

# The validation of two social desirability questionnaires in the South African context

**E Coetzee**

**21250308**

Mini-dissertation submitted in partial fulfilment of the requirements for the degree *Magister Commercii* in Industrial Psychology at the Potchefstroom Campus of the North-West University

Supervisor: Prof A Nel

Co-supervisor: Prof C Jonker

May2015

## Comments

The reader is reminded of the following:

- The editorial style and the references in this mini-dissertation follow the prescriptions of the Publication Manual (6<sup>th</sup> edition) of the American Psychological Association (APA). This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University, Potchefstroom Campus, to use the APA style in all scientific documents. This policy came into effect in January 1999.
- The mini-dissertation is submitted in the form of an introduction, a research article and conclusion.
- The editorial style was applied as specified by the South African Journal of Industrial Psychology, which also subscribes to the APA style. The construction of the tables also follows the APA guidelines.

## ACKNOWLEDGEMENTS

I wish to express my sincere appreciation to the following persons for their support and guidance in making the completion of this mini-dissertation possible.

- First of all I want to thank our heavenly Father for giving me the opportunities and the capacity to prevail through all the challenges that were put before me during this process.
- I wish to thank my parents for their support and love through all these years of study.
- To my close friends, thank you for helping me through the stressful times.
- To Prof Alewyn Nel and Prof Cara Jonker for their time, effort and patience while helping me through this process.
- To my mentor, Prof George Sieberhagen, for his guidance and wisdom regarding my own development.

## **DECLARATION OF ORIGINALITY OF RESEARCH**

### **DECLARATION**

I, Ebenhaezer Coetzee, hereby declare that the dissertation entitled The Validation of two Social Desirability Questionnaires in the South African context is my own work and the views and opinions expressed in this study are those of the author and relevant literature references as listed in the reference list. I also declare that the content of this research will not be handed in for any other qualification at any other tertiary institution.

**EBENHAEZER COETZEE**

**NOVEMBER 2014**

# TABLE OF CONTENTS

List of tables	vii
Summary	viii
Opsomming	x
<b>CHAPTER 1: INTRODUCTION</b>	<b>1</b>
1.1 Problem Statement	1
1.1.1 Social desirability	4
1.1.2 Balanced Inventory of Desirable Responding	5
1.1.3 Marlowe-Crowne Social Desirability Scale	6
1.1.4 Social desirability and Personality research	8
1.2 Research questions	9
1.3 Research objectives	9
1.3.1 General objective	10
1.3.2 Specific objectives	10
1.4 Expected contribution to the field	10
1.4.1 Contribution to industrial/organisational literature	10
1.4.2 Contribution to organisations	11
1.4.3 Contribution to the individual	11
1.5 Research design	11
1.5.1 Research approach	11
1.5.2 Research method	11
1.5.2.1 Literature review	11
1.5.2.2 Research participants	12
1.5.2.3 Measuring instrument(s)	12
1.5.2.4 Research procedure	14
1.5.2.5 Statistical analysis	14
1.5.2.6 Ethical considerations	14
1.6 Overview of the chapters	15
1.7 Chapter summary	15
References	16

## **CHAPTER 2: RESEARCH ARTICLE**

## **CHAPTER 3 CONCLUSION, LIMITATIONS AND RECOMMENDATIONS**

3.1	Conclusions	65
3.2	Limitations	68
3.3	Recommendations	69
3.3.1	Recommendations for the organisation	69
3.3.2	Recommendations for future research	70
	References	72
	Appendix A	75

## LIST OF TABLES

<b>Table</b>	<b>Description</b>	<b>Page</b>
Table 1	Characteristics of Participants ( $N = 359$ )	32
Table 2	Descriptive statistics on the items for BIDR and MCSDS	37
Table 3	BIDR inter-item correlations and factor loadings (first EFA with a two-factor solution)	42
Table 4	BIDR inter-item correlations and factor loadings (second EFA with a one-factor solution)	44
Table 5	BIDR inter-item correlations and factor loadings (third EFA with a one-factor solution)	45
Table 6	MCSDS inter-item correlations and factor loadings (first EFA with a one-factor solution)	46
Table 7	MCSDS communalities and factor loadings (second EFA with a one-factor solution)	48
Table 8	MCSDS communalities and factor loadings (third EFA with a one-factor solution)	49
Table 9	Descriptive statistics, Cronbach alpha coefficients and Product-moment correlations of the one-dimensional BIDR and MCSDS	50

## LIST OF APPENDIX

<b>Appendix</b>	<b>Description</b>	<b>Page</b>
Table A1	List of items from the Balanced Inventory of Desirable Responding	75
Table A2	List of items from the Marlowe-Crowne Social Desirability Scale	77

## SUMMARY

### **Title**

The validation of two social desirability questionnaires within a South African context

### **Keywords**

Social Desirability, Impression management, Self-deception, Self-report measures, Marlowe-Crowne Social Desirability Scale, the Balanced Inventory of Desirable Responding

Respond bias has always been a risk when it comes to interpreting personality data. For this reason two social desirability measures were created to combat this problem during research and workplace application. The first of these measures is the Marlowe-Crowne Social Desirability Scale created to measure a need for approval. The second of these measures is Balanced Inventory of Desirable Responding, which stems from a theory that describes social desirability as both a deception towards others and towards the self. For either of these measures to be usable, however, they need to be reliable and valid. This study then is intended to validate these two instruments in a diverse South African population sample and to look at the reliability of the items in these instruments and their factor structure. The objective of this study was to investigate both of these measures and to determine their psychometric properties and how they compare to the theory in literature.

A convenient and purposive sample of  $N = 359$  individuals from across South Africa was contacted via electronic means and asked to partake in this study. A questionnaire survey was forwarded to them with the intention of measuring social desirability. This included both the Marlowe-Crowne Social Desirability Scale (MCSDS) and Balanced Inventory of Desirable Responding (BIDR) measure. In addition a demographical questionnaire was included (gender, race, language group and age).

The statistical analysis was done via the SPSS program during data examination: descriptive statistics, exploratory factor analysis (with Maximum Likelihood as extraction method), Cronbach's alpha coefficients, and product-moment correlations were conducted. The results of this analysis indicated that although these measures are widely accepted and used

internationally, the full version of both the measures is not valid and reliable within this South African sample. Although not all items from the scales could be validated, there were items that indicated very acceptable psychometric properties.

Various recommendations were made for the context of using these measures to ascertain an individual's response bias and for future research. A person attempting to use these measures should only focus on using the reliable items from this study. These items could be applied in developing a shortened version of these measures. It is recommended that further research into these measures could be done by using a traditional paper-and pencil format, a larger sample or by focusing on a specific population group within South Africa.

# OPSOMMING

## Titel

Die validering van twee sosiale wenslikheidsvraelyste binne 'n Suid-Afrikaanse konteks.

## Sleutelwoorde

Sosiale wenslikheid, indrukbestuur, selfbedrog, selfverslagmaatreëls, Marlowe-Crowne Social Desirability Scale, the Balanced Inventory of Desirable Responding

Responsvooroordeel was nog altyd 'n risiko wanneer dit kom by die interpretasie van persoonlikheidsdata. Daarom is twee sosiale wenslikheidsinstrumente geskep om hierdie probleem tydens navorsing en vir werkplekdoeleindes te bekamp. Die eerste van hierdie instrumente is die *Marlowe-Crowne Social Desirability Scale* wat geskep is om 'n behoefte aan goedkeuring te meet. Die tweede van hierdie maatreëls is die *Balanced Inventory of Desirable Responding* wat spruit uit 'n teorie wat sosiale wenslikheid as beide 'n misleiding teenoor ander en teenoor die self beskryf. Vir enige van hierdie instrumente om bruikbaar te wees, moet hulle betroubaar en geldig wees. Hierdie studie het ten doel om hierdie twee instrumente in 'n diverse Suid-Afrikaanse bevolking te valideer en om te kyk na die betroubaarheid van die items in hierdie instrumente en na hul faktorstruktuur. Die doel van hierdie studie was om ondersoek in te stel na beide van hierdie instrumente se psigometriese eienskappe en hoe hulle vergelyk met die teorie in die literatuur.

'n Gerieflikheids- en doelgerigte steekproef van  $N = 359$  individue van regoor Suid-Afrika is via elektroniese middele gekontak en gevra om deel te neem aan hierdie studie. 'n Vraelysopname is aan hulle gestuur wat daarop gemik is om sosiale wenslikheidsreaksie vooroordeel te meet. Dit sluit beide die *Marlowe-Crowne Social Desirability Scale* en die *Balanced Inventory of Desirable Responding*-maatreëls in. Daarbenewens is 'n demografiese vraelys ingesluit (geslag, ras, taalgroep, en ouderdom).

Die statistiese ontleding is tydens data-ontleding via die SPSS-program gedoen deur die omskrywende statistiek, ondersoekende faktoranalise (met Maksimum Waarskynlikheids as ontrekkingsmetode), Cronbach se alfa koëffisiënte, en produk-moment korrelasies uit te voer. Die resultate van hierdie analise het aangedui dat hoewel hierdie instrumente algemeen

aanvaar word en internasionaal erken word, die volledige weergawe van beide die maatreëls nie geldig en betroubaar in hierdie Suid-Afrikaanse steekproef gevind word nie. Alhoewel nie alle items uit hierdie maatreëls bekragtig kon word nie was daar baie van die items wat aanvaarbare psigometrieë eenskappe getoon het.

Verskeie aanbevelings is gemaak ten opsigte van die konteks vir die gebruik van hierdie instrumente om die reaksie-voordeel van 'n individu vas te stel en vir die gebruik in toekomstige navorsing. Persone wat hierdie instrumente wil gebruik, moet fokus op die betroubare items uit hierdie studie. Hierdie items kan in die ontwikkeling van 'n verkorte weergawe van beide hierdie instrumente toegepas word. Dit word aanbeveel dat verdere navorsing op hierdie instrumente gedoen kan word deur gebruik te maak van 'n tradisionele papier en potlood formaat, 'n groter steekproef, of deur te fokus op 'n spesifieke bevolkingsgroep in Suid-Afrika.

