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Diagnostic Assessment Centres and Self-efficacy

An intervention study among university
graduates

ACSG, 2021

AGENDA

- Introduction
- Defining diagnostic Assessment Centres
- Research objectives and methodology
- Key findings and practical implications



GRADUATES IN SOUTH AFRICA

Source: Quarterly Labour Force Survey (QLFS) , Q1 2020, StatsSA



35%

15-34

35% of the population is between the ages of 15 and 34.

59%

Unemployment rate

The 15-24 age group are most vulnerable with a 59% unemployment rate

33%

Graduate unemployment

Amongst the 15-24 group, 33% unemployment rate of graduates

8,5%

Increase over time

Quarter on quarter increase of 8,5% in graduate unemployment

MACRO- ENVIRONMENT

Why do we see such high unemployment?

- Stagnant economic growth
- High cost of doing business in SA
- Strict labour laws
- Risk adverse companies
- Pool of previously disadvantaged is shrinking

Source: The World Bank, worldbank.org

South Africa:

Unemployment rate (2019)	28.5%
GDP annual % growth (2019)	0.1%

United States:

Unemployment rate (2019)	3.6%
GDP annual % growth (2019)	2.1%

- Low unemployment rate
- Relaxed labour laws
- Greater economic growth
- Lower costs of doing business

Source: Gartner ReimagineHR Survey, LinkedIn 2020 and 2021 Workplace Learning Report

80%
OF
EMPLOYEES

Don't have the skills needed for their current and future roles

TOP SKILLS THAT COMPANIES ARE DEVELOPING:



Leadership and management skills

57%



Creative problem solving and design thinking

42%



Communication

40%

PROGRAMMES THAT L&D WILL DEPLOY GLOBALLY IN 2021:

Leading through change

Diversity & inclusion

Large-scale upskilling or reskilling

COLLABORATION

Collaboration, communication and social skills



DIGITAL LITERACY

Literacy in the areas of information, media and technology



CRITICAL THINKING

Critical thinking, creativity and problem solving



AGILITY

Agility, adaptability and flexibility

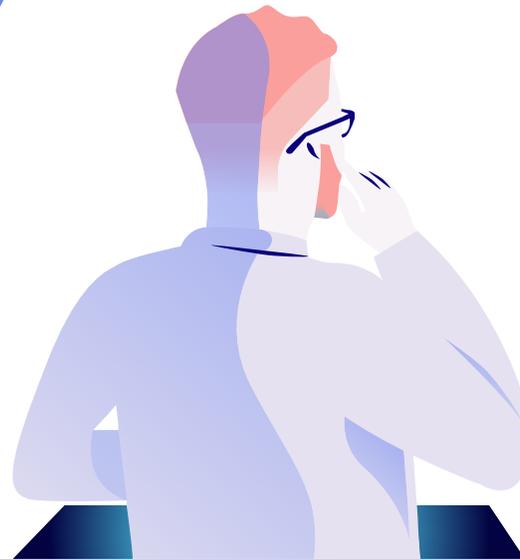


INITIATIVE

Taking initiative, productivity and accountability



21st CENTURY SKILLS



SELF-EFFICACY

Graduate employability:

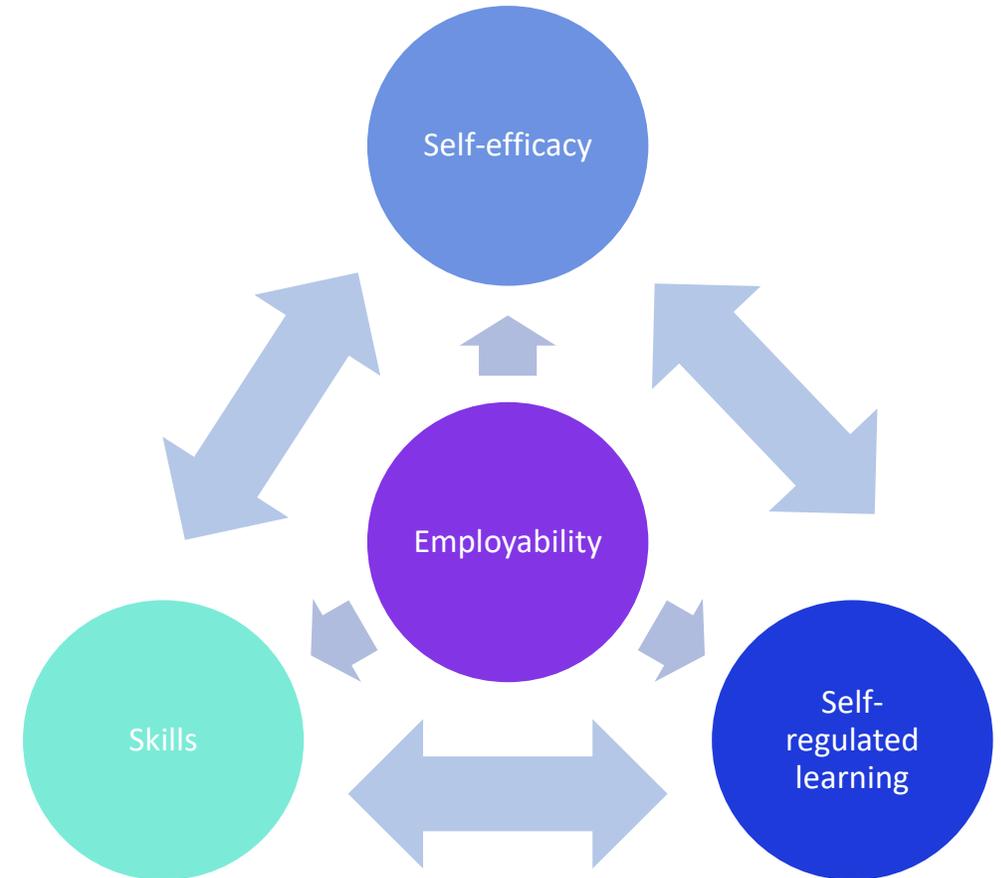
- Graduates obtaining the skills and personal attributes that make them more likely to secure employment.
- Employability requires individuals who are confident and can apply their learning and skills (self-efficacy).

Defining self-efficacy:

- A belief an individual has about their ability to achieve specific tasks
- Self-efficacy plays a pivotal role in a graduate's transition experience from the academic environment to the work environment.

Impacts on:

- Career choices
- Ability to deal with success and failure
- Academic achievement
- Transition from academic to work environment
- Personal development
- Effort and perseverance



Source: Jones, 2015

SELF-EFFICACY AND SOCIAL COGNITIVE THEORY

- Self-efficacy plays a large role in Bandura's Social Cognitive Theory (1997)
- It is defined as multi-faceted, task-dependent and evolving over time

Sources of Self-efficacy:

- Mastery experience: previous performance
- Vicarious experience: observing and modelling
- Verbal persuasion: assurance from others
- Physiological arousal: somatic and emotional states

Link to academic performance:

- Influences the types of tasks an individual sets out to learn and the goals they set
- Mediates career choice and selection of major



DIAGNOSTIC ASSESSMENT CENTRES

Hybrid of an Assessment Centre and a Development Centre with a dual focus:

- Assessment of competencies
- Providing constructive feedback to participants

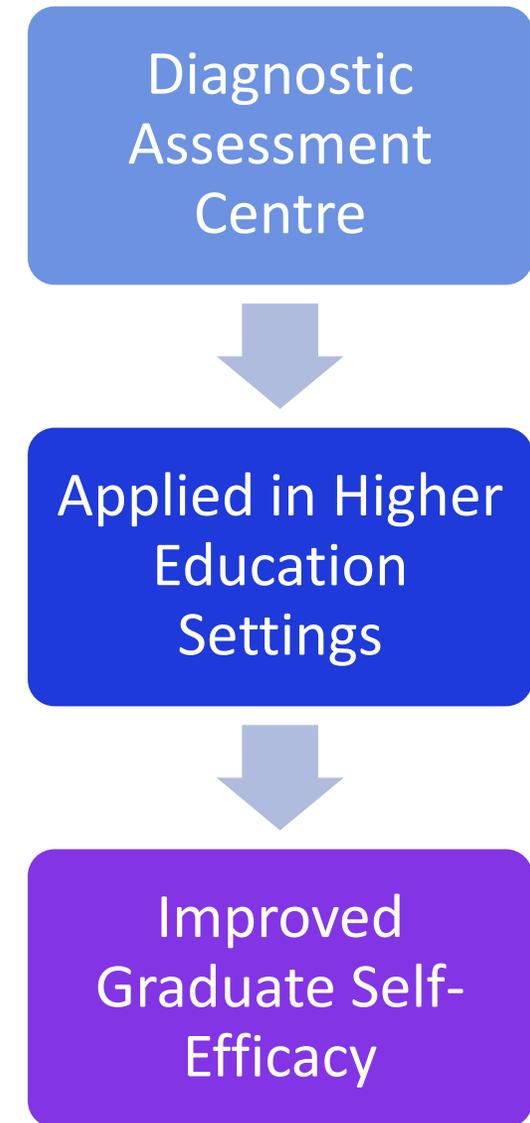
Consists of:

- In-basket assessment
- Competency-based interview
- Competency framework based on Industrial Psychology graduate job profile

Scoring and raters:

- 5-point Behavioural Observation Scale
- 2 raters per participant
- 6 raters in total – all of whom were Master's students in Industrial Psychology
- Comprehensive frame of reference training
- Observer guide and preparation material
- Data-integration session to finalise scoring via consensus

1	2	3	4	5
Well below requirements	Below requirements	Meets most requirements	Above requirements	Well above requirements



COMPETENCY FRAMEWORK

Competency	In-basket exercise	Competency-based interview
Relevant knowledge and skill	X	X
Planning and organising	X	X
Communication – Oral	-	X
Communication – Written	X	-
Action Orientation	X	X
Ability to learn	-	X
Attention to detail	X	X
Analytical thinking	X	X
Adaptability	X	X
Initiative	X	X



METHODOLOGY

Objective:

- A diagnostic centre intervention has a short-term (immediate) and long-term (3-months) effect on the generalised self-efficacy of graduate students.

Sample:

- Industrial Psychology graduates at the University of the Western Cape
- n=17

Quasi-experimental design:

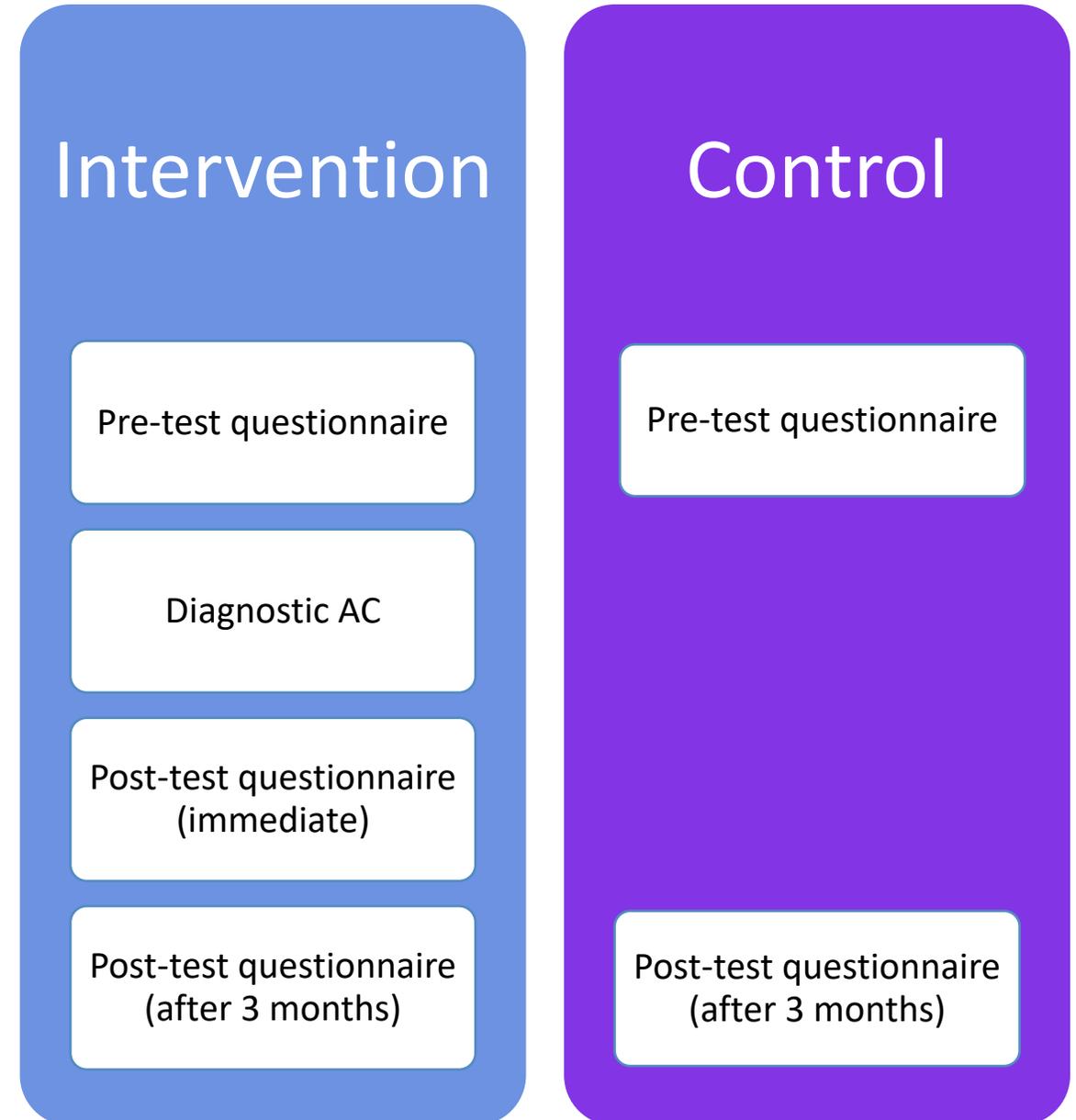
- Intervention group (n=7)
- Control group (n=10)

