Distributors of Psytech International

Assessment Instrument and Software

Jung Type Indicator (JTI)

South African User Guide and Research Reference

Psytech South Africa
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The Jung Type Indicator

Introduction

This guide is for users and potential users of the Jung Type Indicator (JTI). It should be used in conjunction with the Technical Manual for the JTI, and the special feedback guide – "The Jung Type Indicator – the Sixteen Types". This guide does not replace the Technical Manual, but it is intended to provide the additional information that South African users need.

This user guide will be updated regularly as new research evidence becomes available. Psytech manuals and user guides are distributed electronically – at no charge - via the company's web site, and it is incumbent on the user to ensure that they download the updated versions regularly. Hard copies, or electronic copies on CD, of the latest versions of the user guides can also be purchased from the company if users prefer not to download the document themselves.

Structure of this manual

The manual is divided into the following sections:

- **Introduction**
  - This section covers the background to the questionnaire, administration instructions and general advice on its use in South Africa.
- **Reliability**
  - This section contains reports on the reliability studies done on the OPP in South Africa – the composition of the groups, reliability coefficients and Standard Error of Measurement where suitable data exist.
- **Validity**
  - This section contains reports on the validation studies done on the OPP in South Africa

The JTI is a preference questionnaire, based on a typology. Hence, reporting is not based on norm groups. Studies will be added to the various sections as they are completed. The date when it was last updated appears on every study. Every section has its own table of contents and introductory section.

Classification status of the Jung Type Indicator (JTI)

The JTI was submitted to the Psychometrics Committee of the Health Professions Council of South Africa in April 2001. The process of evaluation and classification is a lengthy one. Feedback reports received from the test reviewers indicate that the Jung Type Indicator meets the requirements for classification as a psychological test and a classification certificate was issued in December 2003.

Conditions of use and professional responsibilities

The JTI must be used under the control of a Psychologist, Psychometrist (Independent Practice), or Registered Counsellor.

Purchasing JTI materials and scoring services

When purchasing test materials or scoring services relating to the JTI, the signature and registration number of a Psychologist, Psychometrist (Independent Practice), or Registered Counsellor is required.

Constructing of test batteries

Only a Psychologist, Psychometrist (Independent Practice), or Registered Counsellor may decide which tests or questionnaires to use for a particular purpose. Psychometrists (Supervised Practice) or other role players such as HR Practitioners or line managers may not act independently of the Psychologist, and may not overrule the Psychologist's decisions.

Administration of the Jung Type Indicator

- The test may be administered by a Psychologist, Psychometrist (Independent Practice), Registered Counsellor or a Psychotechnician.

- Psychometrists (Supervised Practice) have to be supervised by a Psychologist.

Scoring of the Jung Type Indicator

The JTI may be scored by
- A Psychologist,
- A Psychometrist (Independent Practice),
- A Psychometrist (Supervised Practice),
- A Registered Counsellor, or
- A Psychotechnician

The scoring of the JTI is usually done by computer. The act of scoring is pure data capture and no interpretation is involved. Detailed instructions for scoring the JTI by computer can be found on the GeneSys Online platform, under tutorials. There are videos and downloadable PDFs. Special training in the use of the software is available and we strongly recommend attending this.

A self-scoring question and answer booklet is also available for the JTI, which enables the user to convert raw scores into a Jungian Type classification, and provides short summary descriptions of the various types. This is intended for use in situations when computer scoring is not feasible. Respondents should never be left to score their own questionnaires without the presence and assistance of a trained professional who can also give feedback on the questionnaire.

In South Africa, most JTIs are scored on computer or administered directly on-screen, for automatic scoring.

Reporting on the Jung Type Indicator

Once the JTI is scored, a comprehensive narrative report can be produced by the computer system. This report is not intended as a final feedback product to be handed out to respondents. Feedback must be given by a trained professional.

Feedback on JTI reports

Feedback on JTI reports may be done by Psychologists Psychometrists (Independent Practice) or Registered Counsellors. Psychometrists registered for supervised practice may give feedback on the JTI within clearly circumscribed guidelines laid down by a Psychologist, and provided that proper supervision, with regular consultation, is maintained.

What the Jung Type Indicator measures

Scales	
Extraversion	Introversion
Sensing	Intuiting
Thinking	Feeling
Judging	Perceiving

The Technical Manual and the "Jung Type Indicator – The Sixteen Types" give detailed information about the constructs measured by the Jung Type Indicator, and how these scales relate to behaviour.