# CHAPTER 1

## INTRODUCTION

This study will focus on examining two very well known measures of social desirability. These measures will be analysed for their construct and convergent validity within a diverse South African population. This chapter presents the problem statement and the objectives that stem from it. The research method will also be explained and the division of chapters outlined.

### 1.1 Problem Statement

“Only people can produce a sustainable competitive advantage” (Aguinis, 2009, p. xiii). This statement rings true in today’s organisations, as the major competitive advantage no longer rests with the latest technologies or products, but with quality employees (Aguinis, 2009). Attracting and retaining the right person can therefore give an organisation the needed competitive advantage (Newell, 2005). As an employee can either be an asset or a liability to the workplace, according to Newell (2005) it is the “psychological differences between people that are crucial in the relation to organisational performance” (p. 115). This then involves screening methods and measures (usually personality measures) that require sound psychometric properties of validity and reliability (Metzer, De Bruin & Adams, 2014; Newell, 2005). Such measures are usually done through self-reporting when an individual is asked to respond to their self-perceptions of their behaviour (Reynolds, Ortengren, Richards & Wit, 2006; Struwig & Stead, 2001).

Whenever tests are conducted using self-report measures, the possibility exists of conscious or unconscious response deception that is likely to distort the information and that may undermine the purpose of the whole measure (Bourgeois, Loss, Meyers & LeUnes, 2003; Loo & Thorpe, 2000; Viswesvaran & Ones, 1999). According to Donaldson and Grant-Vollone (2002), accurate measurement of any behaviour-related research is vital. For decades self-report measures were and are still being used largely because they are more easily obtained and more often than not the most feasible way to gather the relevant information needed regarding behavioural constructs (Donaldson & Grant-Vollone 2002). These self-report

measures then pose a problem because a bias towards the questionnaire items from the respondents could occur, resulting in disruption in the reporting of behaviour and attitudes (Donaldson & Grant-Vollone 2002; Paulhus, 1991). The bias by the individual tends to be displayed through what is called social desirability, which means that he/she tries to be perceived more positively by others (Paulhus, 1991). This bias tends to occur whenever an individual feels that they need to tailor their response to a statement, measurement item or question in order to give a response they feel will be more appropriate for the situation (Foxcroft & Roodt, 2009; Paulhus, 2002; Zerbe & Paulhus, 1987). This will ultimately result in the researcher/organisation having a different view of the person who they wish to evaluate. It is of note that in literature the terms response bias, self-report bias and social desirability (SD) are often used interchangeably.

Self-reporting is often used with personality testing measures, but it leads to frequent criticisms against using personality testing for the purpose of personnel selection in the organisational setting (Li & Bagger, 2007; Ones, Viswesvaran & Reiss, 1996). This response bias in personality inventories has been reported in laboratory, as well as field study research (Cordero-Coma & Breen, 2012; Hough, 1998). The reason is that individuals are likely to distort their responses simply because being perceived positively has always been important to people from wanting to be physically attractive or having good rapport with others in the workplace (Robbins, Judge, Odendaal & Roodt, 2009). Being positively perceived within the workplace might help someone to initially get the position in the organisation or simply a promotion or wage increase (Robbins *et al.*, 2009). From this statement it is clear that when it comes to such benefits, the need to answer self-report measures to make one look as good as possible in accordance with the prevailing social norms is rather attractive (King & Bruner, 2000). The tendency to therefore give a bias answer to a personality measure can be quite tempting.

Personality measures are being used more than ever by organisations in recruiting and placement processes by matching the potential individuals personality with the characteristics of the position (Foxcroft & Roodt, 2009). This is being supported by the link between predicting personality characteristics and work performance (Barrick, Mount & Judge, 2001; Rosse, Stecher, Levin & Miller, 1998). This phenomenon has been found to correlate not only with personality but other aspects, such as ethical behaviour in that SD seems to be

higher when an action is judged as being more unethical, were the individual is more likely to understand their intentions regarding the action (Chung & Monroe, 2003).

Therefore organisations looking to use personality inventories in their selection and recruitment procedures need to consider the influence of SD. Through continuous research into the phenomenon of SD, the studies have been found to correlate with personality measures, such as the big five personality inventory (Li & Bagger, 2006; McCrae & Costa, 1983). This was indicated by the findings that a high SD score correlated with the construct of conscientiousness and agreeableness, whereas a low SD score is likely to indicate that the individual gave a better and more accurate impression about themselves (McCrae & Costa, 1983).

However, if such measures are to be used, there should be an indication of whether the individual was not biased in their responses during this process. Viswesvaran and Ones (1999) mentioned that some individuals may have a higher disposition in faking self-report measures than others; for example, those individuals who have a higher need for approval from others are more likely to distort their data. They conducted a meta-analysis study in which they examined whether an individual's responses to personality measures could be influenced by whether he/she was instructed to make himself/herself seem more socially desirable or more socially undesirable. What they thus found was that trying to portray oneself as more socially desirable or undesirable, did ultimately affect their results on their personality measurement (Viswesvaran & Ones, 1999). In the ideal situation therefore when administering an SD instrument alongside another self-report instrument, one hopes to find a low correlation between the two (Paulhus, 1991). A high correlation with SD is not intended to invalidate an individual's responses, but tends to suggest that there may have been a positive bias towards the measurement (Paulhus, 1991). For reasons such as these there have been measures developed throughout the twentieth century to access this response bias phenomenon.

This study will focus on two of these measuring instruments, namely the Balanced Inventory of Desirable Responding (BIDR) (Paulhus, 1998 as cited in Stöber & Dette, 2002) and the Marlowe-Crowne Social Desirability Scale (MCSDS) (Crowne & Marlowe, 1960). These two scales have been found to be the most commonly used scales in attempting to measure SD (Leite & Beretvas, 2005). These measures are, however, not being widely utilised or

validated within South Africa. This study will therefore be aimed at using a diverse South African population sample and looking at the psychometric properties of these measures.

### 1.1.1 Social desirability

During the past decades the whole notion of SD became a concern as far as self-report measures were concerned (Stöber, Dette & Musch, 2002; Paulhus, 1991; Zerbe, & Paulhus, 1987). It is therefore vital to first clearly define these terms. Response bias or SD in this instance is when a respondent is likely to respond in a fixed manner to purposively give a false or skewed impression about him-/herself (Foxcroft & Roodt, 2009; Paulhus 1984; Zerbe, & Paulhus, 1987). This phenomenon of SD or response bias refers to the tendency of a person to over-report on characteristics that they feel is more socially desirable and under-report on characteristics that they feel as being more socially undesirable, therefore giving a false perception of themselves (Crowne & Marlowe, 1960; Foxcroft & Roodt, 2009; Paulhus, 1991). This led to a movement by researchers to find ways of measuring this phenomenon, which eventually drove them to develop scales for assessing different SD responses by individuals (Stöber, Dette & Musch, 2002). Early attempts in the development of these scales of measurement were the Edwards' Social Desirability Scale (Edwards, 1957) and the Eysenck Lie Scale (Eysenck & Eysenck, 1964). These first attempts all factored around a singled construct, but in further studies conducted they consequently found a low correlation between these SD scales (Stöber, Dette & Musch, 2002). This eventually led to further investigation and one of the first to clearly indicate a successful two-factor model of SD was Paulhus (1984). These two factors were introduced as self-deception enhancement (SDE) and Impression Management (IM) (Paulhus 1984).

The first factor labelled SDE refers to an unconscious positive response towards an item with the goal of protecting positive self-esteem (Paulhus, 1984, 1991). Self-deception in itself presents a challenge in the sense that during the time one is self-deceived, one is currently not aware of it, one recognises it in another or one remembers being self-deceived in the past and did not realise it at the time (Lazar, 1999). Self-deception implies that a person will hold onto a belief even when there is overwhelming evidence to the contrary (Lazar, 1999). Despite this, an individual with relatively high self-deception seems to be relatively well-adjusted, tends to ignore criticisms and is likely to have good self-confidence (Paulhus, 1991).

The second factor that Paulhus (1984, 1991) included in his construction of what constitutes SD was labelled impression management. Where SDE is based more on an unconscious level IM comes from a conscious state of mind in which one will purposively give a false representation about oneself to others (Li & Bagger, 2007; Paulhus, 1991). Most of the studies in impression management that have been done were related to impression management making a contribution to interview success and performance evaluation (Robbins *et al.*, 2009). It was shown that when the proper impression management techniques were used it did tend to work in interviews and that good skills in impression management was the sole success indicator for hiring a person. However, when impression management techniques, such as self-promotion in which one tends to highlight one's own abilities and achievements, sometimes work for interviews, they seem to fail in performance evaluations (Robbins *et al.*, 2009). Impression management has also been found to be more associated with high self-monitoring individuals, as they are constantly aware of the situations and able to adjust their appearance and behaviour to best present themselves to others (Kreitner & Kinicki, 2010; Robbins *et al.*, 2009). In spite of this, impression management is not always a good thing as was previously mentioned, as people sometimes tend to willingly misrepresent themselves and can thus be thought of as being manipulative or insincere by others (Robbins *et al.*, 2009). Using impression management in the wrong situations can also be linked to unethical behaviour and can be misinterpreted by co-workers and those around you, thereby easily being labeled as phoney (Kreitner & Kinicki, 2010). With these two constructs established as a good indication of what SD is, there should be scales to roughly give an interpretation of these two facets of what we know as social desirability.

