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Abstract
Previous research has found that participants in redecision marathons experience increased personal growth and improvements in psychological well-being (McNeel, 1982; Noriega-Gayol, 1997; Widdowson & Rosseau, 2014). In this article, the authors conducted a quantitative analysis based on the use of the Ryff Scales of Psychological Wellbeing to determine whether participants (n=49) at an executive coaching redecision marathon would experience an increase in psychological well-being. The findings show statistically significant improvements in psychological well-being overall, and specifically within the sub-scales of autonomy, environmental mastery, personal growth and self-acceptance, suggesting that redecision-based workshops are effective for improving subjective psychological well-being.

Key Words
transactional analysis, redecision, effectiveness, psychological wellbeing, executive coaching.

Introduction
This is the third article in a series which has examined the use of redecision methods (Goulding & Goulding, 1979) as applied in an executive coaching workshop context. The first article (Rosseau, Rosseau & Widdowson, 2014) outlined the basic structure of the workshop and key theoretical concepts which guide the workshop process. The second article (Widdowson & Rosseau, 2014) was a qualitative study which explored participants' experiences of attending the workshop. The qualitative study found that participants experienced enhanced self-awareness, a greater sense of self-acceptance, increased self-esteem and self-confidence and an increased sense of well-being. Additionally, participants in the qualitative study experienced positive interpersonal changes and improvements in their leadership skills.

With the present article, we take our investigations further, by using a quantitative measure of psychological wellbeing to examine whether the redecision-based executive coaching workshop is effective at increasing the subjective sense of psychological wellbeing amongst participants.

For many years, psychologists and other associated professionals developed a vast range of tools to assess pathology and symptoms. Since the development of the positive psychology movement (Seligman & Csikszentmihalyi, 2000), there has been a growing number of professionals who are seeking to understand and enhance psychological wellbeing (PWB), as opposed to approaches which seek to reduce symptoms and psychopathology.

Defining and measuring PWB has been problematic, with a growing consensus amongst researchers that PWB appears to be a complex and multi-dimensional construct (Diener, 2009; Dodge, Daly, Huyton & Sanders, 2012; Pollard and Lee, 2003). Furthermore, there is some debate about the extent to which PWB can be considered a stable trait, as opposed to a more fluctuating state. Headley and Wearing (1991) and Dodge et al (2012) consider that PWB can be defined as a state of equilibrium whereby an individual’s personal and social resources (including personality factors and socio-economic/ demographic factors) are either stretched or replenished by life events which either deplete or enhance PWB respectively.

A number of authors support a dynamic equilibrium theory of PWB as constituting a stable sense of PWB which is supported or challenged by resources and challenges respectively (Reber, 1995; Headley and Wearing, 1992; Suh, Diener & Fujita, 1996). “In essence, stable wellbeing is when individuals have the psychological, social and physical resources they need to meet a particular psychological, social and/or physical challenge. When individuals have more challenges than resources, the see-saw dips, along with their wellbeing and vice-versa” (Dodge et al., 2012: 230).
Ryff Scales of Psychic Wellbeing

Carol Ryff (1989) identified a series of dimensions which can be combined to give a sense of an individual’s subjective experience of PWB, synthesising material from a number of literature sources regarding PWB and developing a multi-dimensional model of PWB, from which she developed the 42 item Ryff Scales of Psychological Well-being.

The six dimensions of the Ryff Questionnaire (2015) are:

- High scorers on the Self-Acceptance Scale are considered to have a positive attitude towards self and a general sense of acceptance of all sides of their personality - both good and bad. Low scorers would have a sense of dissatisfaction about self and dislike particular personal characteristics or traits.  
- High scorers on the Positive Relations with others scale would have “warm, satisfying, trusting relationships with others; be concerned about the welfare of others (and would be) capable of strong empathy, affection, and intimacy” (Ryff & Keyes, 1995: 727). Low scorers would have poor or strained relationships with others, and may feel isolated or find it difficult to express feelings of warmth in relationships.  
- High scorers on the Autonomy scale would have a clear sense of independence and self-determination and have an internal locus of evaluation (Rogers, Kirschenbaum & Henderson, 1990). Low scorers on this scale may be overly concerned with other’s views or expectations and may have a tendency to defer to other’s opinions.  
- Those scoring highly on the Environmental Mastery scale are considered to have a clear sense of competence over their life and environment and experience a capacity to manage complex and multiple activities. Low scores on this scale are associated with people who have difficulty in managing the demands of day to day life, showing a low sense of control over the external world and their surroundings.  
- A high score on the Purpose in Life scale is seen as indicative of a person who has a clear sense over their personal goals and direction in life and has a sense of personal meaning in relation to their current and past life. Those with low scores on this scale are considered to have little sense of purpose or meaning in their life and may lack clear personal goals or have little sense of personal direction.  
- Finally, persons who score highly on the Personal Growth scale are viewed as having a sense of openness to experiences and having a feeling of continual change, growth and personal development. Individuals with a low score on this scale are considered to experience a sense of stagnation with a feeling of little improvement or growth over time and low ability to develop new attitudes or behaviours (Ryff & Keyes, 1995). Ryff & Keyes (1995) conducted a confirmatory factor analysis study which investigated the validity of Ryff’s measure using a large national probability sample (n=1108) of persons living in the United States. Their study confirmed the validity of the theoretically-based scale dimensions and supported claims that the tool can effectively measure PWB.

