In the Pursuit of Happiness: A Critical Review of Empirical Positive Psychological studies tackling depression

Abstract
The positive psychology movement has become an increasingly popular approach to psychology. With positively worded measures being created, interventions being tested and the lean away from more traditional methods. The current review evaluates the approach of positive psychology to dealing with depression, and the strength of empirical research in the area. Research consistently shows that the positive psychology approach is effective in treating depression, reducing symptoms, however to integrate with other approaches and appreciate the time constraints of modern life remain. The review does raise the question of commitment to recovery with regards to the effectiveness of positive psychology approaches and summarises the positives and negatives of the empirical research presented.

Introduction
Positive Psychology
Positive Psychology has become a growing and often popular field of Psychology. The development of this relatively new branch of Psychology has resulted in the division of several new measures assessing levels of emotions such as Happiness, Well-being, Gratitude and Hope (e.g. Lyubomirsky & Lepper, 1999; Tennant et al., 2007; McCullough, Emmons & Tsang, 2002; Snyder, Sympton, Ybasco, Borders, Babyak & Higgins, 1996). The new approach of prevention over cure, and steering away from the long upheld disease model appeared a welcomed change. However, some will always question the validity of how Positive Psychology approaches certain topics and the use of the term ‘Positive’, as an inference that other Psychological approaches are all indeed negative in nature (Gable & Haidt, 2005).

The Positive Psychology movement is seen to be influenced by a number of key researchers and their work to develop new frameworks and theories regarding well-being and positive emotion. Two of the most commonly cited authors within the field tend to be Dr. Martin Seligman, whose research developed from learned helplessness in humans (Abramson & Seligman, 1978) to learned optimism (Seligman, 2011), and Professor Mihaly Csikszentmihalyi who focused positive research on flow (Csikszentmihalyi, 1996).
Positive Emotion

The harnessing of positive emotions is a key feature of the Positive Psychology movement. The Broaden and build theory of positive emotions (Fredrickson, 2004) postulates that positive emotions can broaden the individual’s thought to action process, producing urges to explore, savour and play. These urges broaden mindsets in opposition to the narrowed mindsets produced by negative emotions, and these then lead to the arising of creative ideas, novel ideas and actions and closer social bonds. These ideas and bonds then serve as an increase in the individual’s personal resources that they are then able to draw upon in the future to improve coping and survival mechanisms (Fredrickson, 2004). Using broaden and build theory, researchers have investigated the possibility that positive emotions may counteract the negative states of some psychopathology that typically involves emotional dysfunction. Furthermore, that the effects of positive emotions impact upon the neural plasticity of the emotional circuit within the brain (Garland, Fredrickson, Kring, Johnson, Meyer & Penn, 2010).

Character Strengths

A further development within positive psychology has been the development of the VIA Character Strengths (Peterson & Seligman, 2004). Separated into six groups known as virtues, the twenty-four character strengths are said to be qualities all humans possess in variable amounts, that when expressed by an individual have a positive effect. The virtue categories consist of humanity, justice, wisdom, courage, temperance and transcendence, each of these are then made up of selected character strengths such as love and kindness (humanity), perseverance (courage) and gratitude (transcendence). Each strength is described within the framework and individuals have the opportunity to take a strengths inventory in order to determine the degree to which they possess each strength. The results from this inventory can then be utilized in a positive manner in both work and social situations. Research indicates that these character strengths appear to be evenly distributed amongst young people cross culturally (Shimai, Otake, Park, Peterson & Seligman, 2006) and the VIA classification is utilised among various different age groups (e.g. Park & Peterson, 2006; Gillham et al., 2011).