Questionnaire:

- Generalised Self-Efficacy Questionnaire by Schwarzer & Jerusalem (1995)
- 10 items

Statistics:

- Non-parametric statistical analyses
- Statistical and practical significance



FINDINGS

Mann-Whitney U:

- No statistically significant difference in the pre-test assessment between the Intervention and Control groups
- Both groups started with the same level of Self-efficacy
- Comparing the Intervention and Control groups on the 3-month post-test assessment shows a practically significant relationship
- However, these results are also not significant

RANKS TABLE

Group		N	Mean Rank	Mean Values	Sum of Ranks
SE_T1 FACTOR SCORE SE	1 INTERVENTION	7	9,14	3,4429	64,00
	2 CONTROL	10	8,90	3,4100	89,00
	Total	17			
SE_T3 FACTOR SCORE SE	1 INTERVENTION	7	10,50	3,6667	63,00
	2 CONTROL	10	7,30	3,4300	73,00
	Total	17			

TEST STATISTICS TABLE

	SE_T1 FACTOR SCORE SE	SE_T3 FACTOR SCORE SE
Mann-Whitney U	34,000	18,000
Wilcoxon W	89,000	73,000
Z	-0,098	-1,319
Asymp. Sig. (2-tailed)	0,922	0,187
Exact Sig. [2*(1-tailed Sig.)]	.962 ^b	.220 ^b

b. Not corrected for ties.

FINDINGS

Friedman:

- Comparing the three self-efficacy results within the Intervention group shows a practically significant increase over time
- However, these are not statistically significant ($p=0,247$).