### 1.1.2 Balanced Inventory of Desirable Responding

In 1989 Paulhus developed the BIDR from the two dimensions of SD that he found during his research. The BIDR was founded upon the self- and other-deception questionnaires developed by Sackeim and Gur (1978). Based on the findings that the self-deception questionnaire (SDQ) clearly loaded onto one factor and the other-deception questionnaire (ODQ) onto another, Paulhus wanted to compare these two dimensions to impression management and self-deception enhancement (Stöber, Dette & Musch, 2002). The two questionnaires proposed by Sackeim and Gur failed to clearly describe these two dimensions, but since the SDQ items were negatively keyed, which indicated a denial of negative qualities

and ODQ positively keyed indicating attribution of positive qualities, the SDQ was linked to self-deception and the ODQ to impression management (Stöber, Dette & Musch, 2002). According to Stöber, Dette and Musch (2002), Paulhus then started to develop the BIDR by beginning to rewrite some of the items from the SDQ and the ODQ, adding new items aimed at impression management and self-deception enhancement. The original items associated with self-deception were based more on ego-defence (e. g. hating one's parents) with the assumption that individuals exhibiting self-deception tend to deny having psychologically threatening thoughts or feelings (Paulhus, 1991). During the development and the publishing of the BIDR in 1988 questionnaire, this focus on self-deception shifted towards a more ego-enhancement (being very overconfident in one's own abilities and judgments) approach in exaggerating claims of positive cognitive attributes of one's self (Paulhus, 1991). Paulhus (1991), in constructing the impression management items for the BIDR, worked from the assumption that respondents are likely to steadily over-report on their own performance and behaviour in a more socially desirable manner and under-report on behaviour that is more socially undesirable. The impression management score of the BIDR demonstrated to clearly assess conscious deception by correlating with other scales based more on impression management, such as the MMPI Lei (L) scale and the Eysenck Personality Inventory (L) scale (Lyton & Carle, 2007). With the factor of self-deception enhancement representing the unconscious deception, the BIDR showed to correlate well with Block's Ego-Resiliency (Block, 1965 as cited in Lyton & Carle, 2007 ) scale, Edwards Social Desirability (Edwards, 1957) scale and Taylor Manifest Anxiety (Taylor, 1953 as cited in Lyton & Carle, 2007) scale where all these focused around denial of psychopathology (Paulhus, 1986).

### 1.1.3 Marlowe-Crowne Social Desirability Scale

From the first scales that were developed, not one at that time could clearly give a good factor construct of what we now know constitutes social desirability. The MCSDS attempted to take another approach towards measuring whether a person wanted to portray themselves as more socially desirable (Crowne & Marlowe, 1960). They looked into the previous scales aimed at measuring SD, such as the Edwards' Social Desirability Scale that was constructed from the Minnesota Multiphasic Personality Inventory (MMPI's K, L, F scales and the Manifest Anxiety Scales) and found that the items used were based on a statistically deviant model (Crowne & Marlowe, 1960). This model is based on a construction of items from that study,

which differentiates between clinically normal individuals and clinically abnormal individuals, which in general has pathological implications (Crowne & Marlowe, 1960). Such items could therefore not clearly distinguish if a response was due to SD or just an absence of that particular pathological symptom (Crowne & Marlowe, 1960). Crowne and Marlowe (1960) set out to develop what would be a very successful culturally approved measurement of SD that does clearly distinguish between item content and the need for an individual to present him-/herself in a socially desirable way. This measure was therefore also required to have minimal abnormal implications if responded to in either a desirable or undesirable way (Crowne & Marlowe, 1960). During the development of the MCSDS, it was compared to the subscales of the MMPI and the Edwards' Social Desirability Scale (Crowne & Marlowe, 1960; Leite & Beretvas, 2005). What was found is that the MCSDS scale correlated more with the actual definition of SD than with what some of the other scales actually measured (Crowne & Marlowe, 1960).

The MCSDS was at first situated around a single construct named "*need for approval*" and this implied a straightforward need for approval from others, vulnerability in self-esteem and the use of repressive defences (Crowne & Marlowe, 1964). The rationale behind this scale and the items constructed was that the average person would not always behave and respond in socially desirable ways. Therefore individuals that have a higher need for approval from others would tend to respond in more socially desirable ways than others (Leite & Beretav, 2005). Regarding the factor structure, Leite and Beretav (2005), indicated that as of yet there is no clear evidence in research that suggests the full 33-item version of the MCSDS fits a one-factor model. The problem of the MCSDS and its dimensions was solved by Paulhus (1984) when he studied the correlations between numerous SD measures and found that two dimensions actually composed social desirability. During this study conducted by Paulhus (1984) he showed special interest to the Marlowe-Crowne scale. Paulhus (1984) noticed that this scale was loaded on both an SDE and IM component somewhat more so than the other SD scales used during his research. From that time on the MCSDS has been used mainly as one of the most common SD measurements in conducting research with over a thousand references in articles and dissertations (Beretvas, Meyers & Leite, 2002).

The latest research focusing on the MCSDS includes using this scale in research conducted with adult male sexual offenders and found the full length version of the MCSDS to have adequate validity and reliability for an SD measure. Tatman, Swogger, Keisha and Cook

(2009) did find a two-factor model of Attribution and Denial from the scale. They found the attribution factor represents self-deception in that it represents unrealistic positive perceptions, whereas the denial factor focuses primarily on individuals that tend to present themselves as highly virtuous, which can give an indication of a type of impression management (Tatman *et al.*, 2009). The MCSDS was also successfully used as an instrument in research for forensic evaluations, using a five-point scale (Andrews & Meyer, 2003). Although there have been shortened versions of this scale developed through the years (Strahan & Gerbasi, 1972; Reynolds, 1982), Loo and Thorpe (2000) continue to recommend that for research purposes the full length version should be used. Although it is evident that this scale developed more than 40 years ago is still in use and proves to be a good scale, another scale was developed that proved to be very successful.

#### 1.1.4 Social desirability and Personality research

SD forms part of an individual's personality and research over the decades has investigated these various effects in an attempt to gain greater understanding. Fastame and Penna (2012) investigated whether the tendency to present oneself in a more favourable light differed with age and measures of well-being, using the MCSD scale. The findings confirmed previous research that SD tended to be higher in older adults (Dijkstra, Smit & Comijs, 2001; Soubelet & Salthouse, 2011) and showed a positive correlation between SD and self-rated measures of depression, personal satisfaction, cognitive efficiency and sensitivity to memory (Fastame & Penna, 2012).

Over the years the BIDR scale and the MCSDS have seen an increase in use for both research and applied purposes (Li & Baggar, 2007). Although a considerable number of studies have shown a good two-factor model for the BIDR, Li and Li (2008) conducted a factor analysis study on an two-factor model in China and what emerged was a four-factor model therefore they warned that the structure of the inventory might vary across nations and cultures. Further comparison of the BIDR between nations and cultures makes it difficult to make appropriate inferences regarding SD when using the BIDR during research for different cultural groups (Li & Reb, 2009). Another aspect that should be kept in mind is that impression management and self-deception, according to Lalwani, Shavitt and Johnson (2006), seem to differ in relation to individuals from individualistic, as well as collectivistic cultural backgrounds.

What they found is that there is a tendency in individuals from more individualistic backgrounds (e.g. United States and Europe) to score higher on self-deception enhancement whereas individuals from more collectivistic backgrounds (e.g. Asian) tend to score higher on impression management (Lalwani, Shavitt & Johnson, 2006).

Little research pertaining to the MCSDS or the BIDR is conducted within a South African context. The South African Personality Inventory adopted items from both the MCSDS and the BIDR to form two scales namely positive and negative impression management (Meiring, 2011). These two scales were used in a study by Valchev *et al.* (2014) and showed results that social relational personality constructs developed for a South African population were strongly associated with these SD scales. Therefore this showed that elements of the MCSDS and the BIDR could be successfully implemented in a South African context. However, these results are based on students and inferences could not be made in respect of work-related individuals. In addition only impression management items were included, and self-deception was not measured. This study attempts to overcome this by including a more mature group of individuals and by including items of self-deception. The population sample for this study will be that of a diverse sample of individuals in South Africa, because of the current nature of the working environment in South African organisations.

## **1.2 RESEARCH QUESTIONS**

Based on the abovementioned problem statement the following research questions have been developed:

- How is social desirability according to the MCSDS and BIDR as measures of social desirability conceptualised in the literature?
- How do the items MCSDS and the BIDR perform with regard to their distribution.
- Do the BIDR and MCSDS show construct validity and internal consistency?
- Do the BIDR and MCSDS show convergent validity?
- What recommendations can be suggested for future research and practice regarding both of these instruments in South Africa?

## **1.3 RESEARCH OBJECTIVES**

The research objectives are divided into a general objective and specific objectives.

### 1.3.1 General objective

The general objective of this research is to determine if the items of either of the two social desirability scales presented (MCSDS and BIDR) can be used fairly for a South African population and therefore to identify the best possible social desirability scale.

### 1.3.2 Specific objectives

The specific objectives of this research are

- to conceptualise social desirability and the instruments measuring this phenomenon according to literature;
- to determine the item performance and distribution of both the BIDR and MCSDS;
- to determine the construct validity of the BIDR and MCSDS;
- to determine the convergent validity of the BIDR and MCSDS; and
- to make recommendations for future research concerning the two instruments of social desirability and to make suggestions for practical use.

## **1.4 EXPECTED CONTRIBUTION TO THE FIELD**

### 1.4.1 Contribution to industrial/organisational literature

There is currently a lack of research in South Africa on social desirability and the measuring thereof when using it with self-report measures. This study is aimed at the validation of two of the most widely used social desirability measures used internationally. The study is also looking to indicate if these two measures factor on both impression management and self-deception. The Crowne and Marlowe Social Desirability Scale and Balanced Inventory of Desirable Responding scale will be compared to social desirability items developed for the South African Personality Inventory. Having a clearly validated measurement for social desirability should provide an extra “*tool*” for future research to use with self-report measures.

### 1.4.2 Contribution to organisations

Organisations could use a social desirability measure as an additional recruiting instrument to give them an indication about candidates for positions. This could be included along with integrity measures for a better indication of truthfulness on the part of the candidate.