Depression
Depression is widely researched regarding a plethora of different subjects such as comorbid conditions (e.g. Gorman, 1996), different samples (such as new mothers) (e.g. Murray, 1992), different age groups (e.g. and treatment methods and side effects (e.g. March et al., 2004; Basterzi, Aydemir, Kisa, Aksaray, Tuzer, Yazici & Göka, 2005; Ostroff & Nelson, 1999). The use of antidepressants, once the favoured method of treatment is now coming into conflict with more modern developing models of therapy than purely pharmacological. The debate continues as neuroscience evidence shows possible neural similarities in the effect of antidepressants and CBT (DeRubeis, Siegle & Hollon, 2008). CBT is seen to have similar clinical effects as pharmaceutical treatment, creating a modulating effect upon the function cortical and limbic areas of the brain (Goldapple, Segal, Garson, Lau, Bieling, Kennedy & Mayberg, 2004). Evidence such as this promotes further research and indicates the ability for patients and service users to make informed decisions with regards to their preferred method of therapy. Evidence of this nature might also encourage patients to explore the less clinical and pharmaceutical routes where possible. Miriam Akhtar’s (2012) work states the importance of positive psychology influences for the recovery from depression and how some self-help strategies can enhance recovery. However, if pure positivity and self-help strategies were enough to help all sufferers of mild to moderate depression recover then surely the prevalence of depression would not be increasingly common and causing other illness (Lépine & Briley, 2011; Moussavi, Chatterji, Verdes, Tandon, Patel & Ustun, 2007).

Interventions

Positive Psychology interventions are rapidly becoming widely used and empirically validated within a multitude of situations (e.g. Huffman, Mastromauro, Boehm, Seabrook, Fricchione, Denninger & Lyubomirsky, 2011; Seligman, Steen, Park & Peterson, 2005). Duckworth, Steen and Seligman (2005) state the usefulness of positive interventions and postulate their supplementary positive effects in treating psychopathology. Seligman et al. (2005) cite the effectiveness three out of five trialled happiness interventions for not only the increase in happiness, but the decrease of depressive symptoms.

The need for critical review
The approach of positive psychology is as highlighted increasingly popular. There are clear indications that the empirical evidence is reliable and growing in support. However, the need to review not only the effectiveness of, but the approach of these studies towards dealing with the issue of depression. For these reasons the current review aims to critically evaluate extent research published from the positive psychological field regarding the issue of depression.

**Method of Review**

**Search strategy**

In order to critically review the Positive Psychology approach to depression database searches were conducted using Scopus, Google Scholar, Psycharticles and ProQuest central. Search terms included the following: Positive Psychology, Depression, and recovery. Boolean term and was included between each for the initial search. This was then followed by the search Positive Psychology and depression recovery. Initial searches (positive psychology and depression and recovery) returned a total of 592 results from Scopus, 17,800 from Google Scholar, 6716 from Psycharticles and 39,087 from ProQuest central. These were then filtered to include only full text, peer reviewed scholarly articles, published in English. This left a total of 189 results from Scopus, not available as a filter from Google Scholar, 6581 from Psycharticles and 17,574 from ProQuest central.

**Inclusion Criteria**

Results were then filtered by the inclusion of the terms positive psychology and depression within the title and/or abstract. This left a total of 6 returns from Scopus, 10 from Google Scholar, 12 from Psycharticles and 17 from ProQuest central. After removing duplicates a total of 39 papers remained.

Finally, papers were read to assess the inclusion of positive psychology elements and approaches to depression. After further reading 28 papers were removed due to not containing empirical positive psychology or being written from that viewpoint. Included papers were to contain information regarding positive psychology interventions, positive psychology practice or specifically related treatments and approaches.
Adhering to this criteria at full article reading left a total of 11 papers to be included within the current review. Results of this review are seen below.

Quality Assessment

Aspects of each of the included studies in this review were assessed using the basic criteria of the Cochrane Risk of Bias Assessment Tool (Higgins et al, 2011; Appendix 1). This tool assists with the screening of any biases which may be present in the studies. The possible biases screened for were; random sequence generation, allocation concealment, incomplete outcome data, selective reporting and other study specific biases. The Cochrane Risk of Bias Assessment Tool usually assesses blinding criteria. However, this particular criterion was excluded from the assessment as it is almost impossible to achieve and adhere to in interventions pertaining to an individual’s mental health (Donker et al, 2013).