Respondents for whom the JTI is suitable

Level of Education

The JTI is intended for respondents with an educational level of Grade 12. One must be sensitive to the fact that educational standards have differed considerably in South Africa. People from impoverished backgrounds are not likely to have had an education of the same standard as people from privileged backgrounds. The Psychologist in charge of the assessment should evaluate the situation with care, taking into account the intended respondent's background, fluency in English and so forth.

It is also possible that a person who has not had formal education up to Grade 12 level, may in fact have acquired sufficient fluency in English and self-insight to complete a JTI questionnaire to good effect. Every situation must be evaluated on its merits.

Proficiency in English

It may be necessary to test for proficiency in English. Some standardised measures of English language skills are available, and users could avail themselves of these. It is not recommended that persons with functional English levels below grade 10 should be required to complete the JTI.

Considering the socio-economic history of South Africa, it is reasonable to suppose that there are many people who should not be tested with questionnaire measures, because they have not had sufficient exposure to formal testing situations or their language proficiency is inadequate. The Psychologist should be realistic about this.

Some cautionary notes:

- It is not recommended that it should be used as the primary assessment instrument for personality in a selection situation. It should always form part of an assessment battery that includes other measures, and preferably some non-test information as well. If it is included in such a battery of measures, its primary purpose should be to provide supporting evidence for other personality measures.

- It is strongly recommended that a validation/integration interview should follow any assessment by means of tests or questionnaires. The interviewer should use this opportunity to verify the test results, and put them into perspective relative to the respondent's background and the purpose of the assessment.

- Users should pay attention to the reliability and validity data available relating to the population group on which they intend to use the questionnaire.

- No person should be excluded from an opportunity or position because of a personality measure used in isolation.

- It should be pointed out that the JTI is not intended as a diagnostic measure for psychopathology.

Computer-assisted reports

Psytech's tests and questionnaires are all supported by computer-assisted reports. Some of the tests have a range of computer-assisted reports, allowing instant interpretation of the test results from a variety of perspectives. Some reports combine information from several tests.

How do the computer-generated reports work?

The reports represent an expert system, drawing on numerous built-in relationships between patterns of scores and human behaviour. It would normally take a user many years of experience to gain the knowledge and insight that are contained in this reporting system.

What are the advantages of computer-generated reports?

Computer-generated reports ensure that the complete pattern of scores is interpreted every time. No score or combination of scores is overlooked. Everyone is treated in exactly the same way, irrespective of whether the person interpreting the results is having an 'off day' or is pressed for time. This helps to ensure fairness and consistency. Moreover, computer-generated reports save a lot of time, freeing the professional up to add value in the interview, integration of results from other sources and feedback processes.

Are computer-assisted reports open to abuse?

Like any powerful tool, computer-assisted reports can be misused. They should not be used to substitute for professional expertise, but rather to supplement and support it.

One must remember that these reports are generic-the standard reports do not know anything about the requirements of the positions that the respondent may have applied for. They are also completely unaware of the respondent's background and personal circumstances. They can usually not stand on their own, but must be used as one source of information in the assessment process, and be integrated with other information. This integration and interpretation is highly skilled professional work, and it should not be left to persons who have not had the required training.

In some situations, handing out unaltered computer-generated reports to respondents or line managers without any counselling or explanation, could be considered abuse of these reports. We recommend that the technical appendix in a report, which gives a graphic summary of raw scores and profiles, not be given to untrained persons.

Administration Instructions for the Jung Type Indicator

The JTI can be administered either on the computer, via the GeneSys online platform, or with paper and pencil, and in a self-scorable booklet.

For instructions on how to operate the platform for test administration, please refer to the GeneSys Online platform, under tutorials via https://eu.genesysonline.net/. There are videos and downloadable PDFs. Special training in the use of the software is available, which is strongly recommend. Do not attempt to use computer software for test administration if you are not completely comfortable with how the online platform works. Familiarise yourself with the process of setting up a testing session with the software, creating the data record and entering the respondent's biographical information into the system, or assisting the respondent in doing so themselves.

Administration using Booklets and Answer Sheets

Say:

"From now on, please do not talk among yourselves, but ask me if anything is not clear. We shall be doing the Jung Type Indicator which has no time limit, however most people take about 10 minutes. During the test I shall be checking to make sure you are not making any accidental mistakes when filling in the answer sheet. I will not be checking your responses."

WARNING: It is most important that answer sheets do not go astray. They should be counted out at the beginning of the test and counted in again at the end.

Distribute the answer sheets

Then ask:

"Has everyone got a sharp pencil, an eraser, and an answer sheet?"

