, low) by experts agreement, according to the risk level of five general dimensions of the questionnaire.
- At present there enough data that make possible to determine an action threshold based on correlation between psychosocial risk levels and SF-36's health scales.
- We present data of the five major dimensions (D1 to D5) of the Questionnaire.

PSYCHOSOCIAL RISK'S «TRAFFIC LIGHT»

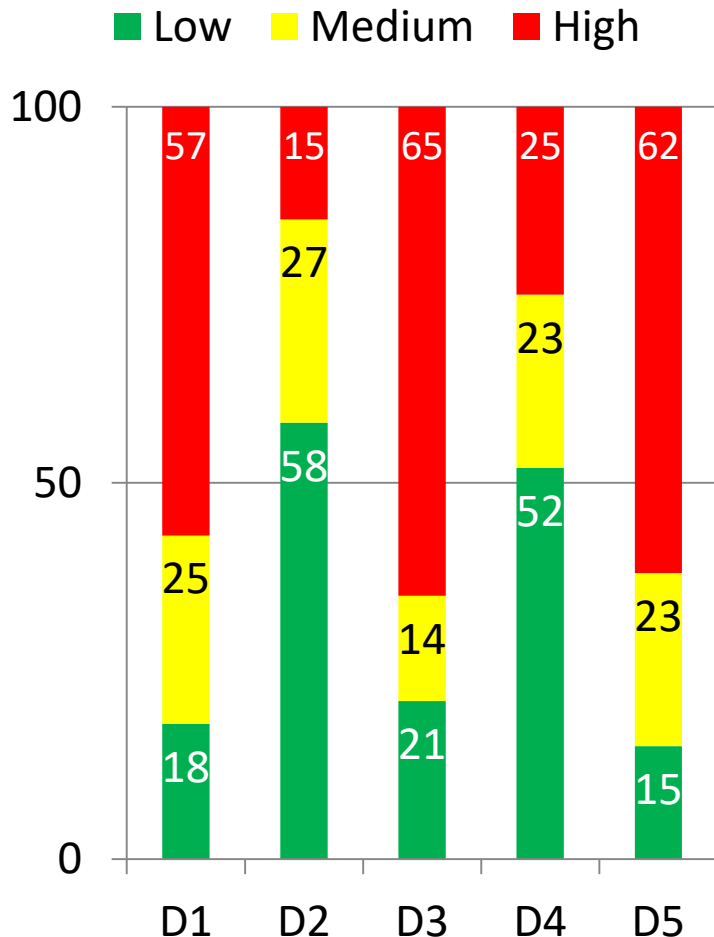
Example: Frequency of Psychosocial Risk Scores in Psychological Demands Scale SUSESO/ISTAS21 Questionnaire (COSPOQ 1) y2016



Low risk	Middle risk	High risk
0 – 46,33	46,34 – 59,64	59,65 – 100

Psychosocial risk “traffic light”