RANKS TABLE

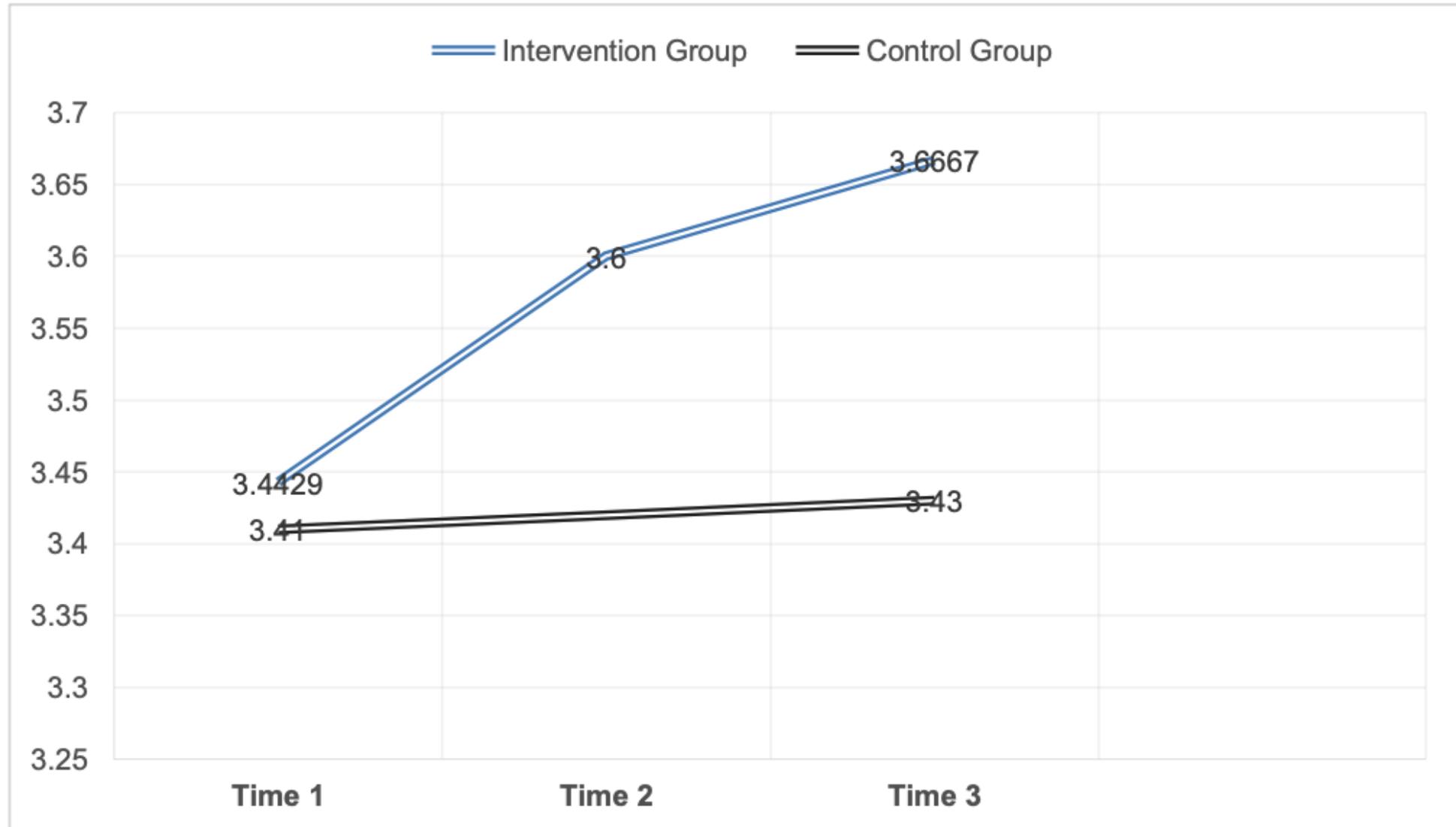
Group		Mean Rank
1 INTERVENTION	SE_T1 FACTOR SCORE SE	1,50
	SE_T2 FACTOR SCORE SE	2,33
	SE_T3 FACTOR SCORE SE	2,17

TEST STATISTICS TABLE

1 INTERVENTION	N	6
	Chi-Square	2,800
	Df	2
	Asymp. Sig.	0,247

FINDINGS

SELF-EFFICACY QUESTIONNAIRE RESULTS OVER TIME



FINDINGS

Wilcoxon Signed Rank test:

- Statistically significant difference between pre-test and immediate post-test assessment within the Intervention group (T1 vs T2)
- However, the relationship within the Intervention group between pre-test and 3-month post-test is not statistically significant (T1 vs T3)

DESCRIPTIVE STATISTICS

Group		N	Mean	Std. Deviation	Minimum	Maximum
1 INTERVENTION	SE_T1 FACTOR SCORE SE	7	3,4429	0,35989	2,90	4,00
	SE_T2 FACTOR SCORE SE	7	3,6000	0,31623	3,10	4,00
	SE_T3 FACTOR SCORE SE	7	3,6667	0,29439	3,30	3,90
2 CONTROL	SE_T1 FACTOR SCORE SE	10	3,4100	0,44083	2,70	3,90
	SE_T2 FACTOR SCORE SE	0				
	SE_T3 FACTOR SCORE SE	10	3,4300	0,38601	2,90	3,90

TEST STATISTICS TABLE

Group		SE_T2 FACTOR SCORE SE - SE_T1 FACTOR SCORE SE	SE_T3 FACTOR SCORE SE - SE_T1 FACTOR SCORE SE
1 INTERVENTION	Z	-2.041 ^b	-1.261 ^b
	Asymp. Sig. (2-tailed)	0,041	0,207
2 CONTROL	Z		-.171 ^b
	Asymp. Sig. (2-tailed)		0,865

b. Based on negative ranks.