The measure is not without its critics. In particular, it has been critiqued for its factor validity, and there have been concerns regarding the clarity and distinctiveness of the dimensions and whether there is clear validity to the six factor structure of the measure (Abbott, Pioubidis, Huppert, Kuh, Wadsworth & Croudace 2006). One large scale validity study conducted by Abbott et al (2006) examining validity and drawing on a large sample (n=1179) of women in the UK aged between 47 and 54, suggested that the six dimensions of the Ryff scales could indeed be reduced to three scales; autonomy, positive relations and motivation/self-direction. These three scales were considered to be similar to the three-factor structure of PWB as described by Deci and Ryan (1985, 2000), who put forward the hypothesis that PWB is associated with the fulfilment of the three psychological needs of autonomy, relatedness and competence.

The study by Abbott et al (2006) indicated high correlations between the environmental mastery, purpose in life, personal growth and self-acceptance scales, which may suggest that these four dimensions may possibly be subsumed within an overarching category of general wellbeing. They also found a strong negative association between high PWB scores and a measure of psychological distress, which was clearest for the Ryff environmental mastery scale, suggesting that individuals with low scores on this scale generally feel a sense of hopelessness, have a low sense of control over their environment and may associate this with some kind of global and stable internal cause. Despite their findings, Abbott et al (2006) did not reject the six-factor Ryff model, but suggested that further work to examine the factor validity of the measure is warranted.

Several other studies have examined the construct validity of the six scales proposed by Ryff, which present sometimes conflicting findings, although they largely indicate that there is some overlap between the different sub-scales. For example, a study by Springer & Hauser (2006) suggested that there was insufficient distinction between the six scales. In contrast, a large-scale study conducted in Spain and Columbia supported the six-factor model (van Dierendonck, Diaz, Rodriguez-Carvajal, Blanco & Moreno-Jiminez, 2008). Clearly there is much to be learnt about PWB, and the research tools available at present require further refinement. Nevertheless, the Ryff scale does appear to be sufficiently valid to provide an indication of subjective changes in PWB.
Previous TA Research
The extent of previous TA research which has examined the impact of intensive workshops is rather limited. One study by McNeel (1982) examined the effects of an intensive, three-day redecision workshop (n=15) which used a measure of ‘self-actualisation’ (the personal orientation inventory) and a non-standardised tool (the personal growth checklist). Both measures were rated by both participants and their close associates such as partners/ family members, providing an interesting perspective on subjective and observable changes amongst participants in the workshop. The study found that participants attending the workshop did experience statistically significant personal growth on both measures. Another study based on the intensive marathon workshop was conducted by Noriega Gayol (1997). In this study, she explored the effects of attending a one-week intensive therapy marathon on self-esteem. The marathon was based on an integration of redecision therapy, self-reparenting and contracting methods. The study found statistically significant improvements in self-esteem amongst participants at the end of the workshop and at three-month follow-up.

As discussed above, our previous study (Widdowson & Rosseau, 2014) used qualitative research to explore the type and nature of any changes that participants experienced in a three-day workshop based on the redecision methods of Goulding and Goulding (1979). This indicated a number of changes, including increased self-awareness, improvements in relationships, as well as increases in self-acceptance, self-confidence and subjective wellbeing. We decided that we would examine these findings further by conducting quantitative research to see if these effects could be reproduced in a form which is measurable and therefore can be subjected to statistical analysis. In this present study, we conducted a pre-post-test study design, based on evaluating whether or not participants experienced an increase in subjective PWB, as measured by the Ryff scale of psychological wellbeing. The scale was selected because, despite some debate on the matter, as a scale it does have established validity. Furthermore, the authors considered that the different dimensions may provide greater specificity to the findings regarding the type and extent of changes amongst participants. A final, and not unimportant consideration in selecting the Ryff scales was that these are free to use and do not require a licence, which would have added cost implications to an unfunded study.