Although the Cochrane Risk of Bias Assessment Tool is usually used for randomised controlled trials, it was used as a point of reference within this review to assess any biases which may be present in included studies that employ a within group design.

Results

Quality Assessment Results

Within the inclusive studies ($n=10$), there were randomised controlled trials (RCT) ($n=6$) and within group studies ($n=4$). The studies were assessed to be of a moderate to high quality overall. Some studies were within group types, therefore had more margin for bias as they had no control group or differing intervention to be used as a comparison (Sandage, Jankowski, Bissonette & Paine, 2016; Kaczmarek, Bączkowski, Enko, Baran & Theuns, 2014; Loh, Schutte, Thorsteinsson, 2014; Körner, Coroiu, Copeland, Gomez-Garibello, Albani, Zenger & Brähler, 2015). One study was of high quality due to its double blind RCT method (Cheng, Mak, Fung, Kwok, Lee & Lam, 2017). Three of the RCT’s reported that the participants were randomised into intervention and control groups but didn’t report the methods used to do so (Sergeant & Mongrain, 2014; Proyer, Gander, Wellenzohn & Ruch, 2013; Proyer, Gander, Wellenzohn & Ruch, 2014). One study experienced high attrition rates yet still reported their findings using an intention to treat (ITT) method (Sergeant & Mongrain, 2014). The assessment tool was also used to find any other biases. Proyer, Gander,
Wellenzohn and Ruch’s (2014) study had a high risk of bias as the sample was solely women. Sandage, Jankowski, Bissonette and Paine (2016) and Sergeant and Mongrain (2014) both offered monetary incentives for participation in their study. This could cause a high risk of bias by possibly altering the demand characteristics.

**Interventions**

All but three studies included for review employed a positive psychological intervention for individuals with depression or depressive symptoms (Sandage, Jankowski, Bissonette & Paine, 2016; Kaczmarek, Bączkowski, Enko, Baran & Theuns, 2014; Körner, Coroiu, Copeland, Gomez-Garibello, Albani, Zenger & Brähler, 2015; Cheng, Mak, Fung, Kwok, Lee & Lam, 2017; Susan & Myriam, 2014). Each of studies cite positive outcome for the intervention provided.

**Other investigative methods evident**

One study assessed the effectiveness of person x intervention fit following a previous study (Proyer, Gander, Wellenzohn and Ruch 2014) and another cites a web based survey as its method of investigation (Kaczmarek, Bączkowski, Enko, Baran & Theuns (2014). One study was deemed longitudinal (Loh, Schutte, Thorsteinsson, 2014) and assessed the mediating effects of resilience upon depression.

**Measures**

Despite a focus upon positive psychology more traditional negative measures were included within some of the reported studies. Loh et al. (2013) used a mix of both more positively associated measures and negative by employing the centre for epidemiological studies depression scale (Radloff, 1977), as well as the resilience scale (Wagnild & Young, 1993).

Similarly, Sandage et al. (2016) used a mix of positive emotion or characteristic measures alongside more established measures. For example, the authors cite the use of the trait forgiveness scale (Berry, Worthington, O’Connor, Parrott & Wade, 2005) amongst others including the symptoms checklist for depressive symptoms (Bartone, Ursano, Wright & Ingraham, 1989).
Reviewing the papers in question it is clear that an almost equal balance of positive psychology measures and traditional (often more negatively worded) measures have been used in order to reflect the outcome scores against measures of juxtaposition.

**Discussion and critique**

Approaching this review there is an expectation to find research that is somewhat unsubstantiated empirically. The notion of positive psychology is often regarded as somewhat incorrect by some researchers and it has been suggested that positive psychology and its practice devalues and discredits other approaches such as the humanistic approach (McDonald & O’Callaghan, 2008). However, despite juxtaposed opinions on how effective and credible positive psychology’s approach is (e.g. Seligman *et al.*, 2005; McDonald & O’Callaghan, 2008), the information reviewed here does provide support for the use of positive psychology methods in tackling the issue of depression. The effectiveness of positive psychology interventions is credible in most cases with each study having a relatively low risk of bias (See Cochrane table in appendix 1).