Rectify any omissions, then say:

"Please fill in the biographical information requested on the answer sheet."

If respondents are also completing other tests or questionnaires as part of the same testing session, say:

"*Please make sure that you fill in your name exactly as you filled it in on the other answer sheets today"*

If there are objections to the filling in of information regarding race and gender, say that this information must be collected to do the necessary research on the test in order to ensure compliance with legal requirements.

Walk round the room to check that the instructions are being followed.

WARNING: It is vitally important that test booklets do not go astray. They should be counted out at the beginning of the session and counted in again at the end.

Distribute the booklets with the instruction:

“Please do not open the test booklet until I tell you to do so.”

Remembering to read slowly and clearly, go to the front of the group and say:

> *"Please open the booklet and follow the instructions for this test as I read them aloud." (Pause to allow booklets to be opened).*
>
> *This is a questionnaire concerning your interests, preferences and feelings about a range of things.*
>
> You have to rate yourself on a scale from one to five on every question.
>
> Select the answer that best describes you on the answer sheet, and indicate your answer by marking the appropriate box clearly.

Check for understanding of the instructions so far, then say:

> *"When answering the questions please remember the following:*
>
> 1. *Do not spend too much time pondering over the answer to each question. The information given in a question may not be as full as you would wish, but answer as best you can.*
> 2. *Please try to avoid the middle **(In between)** answer wherever possible.*
> 3. *Be as honest and truthful as you can. Don't give an answer just because it seems to be the right thing to say.*
> 4. *Make sure you answer every question, even those which do not seem to apply to you.*
> 5. *If you wish to change an answer, please erase it and insert your new answer."*

Then say very clearly:

> *"Does everyone understand how to do this test?"*

Deal with any questions, appropriately, and then say:

> ***"Please turn over the page and begin"***

If respondents ask questions about the meaning of words in the questionnaire, explain these words and make a note of the questions that arose.

If respondents ask about which situation they should consider when responding to the test items, say:

“Think of yourself in an ordinary work situation”

Walk around the room at appropriate intervals to check for potential problems.

When everyone has completed the questionnaire:

COLLECT THE ANSWER SHEETS AND THE TEST BOOKLETS, ENSURING THAT ALL MATERIALS ARE RETURNED (COUNT BOOKLETS AND ANSWER SHEETS)

Then say:

> *"Thank you for completing the Jung Type Indicator."*

Administration using the self-scoring booklet

Say:

"From now on, please do not talk among yourselves, but ask me if anything is not clear. We shall be doing the Jung Type Indicator which has no time limit, however most people take about 10 minutes. During the test I shall be checking to make sure you are not making any accidental mistakes when filling in the answer sheet. I will not be checking your responses."

Distribute the booklets with the instruction:

“Please do not open the test booklet until I tell you to do so.”

"Has everyone got a sharp pencil or a pen, and a booklet?”

Rectify any omissions, then say:

“Open your booklets. Please fill in the biographical information requested in the space provided...”

If respondents are also completing other tests or questionnaires as part of the same testing session, say:

"*Please make sure that you fill in your name exactly as you filled it in on the other answer sheets today"*

If there are objections to the filling in of information regarding race and gender, say that this information must be collected to do the necessary research on the test in order to ensure compliance with legal requirements.

Walk round the room to check that the instructions are being followed.

WARNING: It is vitally important that test booklets do not go astray. They should be counted out at the beginning of the session and counted in again at the end.

Remembering to read slowly and clearly, go to the front of the group and say:

> *"Please follow the instructions for this test as I read them aloud." (Pause to allow booklets to be opened).*
>
> *This is a questionnaire concerning your interests, preferences and feelings about a range of things.*
>
> You have to rate yourself on a scale from one to five on every question.
>
> Select the answer that best describes you, and indicate your answer by marking the appropriate box clearly.

Check for understanding of the instructions so far, then say:

> *"When answering the questions please remember the following:*
>
> 1. *Do not spend too much time pondering over the answer to each question. The information given in a question may not be as full as you would wish, but answer as best you can.*
> 2. *Please try to avoid the middle **(In between)** answer wherever possible.*
> 3. *Be as honest and truthful as you can. Don't give an answer just because it seems to be the right thing to say.*
> 4. *Make sure you answer every question, even those which do not seem to apply to you.*
> 5. *If you wish to change an answer, please do not erase it, but cross it out clearly and insert your new answer."*

Then say very clearly:

> *"Does everyone understand how to do this test?"*

Deal with any questions, appropriately, and then say:

> ***"Please begin"***

If respondents ask questions about the meaning of words in the questionnaire, explain these words and make a note of the questions that arose.