Aims
The aim of the current study was to build on the qualitative research conducted by Widdowson & Rosseau (2014), where participants reported increases in their self-awareness, self-esteem, self-confidence, self-acceptance and subjective sense of wellbeing, and to substantiate these findings by conducting a quantitative study which investigated changes in psychological wellbeing amongst participants in an intensive workshop based on redecision methods. As such, this present study is part of a programme of work by three of the authors (MW, MR & RR) to examine the process and outcome of redecision work in different contexts, and using a range of complementary research methods. As no single research method can provide a complete and comprehensive picture of the area of study, utilising multiple methods allows for a more detailed analysis of the subject under consideration. In this instance, the previous qualitative research gave some indication as to the nature of change experienced by participants in the redecision-based workshops, whereas the present study was designed to examine the extent of these changes, specifically those relating to improvements in subjective PWB and whether these changes would be statistically significant.

Method
The study was conducted drawing on participants working for one organisation. The workshops were facilitated by Mil Rosseau and Rik Rosseau, who had been contracted by the organisation. The nature and structure of the workshops has previously been described in an article by Rosseau, Rosseau and Widdowson (2014). The organisation was consulted about conducting the research within their organisation and they were enthusiastic and supportive in providing their organisational consent. Prior to attending the workshop, participants were advised that three of the authors (MW, MR, RR) were conducting research on the impact of the workshop on psychological wellbeing as part of an existing programme of research, and that they would be invited to complete a questionnaire at several intervals. At the beginning of the workshops, the nature of the research was explained to participants, who were advised that participation was voluntary, and that their choice to participate or not would in no way alter their relationship with the facilitators of the workshop: they would be able to continue with the workshop even if they did not complete the questionnaires. Participants were invited to ask questions about the research at any stage. No incentives were offered for participation in the research.

As the workshops were conducted in Dutch, the Ryff (2015) questionnaire was translated into Dutch by two of the authors (MR and RR). The original English version and this initial Dutch translation were sent to Dr Peter Theuns, for checking and correction where relevant. After this, these three authors discussed and agreed on the final translation used in the study.

The Ryff questionnaire was administered on three occasions; the first was after the opening ‘check in’ and introduction to the workshop, the second was at the end of day three of the workshop, and the third was at the end of the fourth follow-up day. Upon each administration, participants were reminded about the study and that participation was voluntary, in order to ensure repeated informed consent. After this, copies of the questionnaire were distributed amongst the group, together with a...
Participants were asked to simply read the brief instructions at the beginning of the questionnaire and then complete the questionnaire accordingly, if they wished to participate.

The questionnaires were anonymously administered, although each questionnaire had a unique identifier code to allow tracking of changes over the three consecutive administration points. The identifier code was self-generated by the participants, based on a combination of segments of aspects of the day of the month in which they were born and the last three digits of their postcode. This would ensure that each participant had an identifier which would be known by them, and which would not personally identify them to the researchers. Although there was a theoretical possibility that more than one participant might have the same identifier code, all participants had a unique code.

Once completed, the participants placed their questionnaire in the dated envelope supplied. They then sealed the envelope and handed them to the workshop facilitators. Participants were advised that by returning the completed questionnaire, they were consenting for their data to be included in a data base and used for the purposes of this study. To allow for withdrawal from the research, it was decided that only participants who had completed and returned all three questionnaires would be included in the data analysis. This would mean that if a participant changed their mind, all of their data would be withdrawn. In the end, no participants withdrew from the study, and so data from all 49 participants could be analysed for this study.

Data analysis
All data was sent to Dr Peter Theuns, at Vrije Universiteit Brussel, who conducted the statistical analysis of the data. The data were analysed with SPSS version 22 (IBM Corp, 2013). This included an analysis of the internal consistency of the Ryff scales (Cronbach’s Alpha) and a repeated measures ANOVA to establish the significance of the evolution of the Ryff scale scores across the 3 consecutive data collection occasions. Dr Theuns was approached for the data analysis as he has no allegiance to TA and was considered to be an independent academic with a strong reputation for psychological research.