The approach to empirical research with depression appears no less nor any more credible than any other discipline within psychology. The use of RCT’s is always an effective method of investigation and report for the effectiveness of treatment and the fact that so many of the positive psychology focused studies employ such methods provides reliable results and valid arguments for their cause.

One negative aspect of the positive intervention approach is the need for commitment and the length of time this is required for. As evidenced with Sergeant and Mongrain’s (2014) study, the attrition rate for interventions can often be high, and using the IIT method in reporting data results can discredit findings.

The arguments presented by each study were in fact valid when taking into account the low risk elements of each study, the effectiveness outcome of the approach itself, and the use of conflicting measures in order to gauge both the positive and negative outcomes (REF ALL). The age range of participants across the study samples also adds to the credibility of the approach given that positive psychology is not simply aimed at one population (Loh *et al.*, 2014; Proyer *et al.*, 2014).
Despite the credibility of each of the studies, there remains doubt as to how effective the positive psychology approach alone can be. In a time of instant gratification (Benoit, 2005) just how effective can interventions that require longer term commitment be? Perhaps this should be the point. Perhaps this is the difference between those who recover from mental illnesses like depression and those who don’t; the commitment to getting better as opposed to expecting medication to do the job. Future research should assess the genuine want of the patient to recover from symptoms alongside the effectiveness of treatment.

The accentuation and harnessing of positive emotions and traits in positive psychology is not intended nor should it be, a replacement for any negative emotion. Harvey and Pauwels (2003) discuss the ironies of positive psychology itself and how the discipline has neglected to recognise the positive of negative experiences. Harvey and Pauwels (2003) postulate that in the deepest of negative emotions such as grief are often where individuals can experience the greatest positive emotions such as love and gratitude.

Despite positive psychology understandably not promoting the experience of negative states, the recognition of positive growth following trauma within post traumatic growth (Calhoun & Tedeschi, 2014) research is clearly leaning toward the understanding the negative aspects of life will never disappear, but the possibility to grow and experience positive life changes following this should not be ignored.

This perhaps is the implied hope for positive psychology research with depression. The above studies clearly acknowledge the necessity of negativity in life with their use of negative emotion scales, but the positive influence of the interventions and treatments proposed are the focus for recovery and flourishing post trauma. The movement of positive psychology itself is increasingly popular. The focus upon how the individual can flourish, grow and change their mindset is looked to for reference in various clinical and non-clinical settings. The positive psychological approach to dealing with depression is not without flaws such as the commitment needed to attain positive outcome. Despite this, the empirical approach to how positive psychology can assist with depression symptoms is largely very reliable and methodologically sound.

Judging by its growth the future of positive psychology is, let’s say, positive. The effectiveness of techniques is undeniable, however, to focus solely on the positive
aspects of life will lessen the intensity of how positive smaller events can be. The discipline as a whole should not neglect the contributions of other traditional approaches and where possible and effective, merge disciplines for an overall experience for each individual. Research is currently on track regarding depression, and merging concepts such as mindfulness with CBT show effective results. Continuation to develop these skills and teach these to willing individuals may indeed lead to a happier, mentally healthier population.