If respondents ask about which situation they should consider when responding to the test items, say:

“Think of yourself in an ordinary work situation”

Walk around the room at appropriate intervals to check for potential problems.

When everyone has completed the questionnaire:

COLLECT THE TEST BOOKLETS, ENSURING THAT ALL MATERIALS ARE RETURNED (COUNT BOOKLETS)

Then say:

> *"Thank you for completing the Jung Type Indicator."*

The Jung Type Indicator (JTI)

Reliability introduction

Reliability studies

Reliability studies are done whenever we receive a substantial body of data that contains item responses. Reliability calculation is one of the services offered by Psytech SA to its clients. In almost all cases, clients have been willing to share the results of these calculations with other users.

The number of reliability studies on the JTI is still relatively small. Users are encouraged to come forward with additional data.

Availability of biographical information

Frequently full biographical information is not collected, which makes it very difficult to calculate separate reliabilities on different racial and language groups. In some cases, it has been necessary to do a post-hoc classification of respondents based on their names. In such situations it is usually not possible to distinguish between Whites and Coloureds, and they have had to be classified together in one group.

The effect of English language proficiency on the reliability of the JTI

If the respondents have difficulty understanding the item text, the internal consistency reliability of the test is affected. It stands to reason that for groups with lower levels of education, or people who were historically affected by poorer education due to past discriminatory policies, the JTI will not be as reliable, and hence not as valid, as for groups who have had the benefit of good education. While the reliability for the JTI is within acceptable limits, even for Black respondents, this should be borne in mind when the test is applied to groups where there may be doubt about the English proficiency.

Pre-screening for language proficiency is advised before a personality questionnaire should be used. A standardized test of English proficiency is preferred.

The effect of sample size on reliability

An overview of the reliability results will alert the user to the phenomenon that calculated reliabilities are often higher with larger, more diverse samples.

If a sample is very narrowly selected by being based on a particular group of people with particular characteristics, the variance in the sample is reduced. This affects the reliability coefficients. Internal consistency reliability coefficients are based on correlations. Correlations are reduced under conditions where range is restricted.

In-house calculated reliabilities may also be depressed by lack of variance in the sample, particularly if the respondents are employees (not applicants) who were pre-selected on personality. This may be true even if they were pre-selected on a different personality questionnaire (not the JTI).

Standard error of measurement (SEM)

Where data were available, the standard error of measurement is reported for every group for which we have calculated reliabilities.

Choosing an appropriate comparison group for reliability

If a larger, more diverse group is available that conforms to the demographic characteristics of the group you are interested in, use that table for comparison purposes.

The effect of reliability on validity

The reliability of a test places an upper limit on its validity. If a test is not reliable, it can not be valid.

What Does It Mean If A Test Has Low Reliability?

On an ability measure, Reliability is considered low if it is below 0.75. Personality measures should always be interpreted with caution. In cases where the reliability is below 0.65, the results should be interpreted with extreme caution by using additional information for this purpose. The interview prompts report can assist the user in obtaining additional information for the purpose of triangulation, directly from the respondent.
There are various reasons why the reliability of a test, or of a specific sample of the overall sample group, might be low:

- Respondents guessing the answers to items which they may not know. Results should therefore be interpreted with caution.
- Respondents may have rushed to complete the assessment or may have been lacking in motivation at the time of test completion. In this instance, a lower reliability could be attributed to guessing or hasty decision making.
- Respondents finding the test items too difficult.
- Shorter tests, although economic and quick to administer, tend to be less reliable.

It is best practice to always rely on multiple sources of information when making an informed decision utilising an assessment process. This is of particular importance when the reliability of an assessment is lower than usual.

Advice to users

- Collect full biographical information on the respondents.
- Pre-screen for language proficiency using a standardized test of English proficiency wherever possible.
- Verify whether the scales you are interested in for decision-making purposes, are reliable for the persons you want to test.
- Where available, bear the Standard Error of Measurement in mind when making decisions or recommendations based on test results.
- Do not use unreliable scales for decision making.
- Do not rely on a single test when reliability is doubtful.

List of reliability tables

Group	Type of reliability	N0.
Clients at a University counseling center	Internal Consistency	**R1**
SA Information Technology applicants	Internal Consistency	**R2**
SA Bank workers	Internal Consistency	**R3**
SA managerial/professional	Internal Consistency	**R4**

JTI Reliability: Clients at a University Counselling Centre

Sample composition

The sample consisted of clients at a University Counselling Centre in Gauteng. All clients were seeking advice regarding career choice, subject choices or career change. Data were collected between 2001 and 2002.

