Introduction to a methodology for measuring employee motivation

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Multiple measures

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Individual diaries

Interviews

Group discussions

Questionnaires

Multiple measures

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Individual diaries

Interviews

Qualitative

Group discussions
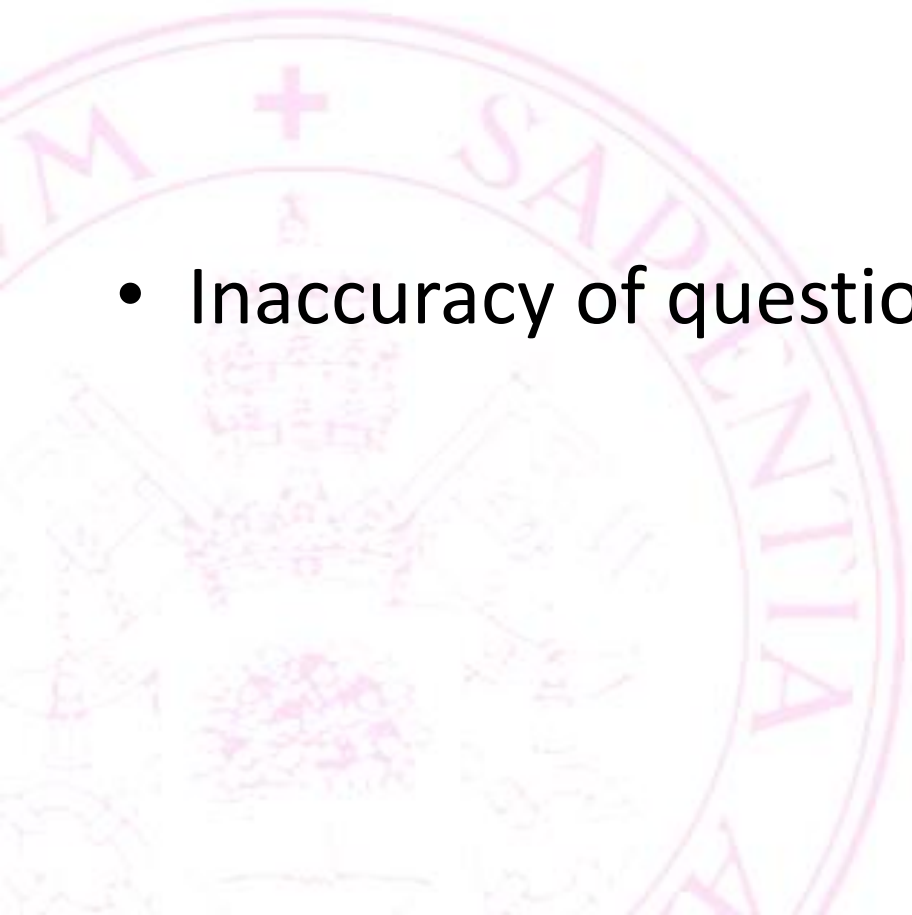
Questionnaires

Quantitative

Multiple measures

- Drawbacks qualitative measures:

    – Costly (especially in terms of the time spent)

    – Difficult to find out to what extent individuals rate

    on a variable.

    – Subject to interpretation

Questionnaires

- Their simplicity is overestimated.

- Inaccuracy of questionnaires.

Validation

Process in which a set of <u>tools and data</u> are used to guarantee the <u>appropriateness</u> of that inferences.

Validity   **Reliability**

Validity

✓ Does it measure what it is supposed to measure?

✓ It refers to **whether or not a survey measures what it intends to measure**.