Results
Reliability analysis
The Cronbach’s Alpha reliability analysis suggests that the internal consistency of the Ryff scales is generally good, as can be seen in Table 1. However, Item 08 (“The demands of everyday life often get me down.”) shows a negative correlation with its scale Environmental Mastery. Content wise it seems that this item needs to be reverse coded in order to make it fit in the scale. With this recoding Cronbach’s alpha for the Environmental Mastery scale increases from .503 to .787. So, with item 8 reverse coded all Ryff scales show a good internal consistency with Cronbach’s Alpha’s ranging from .719 to .832.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Autonomy</td>
<td>1, 7, 13, 19, 25, 31, 37</td>
<td>.749</td>
</tr>
<tr>
<td>b. Environmental mastery</td>
<td>2, 8, 14, 20, 26, 32, 38</td>
<td>.787 (.503)</td>
</tr>
<tr>
<td>c. Personal Growth</td>
<td>3, 9, 15, 21, 27, 33, 39</td>
<td>.719</td>
</tr>
<tr>
<td>d. Positive Relations</td>
<td>4, 10, 16, 22, 28, 34, 40</td>
<td>.814</td>
</tr>
<tr>
<td>e. Purpose in life</td>
<td>5, 11, 17, 23, 29, 35, 41</td>
<td>.754</td>
</tr>
<tr>
<td>f. Self-acceptance</td>
<td>6, 12, 18, 24, 30, 36, 42</td>
<td>.832</td>
</tr>
</tbody>
</table>

* Underlined items are reverse coded.
** The number in brackets is where item 8 is NOT reverse coded

Table 1: Internal consistency of Ryff scales

Evolution of Ryff scale scores: repeated measures ANOVA

When comparing Ryff scale scores for the 3 administration points (pre, post and follow-up), an overall increase in all scale scores is observed. A repeated measures ANOVA indicates that this increment is statistically significant for all scales except Positive Relations.

Statistically significant positive change occurred on the scales of autonomy, environmental mastery, personal growth and self-acceptance at the <.001 level, and statistically significant positive change on the purpose in life scale at the .003 level. Although the trend in the data was for improvement in the positive relations scale, the results were not statistically significant.

Discussion
This study has provided support to the findings from Widdowson & Rosseau (2014) which found that participants in the redecision-based workshop experienced increases in self-acceptance, mastery and psychological wellbeing. This is also consistent with the findings of McNeel (1982) who found that participants in a redecision marathon experienced enhanced personal growth. Clearly further research is needed to determine if such improvements in psychological wellbeing would occur in a clinical population.
Despite participants in the Widdowson & Rosseau (2014) study reporting an improvement in their interpersonal functioning and relationships, this was not evidenced in the present study, where the ‘positive relations’ did show a small improvement of about one fifth of a standard deviation, which is not enough for statistically significant results. It is possible that the Ryff positive relations scale was not sufficiently sensitive to identify improvements or changes in interpersonal relationships in this particular group of participants, or alternatively, that the participants did not experience substantial gains in interpersonal functioning.

The data analysis process was rather straightforward, although the results of the Cronbach’s alpha suggest that item 8 should be reverse-coded. The authors could not find any other information about this from an internet search to support the use of reverse-coding for this item. The Cronbach’s alpha was calculated for both reverse-coding and ‘normal’ coding to establish the internal consistency of the scale. One possibility is that even though the translation of the scale from English into Dutch was repeatedly checked, the translation may have resulted in some semantic error which therefore resulted in this puzzling result.

Autonomy, personal growth, environmental mastery and self-acceptance are all concepts which have relevance to transactional analysis and are congruent with the overall goals of transactional analysis, irrespective of the field of specialisation. The present study examined the impact of redecision methods within a personal development workshop format and the findings are consistent with the theoretical and philosophical perspective developed by Goulding & Goulding (1979). Throughout their writing, they emphasised the importance of developing a sense of personal independence and efficacy, self-agency, self-acceptance and an openness to ongoing personal growth through the application of redecision methods within group work contexts. These same areas are those which were demonstrated to have obtained statistically significant change within this study, thus providing contemporary support for the use of redecision theory, philosophy and methods as a means of promoting personal change.