### 1.4.3 Contribution to the individual

Potential contributions to the individuals themselves could be those of personal growth and better self-understanding. Using a valid and reliable social desirability scale that measures both impression management and social desirability during a feedback session could potentially lead to individuals learning more about themselves regarding their unconscious exceptional attempts to shy away from certain topics.

## **1.5 RESEARCH DESIGN**

### 1.5.1 Research approach

The following study is of a quantitative nature. Quantitative research is characterised by the gathering of data in a standardised manner (Struwig & Stead, 2001). A cross-sectional design will be followed where different groups of individuals will be examined at a single point in time (Salkind, 2009).

### 1.5.2 Research Method

This study consists of a literature review and an empirical study. Results that are obtained are presented in the form of a research article.

#### 1.5.2.1 Literature review

In phase 1 a complete review regarding Social Desirability, MCSDS, and the BIDR is done. Research articles and textbooks from as far back as when the scales were first developed to

recent research conducted on the measures are obtained by using research databases on the internet, as well as textbooks from university libraries. These internet sources include JSTORE; PsycArticles; PsycInfo; EbscoHost; SAEpublications; Google Scholar; ProQuest and ASCat. Journals used that are relevant to the topic include academic journals, such as International Journal of Selection and Assessment, Educational and Psychological Measurement, The Journal of Social Psychology, Journal of Applied Psychology, Journal of Personality and Social Psychology, Journal of Research in Personality, Journal of Clinical Psychology and Journal of Personality Assessment. Keywords used during this search include: impression management, self-deception, social desirability, Marlowe Social Desirability Scale, The Balanced Inventory of Desirable Responding, self-report bias, response bias, personality and social desirability scales.

### 1.5.2.2 Research participants

A combined convenience and purposive sampling is used from 359 participants from various industries across South Africa. Convenience sampling is a form of sampling on the basis of the availability of the research participants (Struwig & Stead, 2001). Purposive sampling is a sampling method whereby respondents have to comply with certain characteristics (in this case race and age) in order to qualify for the sample (Struwig & Stead, 2001). These participants vary demographically according to age, gender, race and language. Prior to data collection a pilot study consisting of 156 random participants was conducted in order to identify misunderstood problematic and inappropriate items. The pilot study showed that the instruments performed acceptable, and no problematic items were identified.

### 1.5.2.3 Measuring instrument(s)

The measuring instruments include a biographical questionnaire, the BIDR and MCSDS.

A short *biographical questionnaire* is sent out along with the other measures for the purpose of gathering information from the respondents, such as their gender, age, language group and race.

The *Balanced Inventory of Desirable Responding scale* (Paulhus, 1991) consists of 40 items, 20 items assessing self-deception enhancement (e.g. "I always know why I like things") and 20 items assessing Impression Management (e.g. "When I hear people talking privately, I

avoid listening”). The scale is constructed on a 5 point Likert-type scale. Each of the 20 item scales has 10 items negatively keyed that are reversed when counting up the scores. The scale is from 1 to 5 ranging from 1 (*being not true*) to 5 (*being very true*). Items that are responded to with a 5 are then given a score of 1 and all others are given 0 and the overall score is the sum of the items (Callaway, 2004). The internal consistency for the BIDR ranges for SDE from .68 to .80 and from .75 to .86 for Impression Management and for the overall 40 items of the BIDS .38 (Paulhus, 1988 cited in Paulhus, 1991). The BIDR has also shown good validity in correlating with the MCSDS at .71 (Paulhus, 1988 cited in Paulhus, 1991). Both the Marlowe and Crowne’s (1964) models focused on the need for approval and the Paulhus (1991) two-factor model of self-deception enhancement and impression management will therefore be used as they are currently the most important competitive and most commonly used models during research (Leite & Beretav, 2005).

The full-length version of the *Marlowe-Crowne Social Desirability Scale* (Crowne & Marlowe, 1960) consists of 33 items with 18 keyed as true and 15 keyed as false. This, however, is not recommended as this type of scale does not leave room for neutral responses and thus discriminates (Struwig & Stead, 2001). Using a Likert-type scale will result in better outcomes than that of a dichotomous or forced-choice response scale according to Classen (2011). During the data questionnaire design phase a 5-point Likert scale is used instead of the "true or false" dichotomous" scale ranging from 1 (*being not true*) to 5 (*being very true*). The items of the MCSDS are either socially desirable but uncommon for most people to use (e.g. “Before voting I thoroughly investigate the qualifications of all the candidates”) or socially undesirable but usually common (e.g. "I like to gossip at times”) (Leite & Beretvas, 2005). The reliability of the Marlowe Social Desirability Scale has been studied since it was designed. Several studies have shown internal consistency with a Cronbach alpha coefficient of .73 (Nordholm, 1974), .79 (Tanaka-Matsumi & Kameoka, 1986). A more recent study of the full-length version of the MCSDS yielded a Cronbach alpha coefficient score of .79 (Ventimiglia & MacDonald, 2012) giving the MCSDS adequate internal consistency.

#### 1.5.2.4 Research procedure

Various social and networking internet web sites in South Africa are utilised in contacting potential participants. These individuals are contacted and should consist of a wide range of South Africans to ensure a diverse response sample. After these individuals have been contacted the online questionnaires is be sent to the participants via an internet link to the online source of the questionnaire. This online questionnaire will be secure and the results are sent to the researcher immediately for data capturing. Computer-based measures have an advantage in that they provide consistency in marking, provide more objectivity and are less costly and labour intensive (Conole & Warburton, 2005; Foxcroft & Roodt, 2009). The participants are assured of confidentiality and their voluntary participation during this phase. The questionnaire takes about 20 to 30 minutes to complete and the participants could save their results and continue at any time for their convenience. Once a sufficient quantity of questionnaires has been received the data analysis will commence.

#### 1.5.2.5 Statistical analysis

Statistical analysis is conducted using the SPSS program (IBM SPSS Statistics 22.0, 2013). With SPSS, construct validity, convergent validity, descriptive statistics and Cronbach's alpha coefficients is carried out. The online questionnaire did not allow for incorrect data to be entered. Specific items with reverse scoring are also accounted for and the questionnaires are checked for missing values only. Descriptive statistics are analysed after exploratory factor analysis was conducted with a maximum likelihood extraction method. Factor loadings where inspected followed with the reliability analysis of each of the questionnaires. Product-moment correlations are carried out to determine the convergent validity of the two instruments.

#### 1.5.2.6 Ethical considerations

Conducting research on individuals has always carried the risk of physical, psychological or emotional trauma therefore one should always adhere to and maintain ethical conduct in a morally acceptable way throughout the whole research process. During this research ethical behaviour, such as confidentiality, informed consent, voluntary participation and the

maintenance and safe-keeping of private information will be adhered to (Salkind, 2009). Salkind (2009) also gives guidelines for ethical behaviour when conducting research in this manner:

- Minimize any risk to the participants.
- The researcher is responsible for maintaining ethical practices.
- A fair agreement must exist between the researcher and the participants prior to conducting the research.
- The researcher must respect the participant's choice to withdraw from the research at any time.
- Participants should at all times be protected from physical or psychological harm.
- The results of the research should be available and those that have participated have the ability to clear up any discrepancies they might be aware of.
- The researcher must take responsibility if any harm comes to those participating in the research.
- The researcher should maintain all information regarding participants confidentially.

## **1.6 OVERVIEW OF THE CHAPTERS**

The findings of this research will be discussed in Chapter 2 in the form of a research article. Chapter 3 consists of the conclusions, limitations and recommendations of this research.

## **1.7 CHAPTER SUMMARY**

This chapter presented the problem statement, outlined the research questions and posed the research objectives. The measuring instruments were highlighted and the research methods utilised in this study explained. This was followed by a brief overview of the chapters.

## REFERENCES

- Aguinis, H. (2009). *Performance management*. Edinburg, UK: Heriot-Watt University.
- Andrews, P., & Meyer, R. G. (2003). Marlowe-Crowne Social Desirability scale and short form C: Forensic norms. *Journal of Clinical Psychology, 59*(4), 483-492.
- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment, 9*(1/2), 9-30.
- Beretvas, S. N., Meyers, J. L., & Leite, W. L. (2002). A reliability generalization study of the Marlowe-Crowne Social Desirability Scale. *Educational and Psychological Measurement, 62*(4), 570-589.
- Bourgeois, A. E., Loss, E., Meyers, M. C., & LeUnes, A. D. (2003). The athletic coping skills inventory: Relationship with impression management and self-deception aspects of socially desirable responding. *Psychology of Sport and Exercise, 4*(2), 71-79.
- Callaway, R. J. (2004). *Confirmatory factor analyses of two social desirability scales and the investigation of their contribution to measures of well-being* (Published master's dissertation). Available from [https://circle.ubc.ca/bitstream/id/25451/ubc\\_2009\\_fall\\_callaway\\_rob.pdf](https://circle.ubc.ca/bitstream/id/25451/ubc_2009_fall_callaway_rob.pdf).
- Chung, J., & Monroe, G. S. (2003). Exploring social desirability bias. *Journal of Business Ethics, 44*(4), 291-302.
- Classen, R. M. (2011). *Investigation of the optimal response scale for personality measurement: Computer-based testing*. (Unpublished master's dissertation). North-West University, Potchefstroom, South Africa.
- Conole, G., & Warburton, B. (2005). A review of computer-assisted assessment. *Research in Learning Technology, 13*(1), 17-31.
- Cordero-Coma, J. & Breen, R. (2012). HIV prevention and social desirability: Husband-wife discrepancies in reports of condom use. *Journal of Marriage and Family, 74*(3): 601-613.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*(4), 349-354.
- Crowne, D. P., & Marlowe, D. (1964). *The approval motive: Studies in evaluative dependence*. New York, NY: Wiley.
- Dijkstra, W., Smit, J. H., & Comijs, C. H. (2001). Using social desirability scales in research among the elderly. *Quality and Quantity, 35*(1), 107-115.