SUSESO/ISTAS21 Questionnaire (COPSOQ 1) y2016

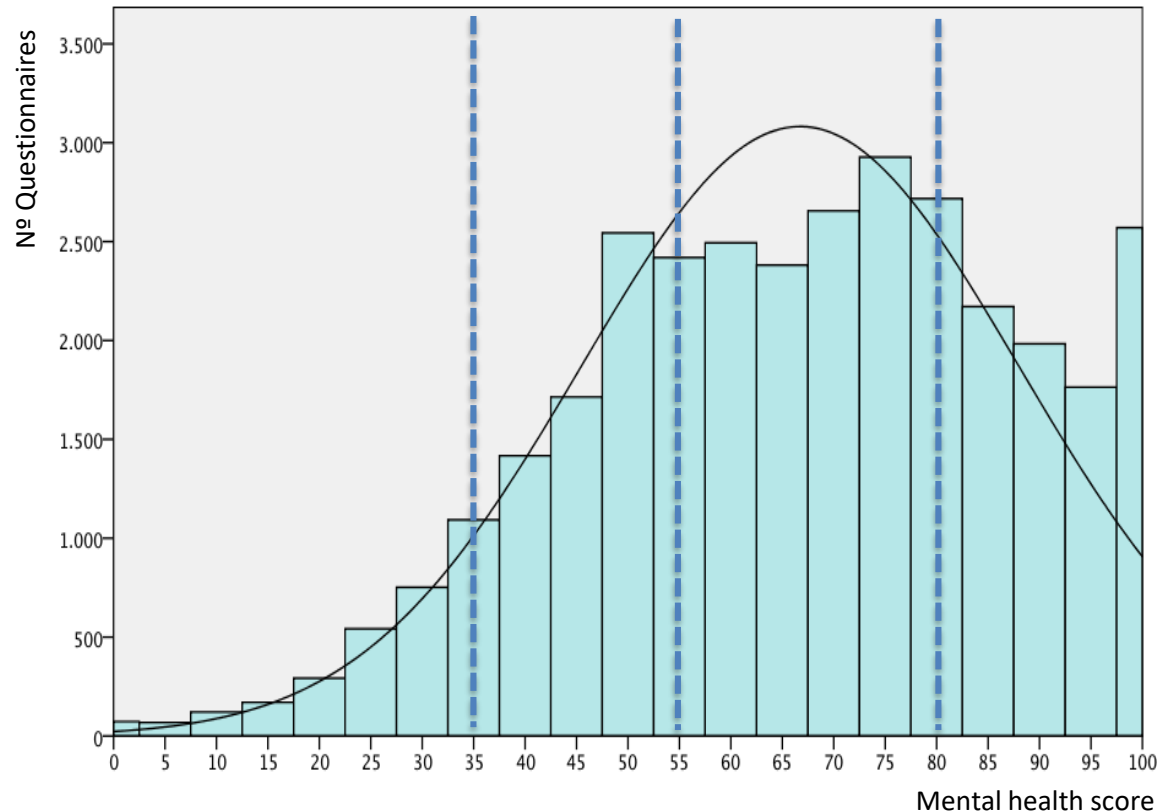


- Prevalence (%) of (individual) employees at each level of risk (high, medium, low) by dimension (D1, D2, D3, D4, D5) in each workplace.
- The global exposure to risk in each workplace was set counting how many columns have more than 50% in high risk (red columns). We call it the “Old_R” (four levels: 0, 1-2, 3, 4-5 columns in red)
- A new way to determine the exposure is counting “red columns” as (+1) (“risky points”), and “green columns” as (-1) (“safety points”). The rest of the columns have a value of 0.
- The simple sum of the points gives the level of risk; it goes from -5 to +5. We call it the “New_R”.
- The new levels are: -5 / +1 (R0); +2 / +3 (R1); +4 / +5 (R2).

MENTAL HEALTH SCORES (SF-36), HEALTH STATUS (EQ-5D) AND PSYCHOSOCIAL RISK.

Mental health scores (SF-36)