Limitations

Although the third questionnaire administration took place on a follow-up day six weeks after the initial workshop, no additional follow-up period was introduced, so it is not possible to state whether participant’s changes were long-lasting in nature. A further study which examines stability of change at a six-month (or more) follow-up would therefore be desirable. Also, the participants in this study all originated from a single organisation within one country, which limit generalisability of the findings. Although the sample size was sufficient to conduct a test of statistical significance, it is possible that a larger sample size might have produced different results.

The absence of a control group significantly limits the findings of this present study. The lack of a control group means we cannot identify whether the improvements participants experienced were an artefact of the passing of time and represented natural fluctuations in PWB or whether they were a direct response to the workshop. Similarly, without a matched control group from within the same organisation, we cannot rule out the possibility that improvements in PWB were due to enhancements in working conditions within the company or some other intra-organisational change.

As with the previous study, we recognise that it is possible that some participants may have responded in a way that they (consciously or unconsciously) perceive as socially-desirable, or due to a desire to ‘please’ the facilitators. Such responses would to some extent bias the participants’ responses, particularly as the responses were handed directly to the workshop facilitators. In order to address this, the questionnaires were completed anonymously and placed in a sealed envelope before handing to the workshop facilitators. Nevertheless, despite this ‘anonymous submission’ procedure, we cannot rule out the potential for such bias. It is also

<table>
<thead>
<tr>
<th>Scale</th>
<th>Average (SD) Time 1</th>
<th>Average (SD) Time 2</th>
<th>Average (SD) Time 3</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Autonomy</td>
<td>24.35 (5.278)</td>
<td>25.78 (5.444)</td>
<td>28.27 (3.872)</td>
<td>17.277</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>b. Environmental mastery</td>
<td>29.35 (5.399)</td>
<td>30.90 (5.080)</td>
<td>32.06 (5.133)</td>
<td>16.145</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>c. Personal Growth</td>
<td>29.82 (4.963)</td>
<td>30.78 (6.103)</td>
<td>32.33 (4.879)</td>
<td>8.871</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>d. Positive Relations</td>
<td>31.61 (6.103)</td>
<td>32.18 (5.985)</td>
<td>32.73 (5.057)</td>
<td>2.072</td>
<td>.145*</td>
</tr>
<tr>
<td>e. Purpose in life</td>
<td>30.43 (5.489)</td>
<td>31.61 (5.361)</td>
<td>32.51 (4.726)</td>
<td>6.034</td>
<td>.003</td>
</tr>
<tr>
<td>f. Self-acceptance</td>
<td>27.35 (6.369)</td>
<td>28.73 (5.484)</td>
<td>29.98 (5.471)</td>
<td>9.160</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

* Huynh-Feldt corrected p-value corrects for violation of sphericity assumption.

Table 2: Repeated measures ANOVA
possible that a positive expectancy bias influenced participants, who may have wished to ‘see’ a positive effect from the workshop.

An additional matter worthy of discussion is that no participants withdrew or declined to take part in the research. Data attrition and participant withdrawal from research projects is a common occurrence, so the fact that no one withdrew from the present study is somewhat unusual, and cannot be explained. Although the workshop facilitators reported that the group members were interested and enthusiastic about participating in the research, we cannot rule out the possibility that some kind of unspoken social pressure to participate occurred within the group.

The present study only examined outcomes, and did not investigate the process or mechanisms of change. Further research is needed to identify these and to explore ways of improving the effectiveness and efficiency of transactional analysts using redecision methods to facilitate personal change.

**Conclusion**

This article has provided statistical evidence supporting the claim that the use of redecision methods in executive coaching workshops can significantly increase participants’ subjective psychological wellbeing. Specifically, participants reported statistically significant, positive changes on the scales of autonomy, environmental mastery, personal growth and self-acceptance, and to a lesser extent (non-significant) on the purpose in life scale. These findings support those from a previous article (Widdowson & Rosseau, 2014) which suggested that participants in such workshops experience an increase in personal growth, self-acceptance and psychological wellbeing.

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**Peter Theuns**, PhD is a clinical psychologist and associate professor of statistics and research methods at the department of Experimental and Applied Psychology, Faculty of Psychology and Education Sciences of the Vrije Universiteit Brussel, Belgium. His research focuses on survey methodology, and more specifically on the content of lead questions and formal aspects of the accompanying rating scales, such as the labelling of the scale anchors.

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**Rik Rosseau** holds a bachelor’s degree as a civil engineer and architect. He is co-founder of BIRD, the Business Institute for Redecision. Rik is in TA training as a transactional analyst (Organisational).

**References**