- Donaldson, S. I., & Grant-Vallone, E. J. (2002). Understanding self-report bias in organisational behavior research. *Journal of Business and Psychology* 17(2), 245-260.
- Edwards, A. L. (1957). *The social desirability variable in personality assessment and research*. New York, NY: Dryden.
- Eysenck, H. J., & Eysenck, S. B. G. (1964). *Manual of the Eysenck personality inventory*. London, UK: University of London Press.
- Fastame, M. C., & Penna, M. P. (2012). Does social desirability confound the assessment of self-reported measures of well-being and metacognitive efficiency in young and older adults? *Clinical Gerontologist*, 35(3), 239-256.
- Foxcroft, C., & Roodt, G. (2009). *Introduction to psychological assessment in the South African context*. Cape Town, South Africa: Oxford University Press.
- Hough, L. M. (1998). Effects of intentional distortion in personality measurement and evaluation of suggested palliatives. *Human Performance*, 11(2/3), 209-244.
- IBM-SPSS Statistics. (2013). *IBM SPSS Statistics for Windows, Version 22.0*. Armonk, NY: IBM Corporation.
- King, M. F., & Bruner, G. C. (2000). Social desirability bias: a neglected aspect of validity testing. *Psychology & Marketing*, 17(2), 79-103.
- Kreitner, R., & Kinicki, A. (2010). *Organisational behaviour* (9th ed). New York, NY: McGraw Hill/Irwin.
- Lalwani, A. K., Shavitt, S., & Johnson, T. (2006). What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology*, 90, 165-178. doi:10.1037/0022-3514.90.1.165
- Lanyon, R. I., & Carte, A. C. (2007). Internal and external validity of scores on the balanced inventory of desirable responding and the Paulhus deception scale. *Educational & Psychological Measurement*, 67(5), 859-876.
- Lazar, A. (1999). Deceiving oneself or self-deceived? On the formation of beliefs "under the influence". *Mind, New Series*, 108(430), 265-290.
- Leite, W. L., & Beretvas, S. N. (2005). Validation of scores on the Marlowe-Crowne Social Desirability Scale and the Balanced Inventory of Desirable Responding. *Educational and Psychological Measurement*, 65(1), 140-154.
- Li, A. and Bagger, J. (2006). Using the BIDR to distinguish the effects of impression management and self-deception on the criterion validity of personality measures: a meta-analysis. *International Journal of Selection and Assessment*, 14, 131-141.

- Li, A., & Bagger, J. (2007). The Balanced Inventory of Desirable Responding (BIDR) a reliability generalization study. *Educational and Psychological Measurement, 67*(3), 525-544.
- Li, A., & Reb, J. (2009). A cross-nations, cross-cultures, and cross-conditions analysis on the equivalence of the balanced inventory of desirable responding. *Journal of Cross-Cultural Psychology, 40*(2), 214-233.
- Li, F., & Li, Y. (2008). The balanced inventory of desirable responding (BIDR): a factor analysis. *Psychological Reports, 103*(3), 727-731.
- Loo, R., & Thorpe, K. (2000). Confirmatory factor analysis of the full and short version of the Marlowe-Crowne Social Desirability scale. *The Journal of Social Psychology, 140*(5), 628-635.
- McCrae, R. R., & Costa, P. Y. (1983). Social Desirability scales: More substance than style. *Journal of Consulting and Clinical Psychology, 51*(6), 882-888.
- Meiring, D. (2011, June). Exploring the cross-cultural application of social desirability within the SAPI project. In F. J. R. van de Vijver (Chair), *Personality theory and assessment: Recent advances*. Symposium at the regional conference of the International Association for Cross-Cultural Psychology, Istanbul, Turkey.
- Metzer, S. A., De Bruin, G. P., & Adams, B. G. (2014). Examining the construct validity of the Basic Traits Inventory and the Ten-Item Personality Inventory in the South African context. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde, 40*(1), Art. #1005, 9 pages. <http://dx.doi.org/10.4102/sajip.v40i1.1005>.
- Newell, S. (2005). Recruitment and selection. In S. Bach (Ed.), *Managing Human Resources* (pp. 115-147). Malden, MA: Blackwell Publishing.
- Nordholm, L. A. (1974). A note on the reliability and validity of the Marlowe-Crowne scale of social desirability. *Journal of Social Psychology, 93*, 139-140.
- Ones, D. S., Viswesvaran, C., & Reiss, A. D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology, 81*(6), 660-679.
- Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS version 15* (3rd ed). New York, NY: McGraw-Hill.
- Paulhus, D. L. (1984). Two-component models of social desirable responding. *Journal of Personality and Social Psychology, 46*(3), 598-609.

- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychology attitudes* (pp. 17-59). San Diego, CA: Academic Press.
- Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement: A mixed blessing? *Journal of Personality and Social Psychology*, 75(5), 1197-1208.
- Paulhus, D. L. (2002). Socially desirable responding: the evolution of a construct. In H. I. Braun, & D. N. Jackson (Eds.), *The role of constructs in psychological and educational measurement* (pp. 49-69). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Reynolds, B., Ortengren, A., Richards, J. B., & De Wit, H. (2006). Dimensions of impulsive behavior: Personality and behavioral measures. *Personality and individual differences*, 40(2), 305-315.
- Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, 38(1), 119-125.
- Robbins, S. P., Judge, T. A., Odendaal A., & Roodt, G. (2009). *Organisational behaviour: Global and South African perspectives*. Cape Town, South Africa: Pearson Education South Africa.
- Rosse, J. G., Stecher, M. D., Levin, R. A., & Miller, J. L. (1998). The Impact of response distortion on pre-employment personality testing and hiring decisions. *Journal of Applied Psychology*, 83(4), 634-644.
- Sackeim, H. A., & Gur, R. C. (1978). Self-deception, other-deception, and consciousness. In G. E. Schwartz, & D. Shapiro (Eds.), *Consciousness and self-regulation: Advances in research* (pp. 139-197). New York, NY: Plenum Press.
- Salkind, N. J. (2009). *Exploring research* (7th ed). London, UK: Pearson Prentice Hall.
- Soubelet, A., & Salthouse, T. A. (2011). Influence of social desirability on age difference in self-reports of mood and personality. *Journal of Personality*, 79(4), 742-762.
- Stöber, J., Dette, D. E., & Musch, J. (2002). Comparing continuous and dichotomous scoring of the balanced inventory of desirable responding. *Journal of Personality Assessment*, 78(2), 370-389.
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogeneous versions of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology*, 28(2), 191-193.
- Struwig, F. W., & Stead, G. B. (2001). *Planning, reporting and reporting research*. Cape Town, South Africa: Pearson Education South Africa.

- Tanaka-Matsumi, J., & Kameoka, V. A. (1986). Reliabilities and concurrent validities of popular self-report measures of depression, anxiety, and social desirability. *Journal of Consulting and Clinical Psychology, 54*(3), 328-33.
- Tatman, A., Swogger, M., Love, K., & Cook, M. (2009). Psychometric properties of the Marlowe-Crowne Social Desirability Scale with adult male sexual offenders. *Sexual Abuse: A Journal of Research and Treatment, 21*(1), 21-34.
- Valchev, V. H., Van de Vijver, F. J. R., Meiring, D., Nel, J. A., Hill, C., Laher, S., & Adams, B. G. (2014). Beyond agreeableness: Social-relational personality concepts from an indigenous and cross-cultural perspective. *Journal of Research in Personality, 48*, 17–32.
- Ventimiglia, M., & MacDonald, D. A. (2012). An examination of the factorial dimensionality of the Marlowe Crowne Social Desirability Scale. *Personality and Individual Differences, 52*, 487-491.
- Viswesvaran, C., & Ones, D. (1999). Meta-analyses of fakability estimates: Implications for personality measurement. *Educational and Psychological Measurement, 59*(2), 197-210.
- Zerbe, W. J., & Paulhus, D. L. (1987). Socially desirable responding in organizations: A re-conception. *Academy of Management Review, 12*, 250-264.

## **CHAPTER 2**

### **RESEARCH ARTICLE**

# Validation of two social desirability questionnaires in the South African context

## Abstract

**Orientation:** Individuals often tend to bias their responses to personality measures and give an overly positive view of themselves. This phenomenon is also known as social desirability and can allow for skewed results in self-report measures.

**Research purpose:** The objective of this study was to evaluate the construct and convergent validity, as well as reliability of the world's two most used social desirability measures (Balanced Inventory of Desirable Responding and Marlow-Crowne Social Desirability Scale) within a South African population.

**Motivation for this study:** Social Desirability is the tendency to give an overly skewed impression about oneself. By being able to fairly measure an individual's tendencies to give a false impression about him-/herself, organisations and researchers can make better decisions about such individuals during practices, such as recruitment, selection, research, etc.

**Research design:** A cross-sectional survey design was used in this study with a sample of South African individuals from different backgrounds ( $N = 359$ ). Exploratory factor analysis was used to evaluate the psychometric properties of both instruments by looking at their communalities, factor loadings and reliability. Additionally, the relationship between the two instruments was evaluated.

**Main findings:** The results indicated that neither the full 40 item BIDR version nor the full 33 item MCSDS version was completely valid to use as most of the items did not show accepted psychometric properties. Although a number of items had to be removed from the data analysis, 11 items from the BIDR and 12 items from the MCSDS did indicate a valid and reliable fit of a one-factor model of Social Desirability for both instruments.

**Practical implications:** The results provide a sample of items that can be used in combination with other personality measures and in accounting for the responses to these items, one can get an insight into the individual's self-report bias.

**Contribution:** This study contributes to the limited research about social desirability within South Africa. The present study also contributes to further investigation into the value of these two measures along with a contribution to the literature on the use of such measures.

**Keywords:** Social Desirability, Impression management, Self-Deception, Self-report measures, Marlowe-Crowne Social Desirability Scale, The Balanced Inventory of Desirable Responding.