SUSESO/ISTAS21 (COSPOQ 1) Questionnaire y2016

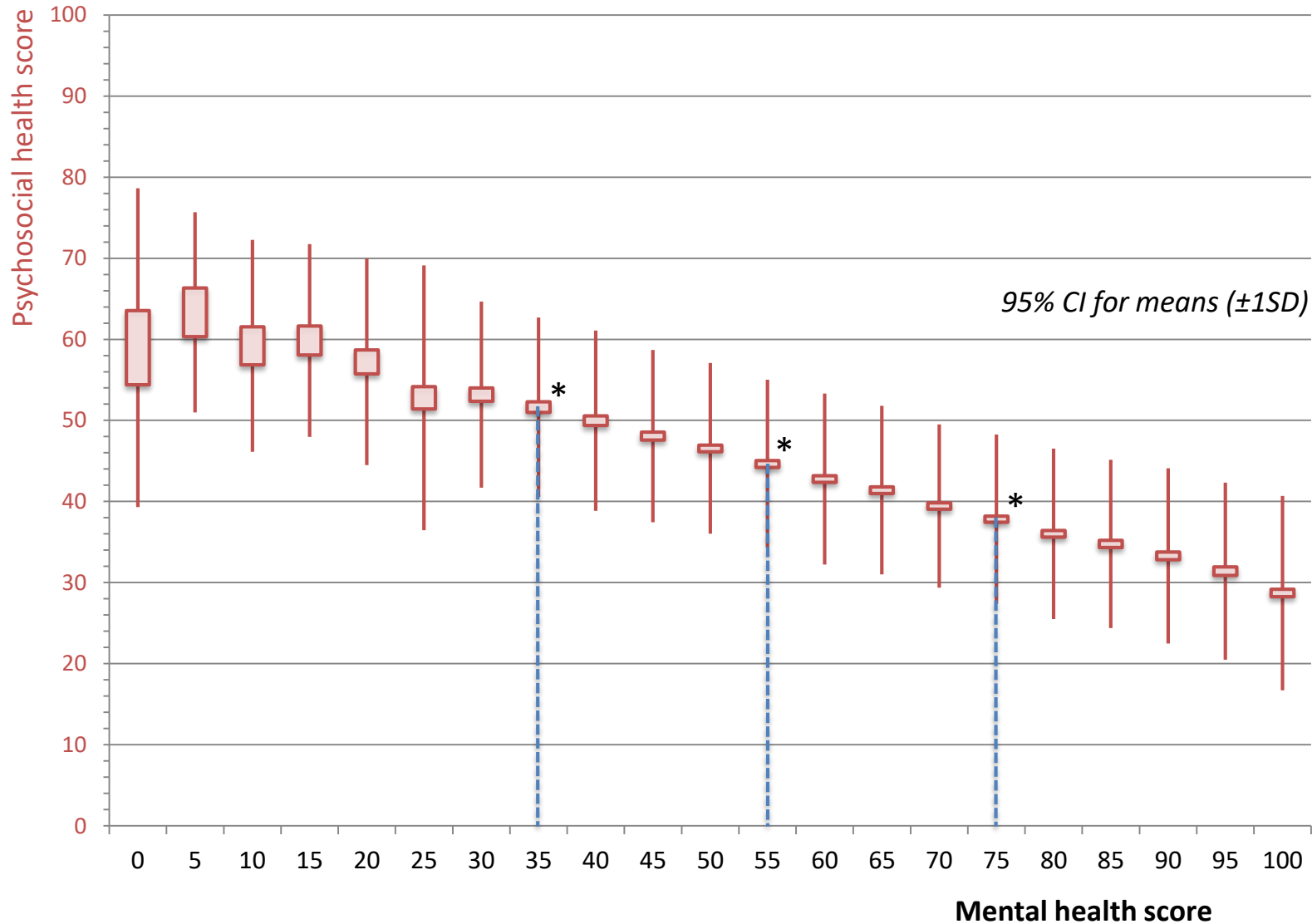


	SUSESO y2016	Reference y2007
N	32.867	4.341
Mean	66,7	66,9
CI (95%)	66,5 - 67,0	66,3 - 67,6
Median	70	70
Std. Deviation	21,27	23,08
Range	0 - 100	0 - 100
Skewness	-0,33	-0,49
Kurtosis	-0,48	-0,47
%worst scores	0,22	0,37
%best scores	7,82	8,90