Unfortunately full biographical information was not collected, therefore the respondent were classified into race groups according to names where this could be done. Whites or coloureds were coded WC. The minimum educational level was grade 11.

	Frequency table: Race			
Category	Count	Cumulative Count	Percent	Cumulative Percent
A	62	62	17.27019	17.2702
WC	277	339	77.15877	94.4290
B	18	357	5.01393	99.4429
Missing	2	359	0.55710	100.0000

	Frequency table: Sex			
Category	Count	Cumulative Count	Percent	Cumulative Percent
F	190	190	52.92479	52.9248
M	168	358	46.79666	99.7214
E	1	359	0.27855	100.0000
Missing	0	359	0.00000	100.0000

	Descriptive Statistics AGE					
Variable	Mean	Std.Dev	Minimum	Maximum	N	No.cases Missing
Age	18.77437	4.000253	2.000000	46.00000	359	0

Descriptive statistics on JTI Scales

	Descriptive Statistics				
Variable	Valid N	Mean	Minimum	Maximum	Std.Dev.
EI - Extraversion - Introversion	359	24.31755	0.00000	53.00000	9.708862
SN - Sensing - Intuiting	359	33.81337	14.00000	56.00000	8.359669
TF - Thinking - Feeling	359	38.66295	15.00000	60.00000	7.745645
JP - Judgment - Perception	359	26.86351	3.00000	54.00000	9.457389

Internal Consistency Reliabililities

Scale	Cronbach Alpha
Extraversion – Introversion	.862558
Sensing – Intuiting	.795979
Thinking – Feeling	.780085
Judgment – Perception	.846875

Standard error of measurement

	1 ScaleName	2 SEM	3 SD	4 Reliability
1	Extraversion - Introversion	3.59938	9.708862	0.862558
2	Sensing - Intuiting	3.77595	8.359669	0.795979
3	Thinking - Feeling	3.63233	7.745645	0.780085
4	Judgment - Perception	3.70079	9.457389	0.846875

JTI Reliability: Information Technology Applicants

Sample composition

Respondents were applicants for training or placement to a specialist consultancy operating in Gauteng. Race was coded from respondents' names. Whiles and coloureds were coded WC. The minimum educational level was grade 12.

	Frequency table: GENDER			
Category	Count	Cumulative Count	Percent	Cumulative Percent
Male	45	45	72.58065	72.5806
Female	16	61	25.80645	98.3871
Unknown	1	62	1.61290	100.0000
Missing	0	62	0.00000	100.0000

	Frequency table: RACE			
Category	Count	Cumulative Count	Percent	Cumulative Percent
WC	28	28	45.16129	45.1613
A	10	38	16.12903	61.2903
B	22	60	35.48387	96.7742
Missing	2	62	3.22581	100.0000

	Descriptive Statistics AGE					
Variable	Mean	Std.Dev	Minimum	Maximum	N	No.cases Missing
AGE	23.43548	4.355592	0.00	31.00000	62	0

Descriptive statistics on JTI scales

	Descriptive Statistics				
Variable	Valid N	Mean	Minimum	Maximum	Std.Dev.
EI Extraversion - Introversion	62	24.46774	1.00000	46.00000	9.044005
SN Sensing - Intuiting	62	35.53226	19.00000	51.00000	6.540461
TF Thinking - Feeling	62	35.01613	15.00000	49.00000	6.749601
JP Judgment - Perception	62	20.87097	4.00000	39.00000	7.442642

Internal consistency reliabilities

JTI Scale	Coefficient Alpha
Extraversion-Introversion	.840961
Sensing-Intuiting	.689844
Thinking-Feeling	.709406
Judgment-Perception	.735848
Mean Alpha	**0.744015**

Standard error of measurement

	1 ScaleName	2 SEM	3 SD	4 Reliability
1	Extraversion - Introversion	3.60672	9.044005	0.840961
2	Sensing - Intuiting	3.64249	6.540461	0.689844
3	Thinking - Feeling	3.63849	6.749601	0.709406
4	Judgment - Perception	3.82520	7.442642	0.735848

JTI Reliability: SA Bank workers

The sample consisted of 68 employees in a major South African bank, tested as part of a study to investigate the perceptions of workers regarding the social justice relating to the Employment Equity Act.