## Introduction

When it comes to hiring and selection most organisations realise that a good person to job fit not only determines the best candidate for the job, but also whether he/she will relate to the workplace environment, the ability to influence others and his/her beliefs about the organisation (Anderson, Flynn & Spataro, 2008; Cabel & Parsons, 2001; Ehrhart, 2006). Therefore, many organisational psychologists and those in the human resources field will investigate the personal characteristics of these job applicants. Results of empirical research support this statement by showing the importance of these personality traits in predicting various aspects of organisational behaviour, which includes job performance, work motivation, leadership and teamwork, integrity, as well as counterproductive/deviant workplace behaviours (absence, theft, etc.) (Judge, Klinger, Simon & Yang, 2008; Kamdar & Van Dyne, 2007; Lee, Ashton & De Vries, 2005; Salgado, 2005).

There is, however, a trait that exists that could potentially cause disruption in the measuring of personality in this instance. This trait is called “social desirability” (SD) that starts with the basic premise of an individual’s bias when reporting on his/her own personality and behavioural characteristics (Crowne & Marlowe, 1960; Zerbe & Paulhus, 1987). Therefore considerable criticism against these results is focused mainly on the validity of the measures used, as personality measures are by definition open to response bias (Goffin & Christiansen, 2003; Judge *et al.*, 2008; Morgeson, Campion, Dipboye, Hollenbeck, Murph, & Schmitt 2007). This bias refers to an individual’s ability to respond in a fixed manner to items of a measurement, leading to respondent error (Foxcroft & Roodt, 2009). This criticism backed up by research showing that a respondent’s ability to manipulate his/her responses in measurements is regarded as the main reason for poor correlations between personality traits and workplace performance (Morgeson *et al.*, 2007; Rosse, Stecher, Levin & Miller, 1998; Scroggins, Thomas & Morris, 2008). This contradicts the previous findings about the prediction of personality characteristics and workplace performance, which tells us that the problem could be with the validity and/or reliability of the measures used (Morgeson *et al.*, 2007).

This bias or SD tendency is therefore open to an aspect of faking and a misrepresentation of the person’s true self on any form of self-report instrument (Martin, Bowen & Hunt, 2002;

Viswesvaran & Ones, 1999). Individuals actively faking their responses to measurements can thus be seen by organisations as better candidates for positions to which they match the personality profile of the specific job (Viswesvaran & Ones, 1999; Martin, Bowen & Hunt, 2002). Previous research therefore found that the effects of social desirability may alter the accuracy of a derived personality structure in psychometric measures (Bourgeois, Loss, Meyers & LeUnes, 2003). During research and in practice the test administrator or researcher does not want assessment scores to be distorted by the participant's own response preferences (Paunonen & LeBel, 2012). This presents a problem, because each conceptualisation of SD comes with its own set of assumptions and ways of handling it (Tan & Grace, 2008). In research therefore, one needs to decide how one will perceive SD. Does it stem purely from the stable personality of an individual or is it a conscious deliberate action by the individual? One needs to understand this aspect during research and in practice, to know how to approach this phenomenon of SD as it will influence the interpretation of SD results.

If SD is conceptualised as a stable part of personality, then it should be considered and treated as such (Callaway, 2004). Alternatively, if SD is not related to personality and is a deliberate deception on the part of an individual, then there should be measures for the screening for and the detection of a response bias (Callaway, 2004). In order to detect the effect of SD, one is left with the question of which one of these two notions is correct, or if SD might be a combination of both. Another factor to consider is the validity of the personality measurement or the SD measure itself (Morgeson *et al.*, 2007). Not only is the measuring of personality characteristics at risk of SD (Li & Bagger, 2006), but to a greater extent measures focusing on emotion and emotional intelligence (Kluemper, 2008; Magnus, Viswesvaran, Deshpande & Joseph, 2006) are at risk of favourable response bias. Since obtaining valid data can present problems because of the nature of SD, researchers are then forced to make some assumptions (Kreuter, Presser & Tourangeau, 2008). The first of these is the assumption that the concerns about SD will lead respondents to under-report socially undesirable behaviours. The second assumption is that if there is a low response on SD behaviours, then it ought to reflect more accurate answers. It can be concluded then that without valid data these assumptions could result in incorrect measurements and interpretations during research and in practice (Kreuter, Presser & Tourangeau, 2008).

A strategy to combat this response bias was to create measures to assess SD. These measures consisted of items of desirable but false statements (e.g. "I will always tell a lie"), or

undesirable but true statements (e.g. "Sometimes I talk about things which I know little or nothing about"). The total scores on these measures are an indicator of deliberate response distortion (Dodaj, 2012). The measures ultimately serve to point out the candidates who may have portrayed themselves overly positive in their descriptions. The assumption then is that identifying these individuals will provide better predictive validation for the personality measures used in the selection process (Rothstein & Goffin, 2006; Salgado, 2005).

It is not surprising that studies have found that people also tend to over-report on behaviours that are seen as more socially acceptable, such as going to church, acting ethically at the workplace and being more physically active (Hadaway, Marler & Chaves, 1998; Randall & Fernandes, 1991; Warnecke *et al.*, 1997). In practice therefore, it would appear that incorrect research data may lead to incorrect planning for interventions and/or programmes. As more and more psychometric testing is currently being used in the workplace, it becomes obvious that the measurement of these elements should be a priority. Due to the fact that there is a link between the prediction of personality characteristics and that of work performance, recruitment or placement and ethical behaviour not controlling for response bias could consequently render the measure less reliable to use (Barrick, Mount & Judge, 2001; Chung & Monroe, 2003; Foxcroft & Roodt, 2009; Rosse *et al.*, 1998; Rothstein, & Goffin, 2006).

One other factor to consider is the relation between any psychometric properties being researched and the population for which it is intended. According to Struwig and Stead (2001), when considering doing research in South Africa, one should take into consideration the various social-historical, temporal and contextual factors and how these affect the research process. There has been a tendency by both workers and unions to reject psychometric instruments in South Africa, because of previously unfair discrimination when such instruments tended to be biased in favour of specific population groups (Saunders, 2002). Therefore there is a demand that in the social and economic environment of South Africa, research pertaining to issues and solutions surrounding work must be conducted in a culturally fair and sensitive manner (Stead & Watson, 1998). Thereby involving different demographical groups within the study should give an overview of an average South African population.

To address these problems measurements were created to detect for SD response bias during personality testing. This article will focus on two of the world's most successful social

desirability measures, namely the balanced inventory of desirable responding (BIDR) and the Marlowe Crowne Social Desirability Scale (MCSDS) and attempt to validate these measurements by examining their construct, convergent validity and whether these measures can ultimately be used fairly within a South African context. The psychometric properties of the two measures with special reference to convergent and construct validity were examined. Construct validity refers to the degree to which a given instrument actually measures the construct or factors for which it was designed. Convergent validity will be determined by investigating how well the MCSDS and the BIDR relate to each other in their similar constructs (Struwig & Stead, 2001). There has thus far been very little validation research done on both these measures within a South African population. Therefore this study will be done by examining whether the items from these measures do indeed measure the construct of SD response bias and also how the two measures correlate with one another.

### Research Purpose and Objectives

In the light of the following discussion, the general objective of this study will be to analyse the items of both the two social desirability scales presented (MCSDS and BIDR), and determine if they can be used fairly for a South African population and therefore identify the best possible social desirability scale.

The study contributes to the current literature through the quantitative measurement of a participant's SD response bias. Another contribution will be to determine the psychometric properties of these two social desirability measurements. On a workplace level this study can help organisations identify individuals during recruitment and selection who seek to give a false impression about themselves. On an individual level a person would be able to get better insight into why he/she may tend to be biased towards personality measurements, and to what extent they are willing to do so.

## Literature Review

### **Social Desirability as a concept**

According to Callaway (2004), there is still a lack of agreement on both the nature and conceptualisation of SD. However, more and more research assessing the likely structure of SD and its dimensions supports the notion that SD comprises at least two factors; SD is either observed as the need for social approval and perceived personal alteration or as impression management (IM) and self-deception enhancement (SDE) (Paulhus, 1984; Paulhus, 1991; Tan & Grace, 2008).

Probably the best description of SD used today comes from the work of Delroy Paulhus. He defined SD as a two-aspect concept phenomenon. The first of these is SED, which can be described as the unconscious tendency of a person to see themselves in a positive manner. The second is IM, which will follow thereafter.

### **Self-deception**

The model by Paulhus (1984) describes SDE as not necessarily always part of SD, because it is a misrepresentation that is both honest and done unconsciously. SDE in this manner is a positively biased response that the individual essentially believes to be true. Robins and Beer (2001) suggested that a propensity to have such positive illusions about oneself can exist in all forms of self-reporting. It has been found that self-deception increases gradually with the motivation for positive self-presentation (Galić & Jerneić, 2006). This is suggested by the significant relationships between SDE and emotional stability, conscientiousness, and extroversion (Li & Bagger, 2006). What marks self-deception in the general sense is that people favour welcome over unwelcome information in such a way that it supports their own goals and motivations (Hippel & Trivers, 2011).

Research into SDE also found correlations between the level of self-deception from an individual and the level of a well-adaptive personality. A decline in self-deception has been found to correlate with states of depression and lower levels of self-esteem (Golin, Terrell, Weitz & Drost, 1979; Taylor & Brown, 1988). According to Lee and Klein (2002), self-

deception also tends to influence an individual's learning ability. Taylor and Brown (1988) suggested that an overly positive outlook of one's capabilities may be a positive outcome insofar as it may support aspects such as greater internal motivation (Hirschfeld, Thomas & McNatt, 2008), and to some extent better intellectual functioning and performance. Taken together, this research provides support that there is an optimal level of self-deception that nurtures a well-adaptive personality and mental health (Baumeister, 1993; Bonanno, Rennie & Dekel, 2005; Paulhus, 1991; Robins & Beer, 2001; Zuckerman & O'Loughlin, 2006) and that individuals with higher or lower levels of the trait are more likely to manifest psychological problems.