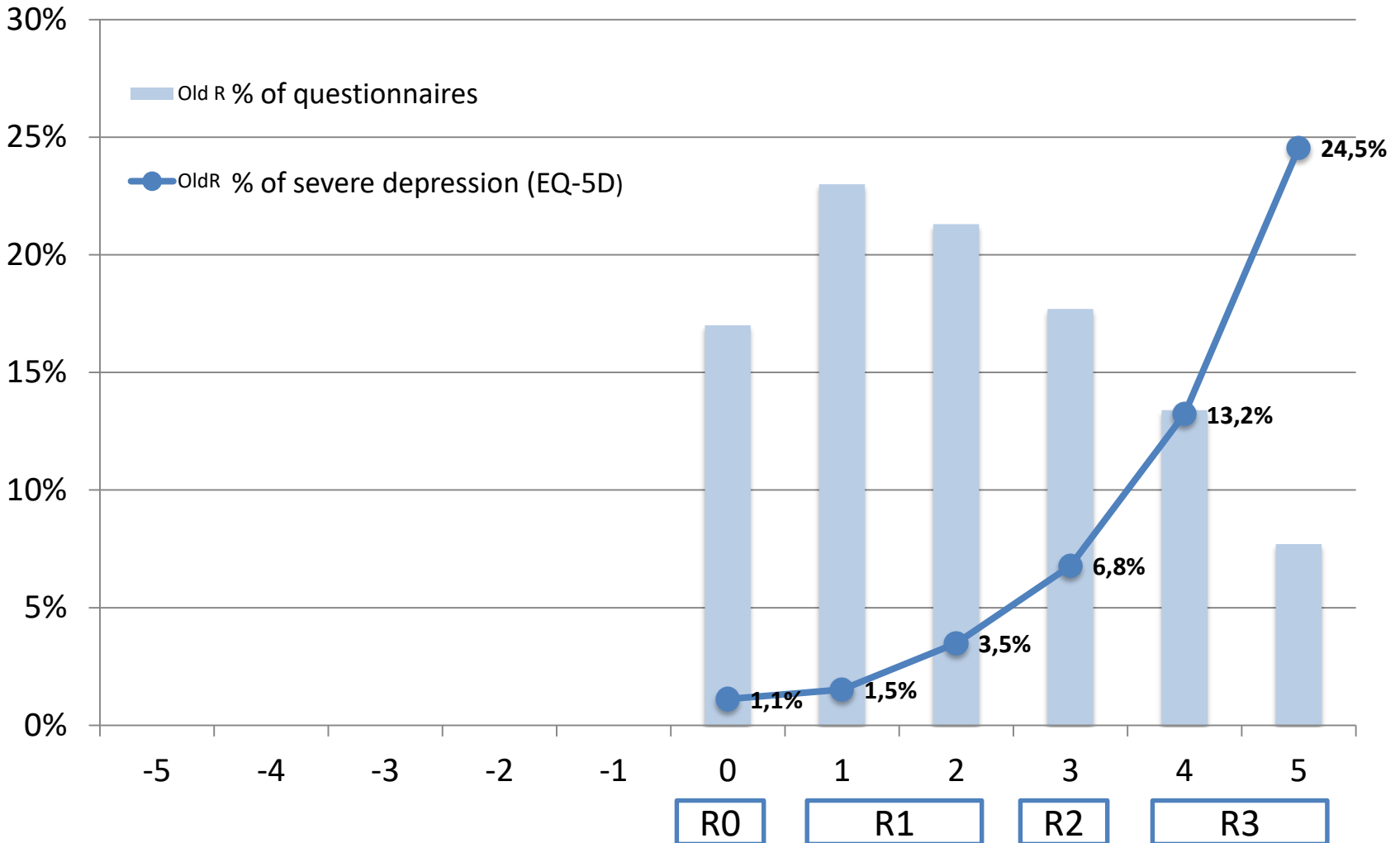
Mean of mental health score according to health status of EQ-5D (Chile, y2007)
without depression 78.3, mild depression 54.4 and severe depression 33.3