	Frequency table: GENDER			
Category	Count	Cumulative Count	Percent	Cumulative Percent
Female	30	30	44.11765	44.1176
Unknown	2	32	2.94118	47.0588
Male	36	68	52.94118	100.0000
Missing	0	68	0.00000	100.0000

	Frequency table: LANGUAGE			
Category	Count	Cumulative Count	Percent	Cumulative Percent
Afrikaan: Afrikaans	22	22	32.35294	32.3529
English	38	60	55.88235	88.2353
isiZulu	2	62	2.94118	91.1765
Setswana:	3	65	4.41176	95.5882
isiXhosa:	1	66	1.47059	97.0588
Sesotho	2	68	2.94118	100.0000
Missing	0	68	0.00000	100.0000

	Frequency table: EDUCATION			
Category	Count	Cumulative Count	Percent	Cumulative Percent
Grade 12:	34	34	50.00000	50.0000
Grade 10 or 11	1	35	1.47059	51.4706
Tec/Uni diploma	12	47	17.64706	69.1176
Degree	11	58	16.17647	85.2941
Post Graduate	6	64	8.82353	94.1176
Vocational Training	1	65	1.47059	95.5882
Missing	3	68	4.41176	100.0000

	Frequency table: RACE			
Category	Count	Cumulative Count	Percent	Cumulative Percent
European:	55	55	80.88235	80.8824
African	9	64	13.23529	94.1176
Coloured:	3	67	4.41176	98.5294
Other	1	68	1.47059	100.0000
Missing	0	68	0.00000	100.0000

Descriptive statistics on JTI scales

Variable	Descriptive Statistics				
	Valid N	Mean	Minimum	Maximum	Std.Dev.
EI - Extraversion-Introversion	68	33.41176	13.00000	51.00000	9.504493
SN - Sensing - Intuiting	68	29.55882	14.00000	52.00000	8.697885
TF - Thinking-Feeling	68	33.97059	17.00000	50.00000	6.994605
JP - Judgment - Perception	68	23.76471	5.00000	45.00000	8.936121

Internal consistency reliabilities

JTI Scale	**Coefficient Alpha**
Extraversion-Introversion	.830489
Sensing-Intuiting	.791712
Thinking-Feeling	.682417
Judgment-Perception	.816647
Mean Alpha	**0.780316**

Standard error of measurement

	1 ScaleName	2 SEM	3 SD	4 Reliability
1	Extraversion - Introversion	3.91316	9.504493	0.830489
2	Sensing - Intuiting	3.96959	8.697885	0.791712
3	Thinking - Feeling	3.94177	6.994605	0.682417
4	Judgment - Perception	3.82642	8.936121	0.816647

JTI Reliability: SA Managerial/Professional group

The sample consisted of 92 management development candidates and Psytech course delegates, tested by Psytech SA and consultants. Race was coded based on names. Whites or coloureds were coded WC.

	Frequency table: RACE			
Category	Count	Cumulative Count	Percent	Cumulative Percent
b	30	30	32.60870	32.6087
w	1	31	1.08696	33.6957
a	11	42	11.95652	45.6522
wc	50	92	54.34783	100.0000
Missing	0	92	0.00000	100.0000

	Frequency table: GENDER			
Category	Count	Cumulative Count	Percent	Cumulative Percent
Male	57	57	61.95652	61.9565
Female	34	91	36.95652	98.9130
Unknown	1	92	1.08696	100.0000
Missing	0	92	0.00000	100.0000

	Descriptive Statistics AGE					
Variable	Mean	Std.Dev	Minimum	Maximum	N	No.cases Missing
AGE	27.14130	8.026853	0.00	53.00000	92	0

Descriptive statistics on JTI scales

	Descriptive Statistics				
Variable	Valid N	Mean	Minimum	Maximum	Std.Dev.
EI Extraversion - Introversion	92	24.83696	1.00000	46.00000	9.241898
SN Sensing - Intuiting	92	35.77174	13.00000	57.00000	8.403431
TF Thinking - Feeling	92	35.92391	15.00000	50.00000	7.205361
JP Judging - Perception	92	22.27174	2.00000	47.00000	9.027556

Internal consistency reliabilities: total sample

JTI Scale	Coefficient Alpha
Extraversion-Introversion	.843367
Sensing-Intuiting	.815175
Thinking-Feeling	.739545
Judgment-Perception	.825719
Mean Alpha	**0.805952**

Standard Error of measurement

	1 ScaleName	2 SEM	3 SD	4 Reliability
1	Extraversion - Introversion	3.65766	9.241898	0.843367
2	Sensing - Intuiting	3.61274	8.403431	0.815175
3	Thinking - Feeling	3.67724	7.205361	0.739545
4	Judging - Perception	3.76873	9.027556	0.825719

Internal consistency reliabilities: black members of this sample

JTI Scale	Coefficient Alpha
Extraversion-Introversion	.809222
Sensing-Intuiting	.612146
Thinking-Feeling	.595522
Judgment-Perception	.620531
Mean Alpha	**0.659355**

The Jung Type Indicator (JTI)

Validity Introduction

The JTI's technical manual covers the concept of validity, the different types of validity and refers to a range of validation studies done internationally with the JTI. Users are encouraged to familiarise themselves with this information and to use the South African studies mentioned here, as supplementary information.