### **Impression management**

The other aspect of SD described by Paulhus (1984; 1991) is impression management (IM), which includes a deliberate misrepresentation of oneself to others. IM is the variance, which hampers our ability to be objective in assessments when it comes to personality. This is normally in situations where there are strong motivations to portray one positively, the need to have social approval and as such these situations have to be controlled (Paulhus, 1984). IM shows a consistent pattern of correlations with personality traits even in the situation of anonymous responding (Paulhus, 1991; Paulhus, 2002; Paulhus & John, 1998). Conscientiousness, agreeableness, and to a lesser extent, emotional stability were correlated with IM (Li & Bagger, 2006).

IM ought, however, to be thought of as a negative aspect to be eliminated or minimized. Should this assumption change, on the other hand, exhibiting high IM could be seen as a positive aspect. In an investigation into IM, Uziel (2010a, 2010b) looked at IM not as a negative self-presentation construct, but as an interpersonally-related self-control characteristic. Using this assumption, Uziel found that individuals with a high IM score showed better performance on traits, such as better creativity and self-control in social settings. He therefore argued that IM is more related to adaptive social behaviour than self-presentation bias. It would appear that people with higher IM show better social adjustment and higher motivation to succeed in social/public settings (Uziel, 2010a, 2010b).

From this perspective it can be concluded that the function of SDE is the enhancement of an individual's personality, while IM is a conscious attempt to create a positive impression of

oneself that can either be a hindrance or a benefit (Dodaj, 2012). Both Marlowe and Crowne's (Crowne & Marlowe, 1964) model that focused on the need for approval and Paulhus' (1991) two-factor model of SDE and IM were therefore used as they are currently the most important competitive and most commonly used during research (Leite & Beretav, 2005).

Next will be a close examination about the two SD measures that are to be analysed in this study.

### **Balanced Inventory of Desirable Responding (BIDR)**

The BIDR has been gaining acknowledgment in the past couple of decades (Paulhus, 1991). The popularity of the BIDR can be attributed to the more recent reconceptualisation of SD. Unlike previous research that thought of SD as being a single construct, Paulhus (1984, 1991, 2002) maintained that social desirability can be broken down into two separate aspects, namely SDE and IM as previously discussed. Despite the approved reliability of the BIDR developed by Paulhus (1984, 1991) shown in its manual, there have also been studies that did not find such reliable results (e.g. Li & Bagger, 2007). This does not mean that the measure is not reliable, but several factors need to be remembered that also play a role in determining reliability. These include random response, specific factor, and transient errors (Becker, 2000; Schmidt & Hunter, 1999; Schmidt, Le & Ilies, 2003; Vispoel & Tao, 2013). Random response occurs when the individual is completing the measure and is affected by his/her mood, attention, memory and factors, such as bias (Osborne & Blanchard, 2011; Vispoel & Tao, 2013). Specific-factor error represents stable but personal responding to the wording or phrasing of particular items. (Vispoel & Tao, 2013). Transient error is a form of response error that occurs temporarily or at unpredictable occasions (fatigue, illness, recent mood swings, etc.) (Vispoel & Tao, 2013). As such, relying solely on alpha reliability coefficients can lead to overemphasising the actual reliability of scores and corresponding relationships between the constructs of a measure.

What makes the BIDR unique as a measure is that the scoring is made in a 7- or 5-point scale (depending on the form used) and then scored in a polytomous manner. In this type of measurement scoring, inversely keyed items are reversed, but only extreme responses are counted. With the 5-point answer scale, 1 point is awarded for each "5" response on SDE

items and for each “4” or “5” response on IM items (Stöber, Dette & Musch, 2010, Vispoel & Tao, 2013). In the case of the 7-point answer scale, 1 point is awarded for each “6” or “7” response on both SDE and IM items (Stöber, Dette & Musch, 2010). “Of the four scoring procedures, polytomous scoring of 7-point scales is recommended. The stringency of the polytomous scoring guarantees that high scores are attained only by subjects who give exaggerated responses to items that are already highly desirable. Thus, for both scales, the format seems to be optimal for indexing inflated self-descriptions” (Paulhus, 1994).

As previously discussed, the conceptualisation of SD according to Paulhus (1991) consisting of IM and SDE will be the goal regarding the construct validity. The discriminate and convergent validity of both the IM and SDE subscales can be discerned by examining their correlations with other SD scales. An example of this includes an SDE subscale, which measures the advertising of an individual’s self-image, and was found to be correlated more highly with measures of defensiveness and coping, such as the Edwards Social Desirability Scale (Edwards, 1957), Byrne’s Repression-Sensitization Scale, and Gur’s Self-Deception Scale. The IM subscale, which measures a deliberate misrepresentation of one’s public image, was more closely related to the Minnesota Multiphasic Personality Inventory Lie subscale, Wiggins’s Social Desirability Scale, and Gur’s Other-Deception Scale (Paulhus, 1991). The low or medium correlations between these two subscales of the BIDR also provide discriminate validity (Paulhus, 1984, 1991).

### **Marlow-Crowne Social Desirability Scale (MCSDS)**

Over the last few decades there have been numerous measures created that claim to assess SD. In over a 1 000 research studies (Beretvas, Meyers & Leite, 2002; Loo, & Thrope, 2000; Loo & Loewen, 2004; Tatman, Swogger, Love & Cook, 2009; Reynolds, 1982), the Marlow-Crowne Social Desirability Scale (MCSDS) has been the most commonly used measuring instrument to assess this phenomenon and favoured by researchers (Ventimiglia & MacDonald, 2012). The MCSDS was initially created to measure one construct, namely the need for approval (an individual’s level of approval seeking and avoidance of disapproval) (Crowne & Marlowe, 1960). According to Ventimiglia and MacDonald (2012), ever since the first usage and creation of the MCSDS, the research around the MCSDS has not only been to investigate the psychometric properties, but more importantly to identify the conceptual nature of SD as a construct. While some studies have determined that the MCSDS most likely

measures a number of different constructs, more than just SDE and IM (Ballard, 1992; Leite & Beretvas, 2005), research also supports the two-factor structure of SD originally proposed (Loo & Thorpe, 2000; Tatman *et al.*, 2009; Ventimiglia & MacDonald, 2012). Ventimiglia and MacDonald (2012) found good convergent and discriminant correlations from the MCSDS scale with those of the BIDR. The MCSDS has been normed and found reliable in a number of fields and situations, including forensic evaluations and used as a measure of defensiveness in medical research (Andrews & Meyer, 2003; Deshields, Tait, Gfeller & Chibnall, 1995; Mann & James, 1998). The MCSDS is a self-report measure that can be easily administered to individuals. The MCSDS is also a publically available measure, making it very cost effective for those that intend to use it.

## **Conclusion**

There has been much debate and research surrounding the concept and dimensions of social desirability and how to measure it. The BIDR and the MCSDS have and are still being used today, because they have shown to provide a good indication of a response bias in personality testing. The objective of this study was ultimately to determine the psychometric properties and reliability of both the BIDR and the MCSDS within a diverse South African population, to establish if they measure what they were intended to measure and to determine which of these measures is a more desirable one to use within a South African sample for research and work purposes.

## **Research design**

The research approach and the research method are discussed as follows.

### Research approach

The research study was of a quantitative nature. Quantitative research is characterised by the gathering of data in a standardised manner (Struwig & Stead, 2001). This data is then used to explain quantities, and to predict and describe the structures being researched. The data from quantitative studies is used to generalise from a sample to the greater population by collecting numerical data. A cross-sectional design was followed whereby different groups of

individuals will be examined at a single point in time (Salkind, 2009). The primary goal of this study was to assess the validity and reliability of the items from a South African population.

## Research method

### **Research participants**

The study consisted of a combined convenience and purposive non-probability sample ( $N = 359$ ) consisting of 222 men and 137 woman from different occupations, racial and language groups across South Africa. The convenience sampling method utilises participants that can be easily contacted and accessed, while purposive sampling target a population with certain characteristics (race and age) (Struwig & Stead, 2001).

**TABLE 1:** Characteristics of Participants ( $N = 359$ )

<b>Item</b>	<b>Category</b>	<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>	Female	137	38.2
	Male	222	61.8
<b>Race</b>	White	192	53.5
	African	141	39.3
	Coloured	12	3.3
	Indian	12	3.3
	Missing values	2	.6
<b>Age</b>	60 - 69	9	2.5
	50 - 59	22	6.1
	40 – 49	65	18.1
	30 – 39	114	31.8
	18 – 29	134	37.3
	Missing values	15	4.2
<b>Language</b>	Western Germanic languages	225	62.7
	Bantu languages	130	36.2
	Missing values	4	1.1

According to Table 1, the majority of the participants in the study were white (53.5%), male (61.8%), and between the ages of 18 and 29. The majority of participants spoke a Western Germanic language as mother tongue (Afrikaans and English).

### **Measuring instruments**

A short *biographical questionnaire* was used for the purpose of gathering information from the respondents, such as gender, age, language, and racial group.

**Balanced Inventory of Desirable Responding scale:** The *Balanced Inventory of Desirable Responding scale* (Paulhus, 1991) consists of 40 items, 20 items assessing self-deception enhancement (e.g. "I always know why I like things") and 20 items assessing IM (e.g. "When I hear people talking privately, I avoid listening"). The scale is constructed on a 5-point Likert-type scale. Each of the 20-item scales has 10 items negatively keyed that are reversed when counting up the scores. The scale is from 1 to 5 ranging from 1 (*being not true*) to 5 (*being very true*). Items on the questionnaire that are marked with a 5 are then given a score of 1 and all others are given 0 and the overall score is the sum of the items (Callaway, 2004). The internal consistency for the BIDR ranges from .68 to .80 for SDE and from .72 to .86 for IM and .38 for the overall 40 items of the BIDS (Holden, Starzyk, McLeod & Edwards, 2000; Paulhus, 1988 cited in Paulhus, 1991). The BIDR has also shown good validity in correlating with the MCSDS at .71 (Paulhus, 1988 cited in Paulhus, 1991).