Psychosocial risks scores by mental health scores

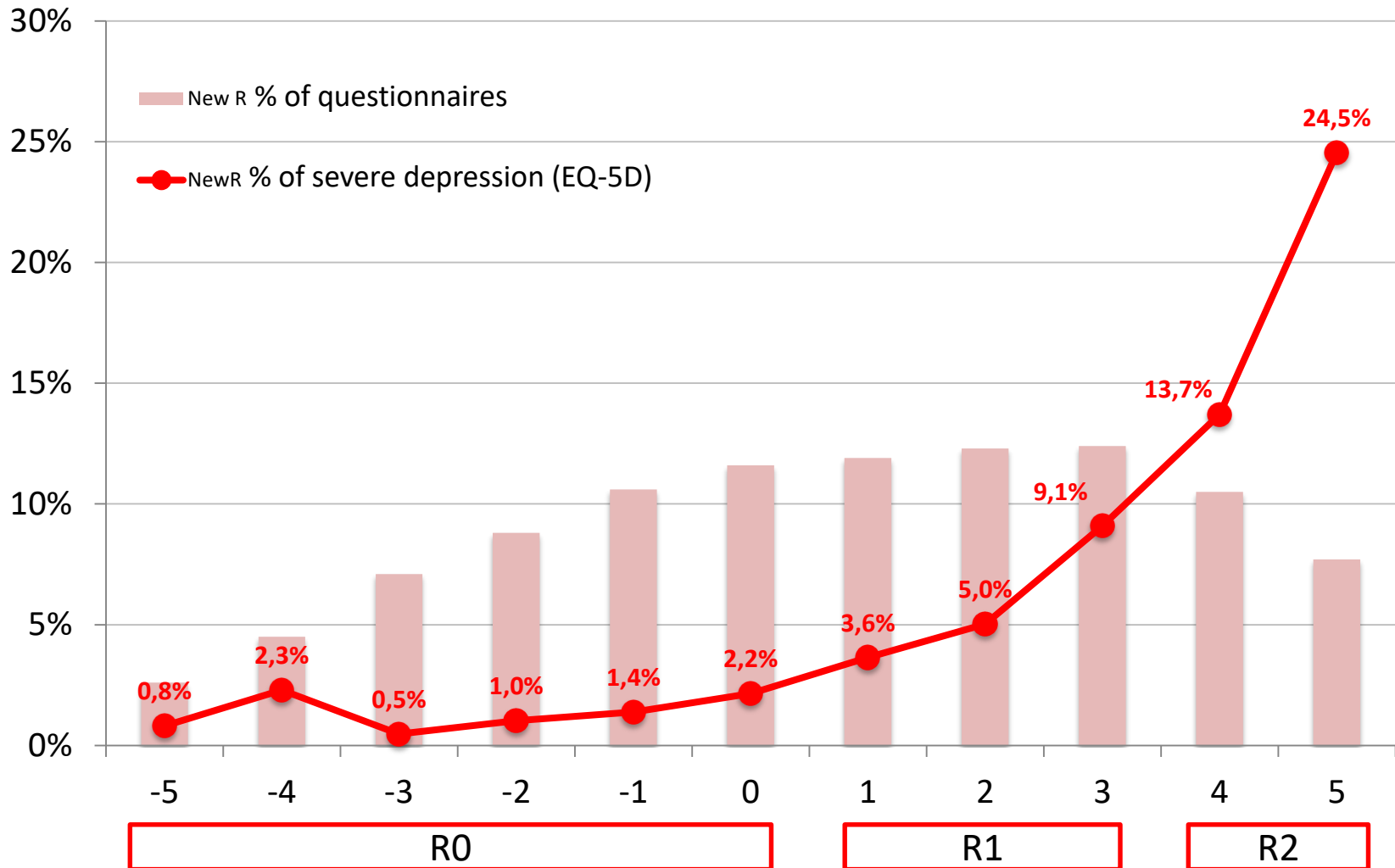
SUSESO/ISTAS21 Questionnaires y2016



Old_R



New_R



Old_R vs New_R Comparison

Old_R	Potential Cases	Potential not Cases	
In surveillance	5,95%	77,08%	83,03%
No surveillance	0,19%	16,78%	16,97%
	6,14%	93,86%	

Sensibility	96,93%
Specificity	17,88%
Positive Predictive Value	7,17%
Negative Predictive Value	98,89%
Precision	22,73%

New_R	Potential Cases	Potential not Cases	
In surveillance	5,50%	49,22%	54,72%
No surveillance	0,64%	44,64%	45,28%
	6,14%	93,86%	

Sensibility	89,52%
Specificity	47,56%
Positive Predictive Value	10,04%
Negative Predictive Value	98,58%
Precision	50,13%

Conclusions

- There is a significant increase in the percentage of potential cases of mental health associated with the increase in NewR score
- This increase is linear in NewR0 and then exponential in NewR1 and NewR2
- We believe it is appropriate to consider NewR0 as low risk, NewR1 as medium risk and NewR2 as high risk
- The NewR increases to twice the accuracy of the evaluation process than OldR, which allows focusing the interventions.