✓ On a survey with high validity items are closely linked to the test's intended focus. *(e.g. If a test has poor validity then it does not measure the engagement-related content it ought to*)

Validity

Content validity

Construct validity

Criterion-related validity
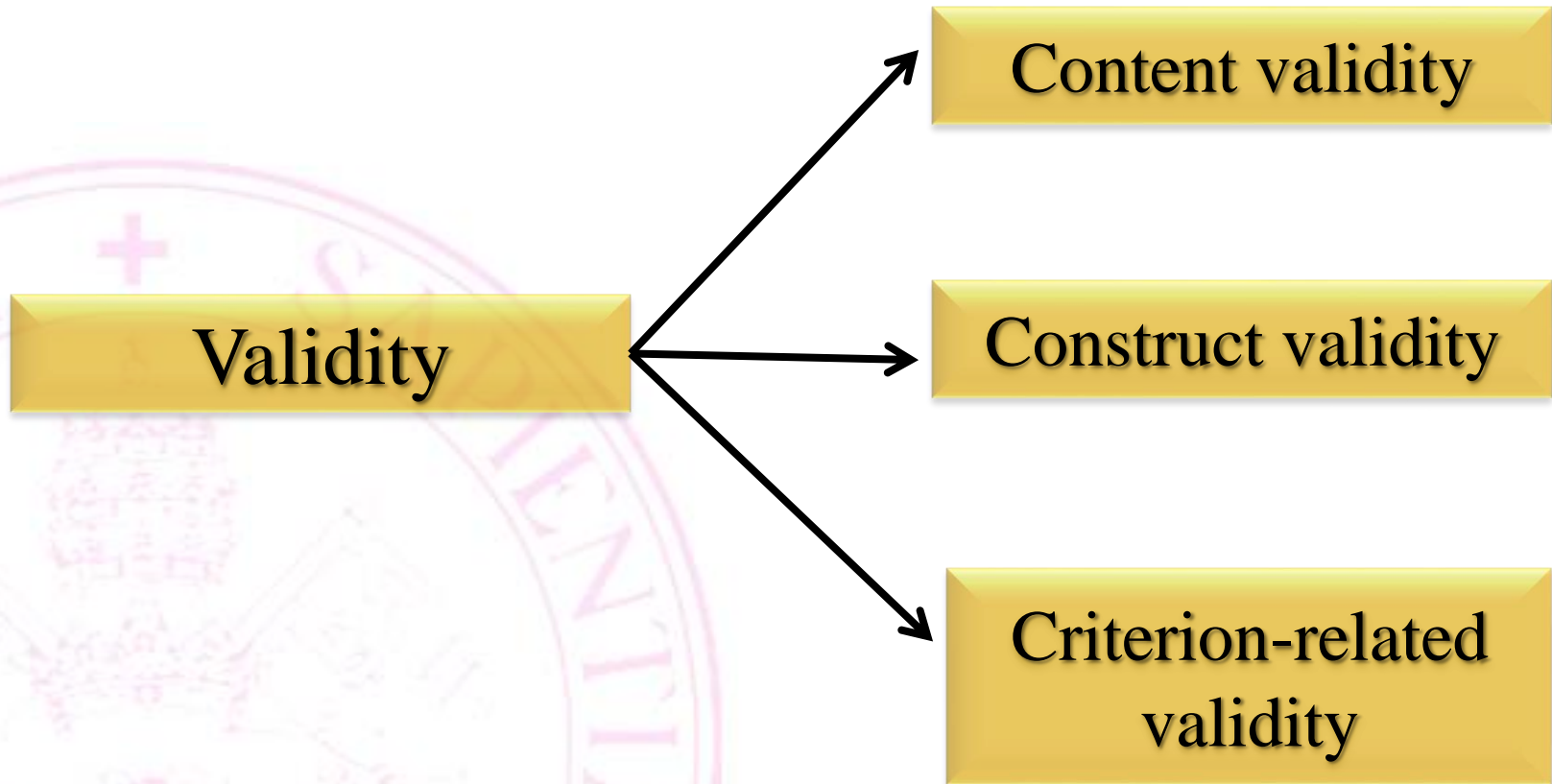
Validity

❖**Content Validity:** refers to the extent to which a measure

represents all facets of a given construct.