However, it is not for positive psychology to let people aim to simply “accentuate the positives, eliminate the negatives” (Hoagey Carmicheal), but to aim for the understanding of negative emotions and what they attribute to the positive experiences. To savour the positive because they have experienced negative.
References


## Appendices

### Appendix 1:
Cochrane Risk of Bias Assessment of all Inclusive Studies

<table>
<thead>
<tr>
<th>Authors</th>
<th>Selection bias</th>
<th>Attrition bias</th>
<th>Reporting bias</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cheng, Mak, Fung, Kwok, Lee, Lam (2017)</strong></td>
<td>Low risk</td>
<td>Low risk</td>
<td>Low risk</td>
</tr>
<tr>
<td></td>
<td>Random sequence generation</td>
<td>Allocation concealment</td>
<td>Incomplete outcome data</td>
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<tr>
<td></td>
<td>Participants were recruited and randomised into control and intervention groups.</td>
<td>The study was a double blind RCT</td>
<td>Low attrition rate.</td>
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<tr>
<td></td>
<td><em>“One hundred three caregivers provided informed consent and were randomized into one of the three treatment conditions.”</em></td>
<td><em>“Both participants and raters were blind to the treatment assignment.”</em></td>
<td>Assessed at baseline: SIM-PE n=36 STD-PE n=33 BF n=34</td>
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<td>Low risk</td>
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<tr>
<td></td>
<td>No selective reporting identified</td>
<td>No other biases identified</td>
<td>No other biases identified</td>
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<tr>
<td><strong>Sandage, Jankowski, Bissononette and Paine (2016)</strong></td>
<td>Low risk</td>
<td>High risk</td>
<td>Low risk</td>
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<tr>
<td></td>
<td>Participants recruited were masters students</td>
<td>Within subjects</td>
<td>Low risk</td>
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<td></td>
<td>All outcomes appear to be reported</td>
<td>No selective reporting identified</td>
<td>High risk</td>
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<td></td>
<td>Paid study</td>
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<tr>
<td></td>
<td><em>“A $15 gift certificate to a bookstore was offered as incentive for participating in the study.”</em></td>
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</table>
Susan and Myriam (2014)

**Low risk**
Participants were recruited and randomised adequately

"a general community sample was recruited via the Internet between April 2010 and January 2011. Recruitment ceased once the sample size became large enough to ensure adequate power for the statistical analyses".....

"randomly assigned to a condition"

**Unclear**

The study states that the participants were randomly assigned to groups but does not specify which methods were used for randomisation.

**High risk**

High attrition rates
Using an intention to treat method, participants from the pre-intervention phase were included in the analysis of data even though the non-completion rate was; n=187 for the intervention group and n=164.

“Optimism group
Pre-intervention period n=253
Completed up to two month follow up n=66

Control group
Pre-intervention period n=213
Completed up to two month follow up n=49”

**Low risk**

Very thorough outcome and limitation reporting

**High risk**
Monetary incentive

“As an incentive, entry into a $1,000 draw was offered to participants following completion of each follow-up assessment.”

Proyer, Gander, Wellenzohn and Ruch (2013)

**Low risk**

Adequate recruitment and randomisation.

“A total of 510 participants were

**Unclear**

The study states that the participants were randomly assigned to groups but does not specify which