Recommendations

Users are strongly encouraged to do validation studies on the instruments they use within their organisations or within their industry sectors, by co-operating with other organisations in the same industry. In some cases, this may mean sharing information with organisations that are potential competitors. In the interest of professionalism, users are encouraged to overcome their reservations in this regard, since co-operation is in their interest. Psytech South Africa provides extensive support for validation studies done on its instruments, and users are welcome to contact their representatives in this regard.

For construct validation studies, it is necessary to assess the domain of personality with more than one instrument on the same respondents. This may seem like an unnecessary expense at first, but it is worthwhile to verify how personality questionnaires relate to one another, particularly if one is still introducing a new questionnaire. All of the validation studies done on the JTI have been construct validation studies. The JTI is not recommended as a personality measure for selection purposes, and the correlations with other measures support the construct validity of the JTI quite convincingly.

List of South African validity studies done on the Jung Type Indicator

Study	Validity type	Number
Correlations with Occupational Personality Profile	Construct	V1
Correlations with Occupational Interest Profile	Construct	V2
Correlations with Values and Motives Inventory	Construct	V3

JTI Validity: Correlations with Occupational Personality Profile

Sample composition

The sample consisted of adults in managerial or sales positions tested by a consultancy firm.

	Frequency table: SEX			
Category	Count	Cumulative Count	Percent	Cumulative Percent
Female	20	20	17.85714	17.8571
Male	92	112	82.14286	100.0000

	Frequency table: LANGUAGE			
Category	Count	Cumulative Count	Percent	Cumulative Percent
English	53	53	47.32143	47.3214
Afrikaans	42	95	37.50000	84.8214
Sesotho	3	98	2.67857	87.5000
Setswana	2	100	1.78571	89.2857
Other	1	101	0.89286	90.1786
isiZulu	5	106	4.46429	94.6429
Xitsonga	1	107	0.89286	95.5357
isiXhosa	1	108	0.89286	96.4286
Missing	4	112	3.57143	100.0000

	Frequency table: EDUCATION			
Category	Count	Cumulative Count	Percent	Cumulative Percent
Tec/Uni diploma	13	13	11.60714	11.6071
Post Graduate	1	14	0.89286	12.5000
Grade 12	77	91	68.75000	81.2500
Grade 10 or 11	13	104	11.60714	92.8571
Vocational Training	1	105	0.89286	93.7500
Degree	3	108	2.67857	96.4286
Missing	4	112	3.57143	100.0000

	Frequency table: RACE			
Category	Count	Cumulative Count	Percent	Cumulative Percent
European	86	86	76.78571	76.7857
Asian	1	87	0.89286	77.6786
African	14	101	12.50000	90.1786
Other	5	106	4.46429	94.6429
Coloured	2	108	1.78571	96.4286
Missing	4	112	3.57143	100.0000

	Descriptive Statistics AGE					
Variable	Mean	Std.Dev	Minimum	Maximum	N	No.cases Missing
AGE	37.94643	9.530264	0.00	61.00000	112	0

Correlations with OPP

Only correlations that were significant at the 5% level were retained.

Variable	Extraversion-Introversion	Sensing-Intuition	Thinking-Feeling	Judgment-Perception
Accommodating-Assertive	**-.31***			
Detail Conscous-Flexible				**.38***
Cynical-Trusting	**-.20***	**.19***		
Emotional-Phlegmatic	**-.45***		**-.35***	**-.31***
Reserved-Gregarious	**-.63***			
Genuine-Persuasive	**-.54***			
Composed-Contesting				**-.29***
Optimistic-Pessimistig	**.44***	**-.22***		
Abstract-Pragmatic	**.27***	**-.64***	**-.20***	

According to these findings:

People who score high on Introversion are more likely to be: Accommodating, Cynical, Emotional, Reseved, Genuine, Pessimistic and Pragmatic.

People who score high on Intuition are more likely to be: Cynical, Optimistic and Abstract.