❖How to increase it?

❖Previous review of literature

❖Consulting experts and researchers in the field

Validity

❖ **Construct validity:** When the test is an indicator of the construct aimed to be measured.

❖ Multivariate techniques to determine the factors involved in the test:

  ❖ EFA (Exploratory Factor Analysis)

  ❖ CFA (Confirmatory Factor Analysis)

Validity

❖ **Criterion-related validity:** The extent to which

a scale or test predicts scores on some criterion measure.

❖ The higher the correlation between test-criterion, the higher

criterion validity.

Reliability

- Reliability is the extent to which a measure or test shows the same result on repeated trials. Consistency = absent of measurement errors.

- Methods used for empirical estimation of the reliability coefficient: Internal consistency

Measuring security motivation

- Focus on security motivation vs work motivation

- To assess security motivation:

  - **Multidimensional Work Motivation Survey (MWMS)**

  - **Multidimensional Security Motivation Survey (MSMS)**
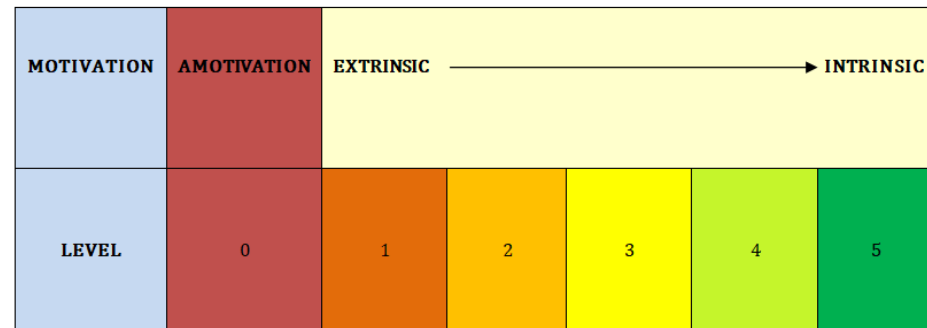
Multidimensional Work Motivation Survey (MWMS)

MOTIVATION	AMOTIVATION	EXTRINSIC					INTRINSIC
LEVEL	0	1	2	3	4	5	
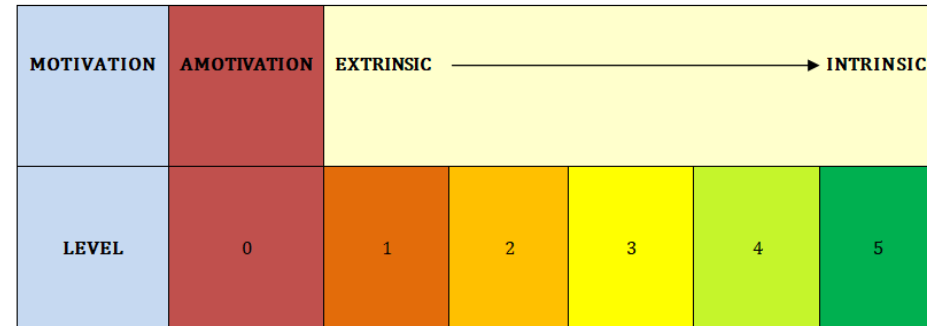
-Validated

-19 items

-Likert, ranging from 1 (not at all) to 7 (Completely)

Multidimensional Security Motivation Survey (MWMS)

MOTIVATION	AMOTIVATION	EXTRINSIC				→ INTRINSIC
LEVEL	0	1	2	3	4	5

-Adapted survey

-Based on the same model and keep survey structure

-19 items

-Likert, ranging from 1 (not at all) to 7 (Completely)

Process

- Steps that guarantee a smooth and proper collection of data:

- **Step 1** - Prepare a proper heading asking for employees' help to improve.
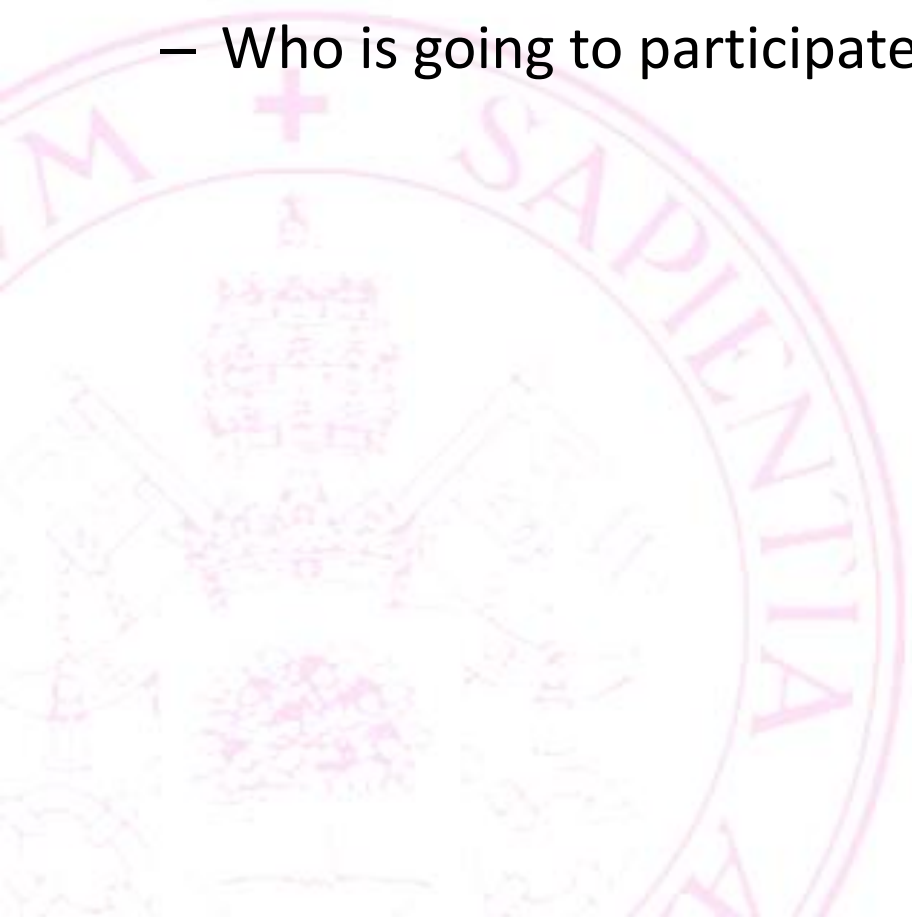
Process

"Dear employee,

As you already know, we keep trying to improve constantly and reach an excellent plant security. But we cannot do it <u>without your help</u>. It is very important for us to get your <u>honest responses</u> in this survey to know what the <u>improvable</u> areas are in your job. Since it is not our intention to evaluate single individuals, but groups or the whole organization, you are <u>not going to be identified</u>. Your responses will be completely anonymous, and will remain confidential. Thank you for your collaboration.

Process

- **Step 2** - Gain stakeholder trust

  – Identify stakeholders to ensure support for the survey.

  – Senior management, trade union representative, contractors.

  – Ask a member of the executive team, (preferably the CEO) to circulate a letter encouraging participation.

  – Keep stakeholders involved throughout the process

Process

- **Step 3** - Define audience

    – Who is going to participate?

Process

- **Step 3 -** Define audience

  – Who is going to participate?