**Low risk**

Adequate attrition rates

“This is in the expected range for

**Low risk**

Reported all outcomes adequately

**High risk**
Unequal gender split

“The sample consisted only of females”
<table>
<thead>
<tr>
<th>Study</th>
<th>Risk Level</th>
<th>Adequate Randomisation</th>
<th>Attrition Rate</th>
<th>Other Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proyer, Gander, Wellenzohn and Ruch (2014)</td>
<td>Low Risk</td>
<td>Adequate randomisation</td>
<td>Low Risk</td>
<td>No other biases identified</td>
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<tr>
<td>Low Risk</td>
<td></td>
<td>The study states that the participants were randomly assigned to one of nine positive intervention conditions or a placebo control condition.</td>
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<td>Low Risk</td>
<td></td>
<td>The attrition rate is low. However, it is salient to note that there is a good sample size considering the length of time between the two studies</td>
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<td>Low Risk</td>
<td></td>
<td>Outcomes appear to be reported thoroughly</td>
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<tr>
<td>Low Risk</td>
<td></td>
<td>No other biases identified</td>
<td></td>
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<tr>
<td>Chaves, López-Gomez, Hervas &amp; Vazquez (2016)</td>
<td>Low Risk</td>
<td>Adequate randomisation</td>
<td>Low Risk</td>
<td>No other biases identified</td>
</tr>
<tr>
<td>Low Risk</td>
<td></td>
<td>Although the participants were assigned due to their availability it was still done randomly and blind.</td>
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<tr>
<td>Low Risk</td>
<td></td>
<td>ITT analysis with low attrition</td>
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<tr>
<td>Low Risk</td>
<td></td>
<td>“From the 130 women assessed for eligibility, 96 were blindly assigned to one of the</td>
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<td>Low Risk</td>
<td></td>
<td>Outcomes appear to be reported thoroughly</td>
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<tr>
<td>Low Risk</td>
<td></td>
<td>No other biases identified</td>
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<tr>
<td>Study</td>
<td>Risk</td>
<td>Adequate Randomisation</td>
<td>Adequate Allocation Concealment</td>
<td>No Attrition within Whole Study</td>
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<tr>
<td>Kwok, Gu &amp; Kai Kit (2016)</td>
<td>Low Risk</td>
<td><em>Within each school, half of the potentially eligible participants were randomly selected to the experimental group and the other half to the control group. As a exception to the CONSORT recommendations during the randomization process: participants were allocated into each intervention group due to their preferences about the day of the week to attend intervention sessions. Nevertheless, participants were blind to specific contents of the two interventions offered</em></td>
<td><em>Randomization was completed by a research assistant who has no other study responsibilities, using computer random number generators.</em></td>
<td>No attrition within the whole study. Data were collected from participants both pre and post-test.</td>
</tr>
</tbody>
</table>
result, within each school, there is one experimental group (consisting of 6–8 participants) and one control group (consisting of 6–8 participants). In total, 34 children were randomly assigned into the experimental condition and 34 children into control condition.”

<table>
<thead>
<tr>
<th>Study</th>
<th>Low Risk</th>
<th>High Risk</th>
<th>Low Risk</th>
<th>Low Risk</th>
<th>Low risk</th>
</tr>
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<tbody>
<tr>
<td>Kaczmarek, Bączkowski, Enko, Baran &amp; Theuns (2014)</td>
<td>Adequate recruitment of participants.</td>
<td>Within subjects</td>
<td>All recruited participants completed the study</td>
<td>All outcomes reported adequately</td>
<td>No other biases identified</td>
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<td></td>
<td>“Two hundred and fifty seven adults participated in this study by completing a web-based survey. Most of them (85%) were recruited through invitations placed on popular message boards in Poland.”</td>
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<tr>
<td>Study Authors</td>
<td>Low Risk</td>
<td>High Risk</td>
<td>Unclear</td>
<td>Low Risk</td>
<td>Low risk</td>
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<td>Loh, Schutte, Thorsteinsson (2014)</td>
<td>Adequate recruitment of participants</td>
<td>Within subjects</td>
<td>The study had high attrition rates</td>
<td>Outcomes appeared to be reported thoroughly</td>
<td>No other biases identified</td>
</tr>
<tr>
<td></td>
<td>“Two hundred and seventeen (N = 217) first year psychology students from a university in Australia were recruited at the start of the semester of their first year of study.”</td>
<td></td>
<td>“Initial n=217 3 month follow up n=107”</td>
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<tr>
<td>Körner, Coroiu, Copeland, Gomez-Garibello, Albani, Zenger &amp; Brähler (2015)</td>
<td>Really detailed recruitment of participants</td>
<td>Within subjects</td>
<td>Low attrition rates</td>
<td>Ensured that all outcome data was collected and reported</td>
<td>No other biases identified</td>
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<td></td>
<td>“research assistant presented all eligible”</td>
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</table>
participants with an overview of the study procedures, delivered a detailed data privacy statement, and informed the potential participant about the anonymization of all personal data.”

“The current study includes 2,404 participants who were older than 17 years and had no missing answers on the outcome measure”