LIMITATIONS



Sampling:

- Sample size should be increased
- Composition – only included Industrial Psychology graduates
- Opt-in study where people volunteered to participate
- Restriction of range, as volunteers likely possess higher levels of Self-efficacy and motivation

Time-lines:

- Bandura theorises that Self-efficacy only increases over time
- Therefore, impacts should be measured over a longer-term than 3 months

Assessment centre:

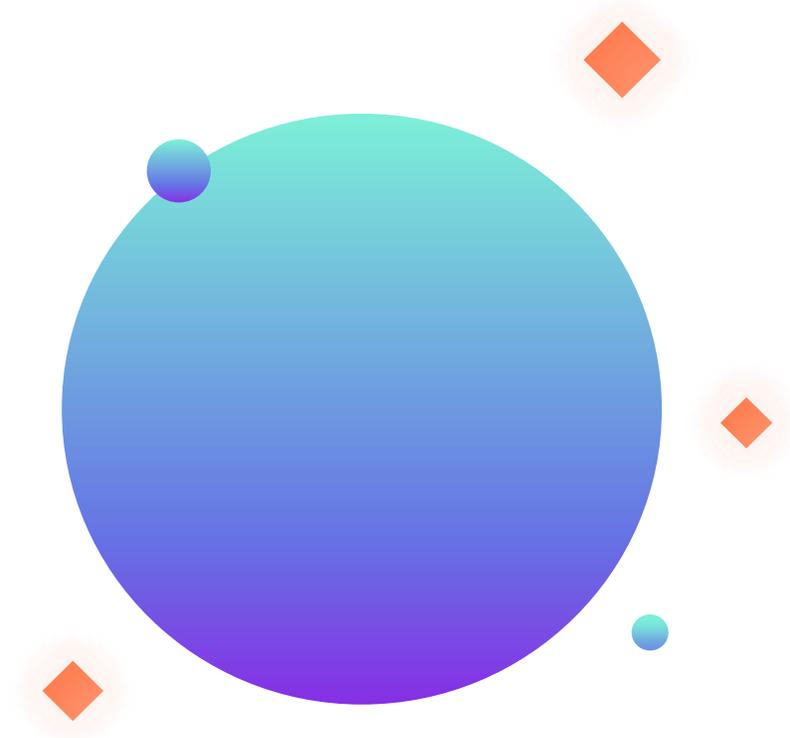
- Analyses should also be conducted on exercises and competency scores
- This would determine whether particular exercises and/or competencies have a greater impact on Generalised Self-efficacy

PRACTICAL IMPLICATIONS - EDUCATION

- **Self-efficacy interventions would be most fruitful if they started at a first-year level**
 - This will help students get started on the path of self-reflection and self-awareness
 - **During second and third year, students could be tracked over time and participate in various development programmes**
 - These programmes could focus on soft skills for entry into the job market
 - They could also provide a vital opportunity to start practicing Self-efficacy and other related intra-psychological skills
 - **Current student development focuses on content knowledge**
 - We only see the students who master skills, we don't see those who fail
 - How do we help students to improve over time – over and above teaching content knowledge and technical skills
 - Critical role of coaching and mentoring
 - **Flourishing in the academic environment**
 - Often students fail because they can't adapt sufficiently to the demands of the academic environment
 - Diagnostic Assessment Centres, feedback and development of Self-efficacy could be one the keys to unlock their potential and boost confidence
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PRACTICAL IMPLICATIONS - CORPORATE

- **Development of Self-efficacy**
 - Self-efficacy is a critical skill to build in employees, as a foundation for specific development of technical/soft skills
- **Theories to support development of Self-efficacy**
 - Goal setting theory - setting specific, ambitious targets
 - Scaffolded learning theory – supporting problem solving in new areas and then stepping back and offering support
- **Individual goals, not group goals**
 - Each employee should be on their own trajectory
 - Individual goals and individual growth should be the focus
 - Growth mindset vs fixed mindset
- **What does this entail?**
 - Gradually increasing difficulty of tasks over time
 - Greater focus on feedback
 - Support mechanisms in times of failure



MAIN TAKEAWAYS



- Diagnostic Assessment Centres are an effective way of increasing Self-efficacy
- Assessments and developmental feedback increases Self-efficacy in the short and medium-term
- Once an employee has gained Self-efficacy, they can set career goals with their line manager – and continue the positive cycle of growth
- In organisations, the individual growth path for employees should not be connected to a group norm
- Track progress against individual mastery paths. This calls for a different approach to leadership
- Give opportunities to people to stretch, but don't break them
- Provide a support mechanism to catch people if things go wrong

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Thank You

Any questions?