- **Step 4 -** Design procedure collection

  – E-questionnaire or paper-based? Both have advantages and disadvantages (particularly response rates, central tendency)
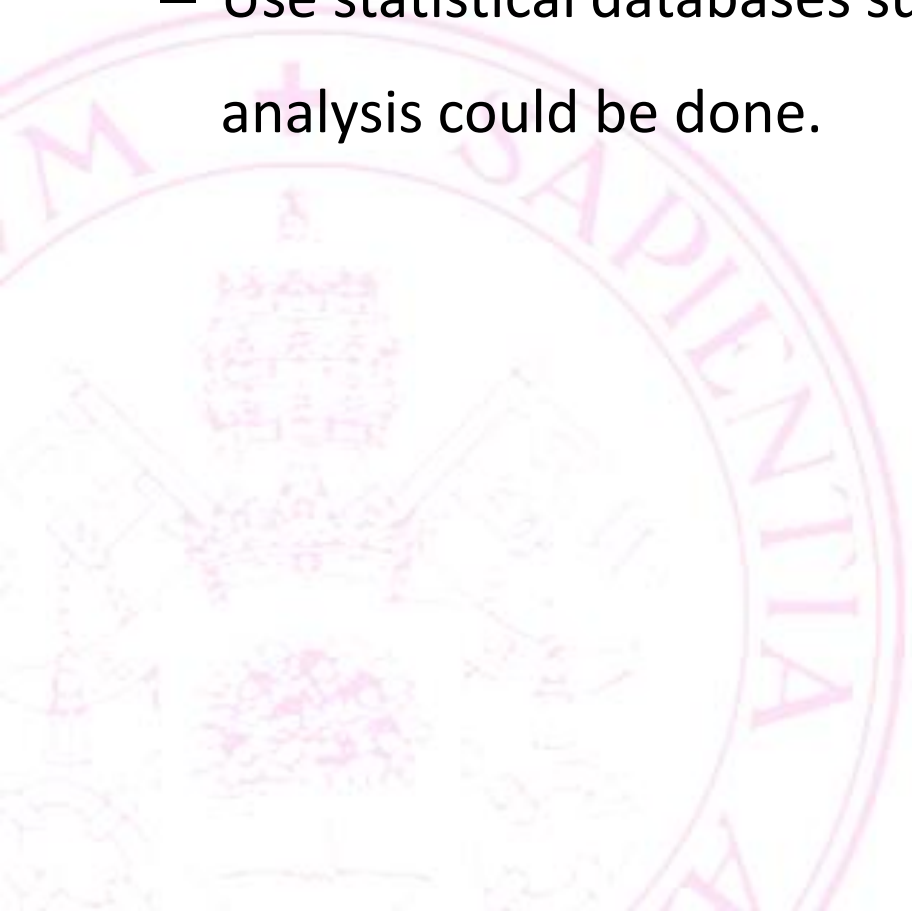
Process

- **Step 5** - Prepare employees a week before. Give details of the survey:

  - The audience for the survey.

  - When and how the survey will be conducted.

  - How long the survey will take.

  - Assurances of anonymity.

  - When the results will be announced.

  - How the results will be used.

Process

- **Step 6** - Collect data:

  – Printed survey and a sealable envelope.

  – Copies will be distributed to staff

  – Employees will be asked to complete the surveys within a 48-hour period.

  – Collection boxes will be facilitated.

Process

- **Step 7** - Introduction and analysis of data:

  - Use statistical databases such as Excel or SPSS. Multiple

    analysis could be done.

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  – Use statistical databases such as Excel or SPSS. Multiple

    analysis could be done.

- **Step 8** - Disseminating results:

  – Within two months of its completion.

  – Line management could brief employees face-to-face (in group

    discussion)

Process

- **Step 9** - Repeat the survey on an annual basis.

Thank you.

Martínez-Córcoles, 2018. Introduction to a methodology for measuring employee motivation. Roundtable meeting on Motivating Staff with Accountability for Nuclear Security. Vienna, Austria. Retrieved from wins.org.

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Testing the validity of the International Atomic Energy Agency (IAEA) safety culture model☆

CrossMark

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