People who score high on Feeling are more likely to be: Emotional and Abstract.

People who score high on perception are more likely to be: Flexible, Emotional and Composed.

These correlations support the construct validity for both tests.

JTI Validity: Correlations with Occupational Interest Profile

Sample composition

The sample consisted of clients at a vocational guidance centre at a university in Gauteng. The minimum educational level was grade 11.

	Frequency table: Race			
Category	Count	Cumulative Count	Percent	Cumulative Percent
White/coloured	269	269	76.63818	76.6382
Asian	63	332	17.94872	94.5869
Black	19	351	5.41311	100.0000
Missing	0	351	0.00000	100.0000

	Frequency table: Sex			
Category	Count	Cumulative Count	Percent	Cumulative Percent
Female	183	183	52.13675	52.1368
Male	166	349	47.29345	99.4302
Unknown	1	350	0.28490	99.7151
Missing	1	351	0.28490	100.0000

	Descriptive Statistics AGE					
Variable	Mean	Std.Dev	Minimum	Maximum	N	No.cases Missing
Age	18.59544	3.170648	15.00000	42.00000	351	0

Correlations with Occupational Interest Profile

Only correlations that were significant at the 5% level were retained.

Variable	Correlations Marked correlations are significant at p < .05000 N=353 (Casewise deletion of missing data) JTI_EI	JTI_SN	JTI_TF	JTI_JP
Need for Excitement	-0.31	0.26		0.27
Stability			-0.33	
Need for Change		0.28		0.80
Need for People	-0.81			
Need for Control	-0.41		-0.14	-0.27
Persuasive interest	-0.49	0.34		
Scientific interest	0.16			
Practical interest		0.11		0.11
Administrative interest		-0.26	-0.25	-0.36
Caring/nurturing interest		0.15	0.61	
Artistic interest		0.71	0.30	0.26
Logical interest	0.18		-0.25	-0.18

Of particular interest is the high negative correlation of Introversion with Need for People as measured on the OIP. According to these findings, introverts also have a low need for control and a low interest in persuading people.

The Sensing.Intuiting scale had a high positive correlation with Artistic Interest, indicating that intuitive people have an interest in art.

The Thinking-Feeling scale had a moderate negative correlation with Stability and a high positive correlation with the Caring-Nurturing scale.

The Judgment-Perception scale had a particularly high correlation with the need for change as measured by the OIP.

This pattern of correlation supports the construct validity for both instruments.

JTI validity: Correlations with Values and Motives Inventory

Sample composition

The sample consisted of clients at a vocational guidance centre at a university in Gauteng. The minimum educational level was grade 11.

	Frequency table: Race			
Category	Count	Cumulative Count	Percent	Cumulative Percent
White/coloured	269	269	76.63818	76.6382
Asian	63	332	17.94872	94.5869
Black	19	351	5.41311	100.0000
Missing	0	351	0.00000	100.0000

	Frequency table: Sex			
Category	Count	Cumulative Count	Percent	Cumulative Percent
Female	183	183	52.13675	52.1368
Male	166	349	47.29345	99.4302
Unknown	1	350	0.28490	99.7151
Missing	1	351	0.28490	100.0000

	Descriptive Statistics AGE					
Variable	Mean	Std.Dev	Minimum	Maximum	N	No.cases Missing
Age	18.59544	3.170648	15.00000	42.00000	351	0

Correlations with VMI

Only correlations that were significant at the 5% level were retained.

Variable	Correlations Marked correlations are significant at p < .05000 N=348 (Casewise deletion of missing data) JTI_EI	JTI_SN	JTI_TF	JTI_JP
VMI_TRADITIONAL		-0.24		-0.14
VMI_MORALITY	0.12	-0.16	0.12	-0.26
VMI_INDEPENDENCE		0.33		0.24
VMI_ETHICAL/TRANSCENDENTAL			0.28	
VMI_ALTRUISM		0.17	0.57	
VMI_AFFILIATION	-0.51		0.26	
VMI_AFFECTION	-0.29	0.13	0.48	
VMI_ACHIEVEMENT	-0.18			-0.35
VMI_FINANCIAL	-0.21		-0.19	
VMI_SAFETY	0.20	-0.15	0.11	-0.26
VMI_AESTTHETIC		0.69	0.33	0.21

According to these results, persons who score high on Introversion have low affiliation needs.
Persons who score high on Intuition have high Aesthetic values.
Persons who score high in Feeling have high levels of Altruism and are motivated by a need for Affection.

The pattern of correlations in these results support evidence of construct validity for both instruments.