**Marlowe-Crowne Social Desirability Scale:** The full-length version of the *Marlowe-Crowne Social Desirability Scale* (Crowne & Marlowe, 1960) consists of 33 items with 18 keyed as true and 15 keyed as false. However, studies have shown that using a Likert-type scale resulted in better outcomes than that of a dichotomous or forced-choice response scale (Classen, 2011). During the data questionnaire design phase a 5-point Likert scale was used instead of the "true or false" dichotomous" scale ranging from 1 (*being not true*) to 5 (*being very true*). The items of the MCSDS are either socially desirable but uncommon for most people to use (e.g. "Before voting I thoroughly investigate the qualifications of all the candidates") or socially undesirable but usually common (e.g. "I like to gossip at times") (Leite & Beretvas, 2005). The reliability of the Marlowe Social Desirability Scale has been studied since it was designed. Several studies have shown internal consistency with a Cronbach alpha coefficient of .73 (Nordholm, 1974), and .79 (Tanaka-Matsumi & Kameoka,

1986). A more recent study of the full-length version of the MCSDS yielded a Cronbach alpha coefficient score of .79 (Ventimiglia & MacDonald, 2012) giving the MCSDS adequate internal consistency.

### **Research procedure and ethical considerations**

Data collection was done by means of an online questionnaire that was distributed via formal and informal networks to diverse working individuals in both the public and private sector. All participants were assured of the confidentiality of their involvement and that the survey was voluntary. According to Risko, Quilty and Oakman (2010), using personality questionnaires over the internet does not decrease the tendency of social desirability even though it might be more anonymous. One other benefit when using a web-based sample is that it provides a convenient, easy to assess sample that is significantly more diverse and possibly more representative of the general population (Risko, Quilty, & Oakman, 2010). The research questionnaire was administered to the participants during the months of June 2013 to November 2013. In order to randomise the data collection process, the data were collected from participants in different occupations and industries. Data were also collected on different days and at different times and were then analysed in terms of their factor loading, communalities, descriptive statistics and the goodness-of-fit.

Conducting research on individuals has always carried the risk of physical, psychological or emotional trauma therefore one should always adhere to and maintain ethical conduct in a morally acceptable way throughout the whole research process. Consequently, during this research, ethical behaviour, such as confidentiality, informed consent, voluntary participation and the maintaining and safe-keeping of private information will be adhered to (Salkind, 2009). All participants were assured of their confidentiality and that the data would only be used for academic purposes. The participants were also advised that they would not receive individual feedback on their results.

### **Statistical Analysis**

Statistical analysis was conducted using the SPSS program (IBM SPSS Statistics 22.0, 2013). With SPSS, construct validity, convergent validity, descriptive statistics and Cronbach's alpha coefficients were carried out. The online questionnaire did not allow for incorrect data to be

entered. Specific items with reverse scoring were also accounted for and the questionnaires were checked for missing values only. Descriptive statistics were analysed where after exploratory factor analysis was conducted. The factors were computed after exploratory factor analysis and descriptive statistics were conducted again for the set factors, followed by reviewing the internal consistency and the relationship between the two instruments.

### **Descriptive statistics**

The descriptive statistics were an overall, coherent and straightforward outlook of the summarised data including the mean, standard deviation, range of scores (skewness and kurtosis) of the items of both instruments (Pallant, 2007; Struwig & Stead, 2010). The descriptive statistics were used to identify the distribution of the items, and to determine if some items were answered randomly or consistently. The skewness and kurtosis was analysed according to DeCarlo (1997)'s suggestion that items with a skewness  $< 2$  and kurtosis  $< 4$  are acceptable for further analysis. In descriptive statistics the skewness is an indicator of the symmetry of the distribution, whereas kurtosis provides a description of the weakness of the distribution (Pallant, 2007).

### **Factor analysis**

Exploratory factor analysis (EFA) was conducted to explore the factors for the BIDR and the MCSDS. EFA is used when one wants to determine the construct validity regarding the number of underlying factors within a construct. By performing exploratory factor analysis, the underlying factor structure can be known. The goals of factor analysis according to Suhr (2006) are to assist a researcher determine the number of items to include in further analysis. EFA was applied in this study, because of that fact that these measures were developed and tested outside of the current population sample (South Africa).

Principle Component Analysis (PCA) was first used as extraction method to determine the total of factors for both instruments by viewing the scree plot (Castello & Osborne). After this, Maximum Likelihood (ML) as extraction method was employed on both instruments in order to determine factor loadings, communalities and goodness-of-fit. Communality is the extent to which an item correlates with all other items in the dataset. Higher communalities are preferable. If a communality for a particular variable is low (in this case  $> .2$ ), then that

variable will struggle to load significantly on any factor and thus be removed from any further analysis. The results of the factor matrix were used to determine the factor loadings and how strongly they load onto a factor. Eigenvalues of 1 and greater to the total variance explained were identified. With BIDR, two factors were first extracted with a varimax rotation (since the factors were found to be uncorrelated), and when the two-factor solution showed poor results, a one factor-solution was conducted thereafter with the remaining items. With MCSDS, a one-factor solution was conducted from the start with no rotation since only one factor was evident (Castello & Osborne, 2005). Maximum Likelihood (ML) as extraction method was used since all of the items showed relatively low skewed distribution (Castello & Osborne, 2005) as can be viewed in Table 2, and to determine the goodness-of-fit. In order to do that the chi-square goodness-of-fit test ( $\chi^2$ ) was conducted with ML. With this, it was possible to test the absolute fit of the model.

After the EFA was completed, the dimensions were created for both instruments, followed by calculating the descriptive statistics for the dimensions, as well as the Cronbach alpha coefficients. Only a Cronbach alpha coefficient of 0.70 and higher is considered reliable (Cicchetti, 1994; Nunnally & Bernstein, 1994). Following the reliability analysis, product-moment correlation analysis was conducted in order to determine convergent validity. In this case, the dimension of BIDR and the dimension of MCSDS were utilised in the analysis to determine if there is a statistical significant correlation ( $p > 0.01$ ) and practical significant correlation (medium effect  $> 0.30$ ; large effect  $> 0.50$ ).

## Results

### Descriptive statistics of items for both the MCSDS and the BIDR

The first step involved examining the descriptive statistics of all 73 items combined from both social desirability questionnaires. Table 2 describes the quality of the data for both SD questionnaires by first examining the skewness and kurtosis of the items. According to the table, it seems that all the items are relatively normally distributed, as stipulated by guidelines for skewness (<2) and kurtosis (<4) (DeCarlo, 1997). All items therefore were used for exploratory factor analysis to determine the construct validity of both instruments.

**TABLE 2:** Descriptive statistics on the items for BIDR and MCSDS

Item		Mean	SD	Skewness	Kurtosis
<b>BIDR</b>					
s3q1	My first impression of people usually turns out to be right.	3.86	.874	-.640	.243
s3q2	It would be very hard for me to break any of my bad habits.	2.75	1.256	-.002	-1.240
s3q3	I don't care to know what other people really think of me.	3.00	1.285	-.090	-1.084
s3q4	I have not always been honest with myself.	2.74	1.265	.040	-1.217
s3q5	I always know why I like things.	3.80	.961	-.805	.457
s3q6	When my emotions are aroused, it biases my thinking.	3.11	1.193	-.317	-.858
s3q7	Once I made up my mind, other people can seldom change my opinion.	3.14	1.231	-.217	-.942
s3q8	I am not a safe driver when I exceed the speed limit.	2.60	1.422	.396	-1.212
s3q9	I am fully in control of my fate.	3.51	1.172	-.552	-.474
s3q10	It's hard for me to shut off a disturbing thought.	3.15	1.262	-.289	-1.007
s3q11	I never regret my decisions.	3.18	1.146	-.074	-.797

Table 2: Continued

s3q12	I sometimes lose out of things because I can't make up my mind soon enough.	2.88	1.237	-.019	-1.110
s3q13	The reason I vote is because my vote can make a difference.	3.92	1.222	-1.129	.315
s3q14	My parents were not always fair when they punished me.	2.39	1.258	.404	-1.073
s3q15	I am a completely rational person.	3.61	1.079	-.833	.257
s3q16	I rarely appreciate criticism.	2.84	1.198	.065	-.972
s3q17	I am very confident in my judgments.	3.92	.834	-.903	1.169
s3q18	I have sometimes doubted my ability as a lover.	2.86	1.322	-.072	-1.267
s3q19	It's all right with me if some people happen to dislike me.	3.60	1.133	-.831	-.013
s3q20	I don't always know the reason why I do the things I do.	2.72	1.292	.149	-1.161
s3q21	I sometimes tell lies if I have to.	2.83	1.247	-.108	-1.151
s3q22	I never cover up my mistakes.	2.86	1.241	.087	-1.005
s3q23	There have been occasions when I have taken advantage of someone.	2.43	1.191	.313	-.981
s3q24	I never swear.	2.14	1.280	.916	-.296
s3q25	I sometimes try to get even rather than forgive and forget.	2.54	1.249	.339	-.970
s3q26	I always obey laws, even if I'm unlikely to get caught.	3.57	1.059	-.418	-.524
s3q27	I have said something bad about a friend behind his or her back.	2.85	1.267	-.122	-1.183
s3q28	When I hear people talking privately, I avoid listening.	3.36	1.196	-.322	-.782
s3q29	I have received too much change from a salesperson without telling him or her.	2.37	1.250	.439	-.993
s3q30	I always declare everything at customs.	3.61	1.211	-.564	-.587
s3q31	When I was young I sometimes stole things.	2.62	1.347	.110	-1.399

Table 2: Continued

s3q32	I have never dropped litter on the street.	2.63	1.350	.379	-1.047
s3q33	I sometimes drive faster than the speed limit.	3.72	1.230	-.954	-.036
s3q34	I never read sexy books or magazines.	2.51	1.399	.585	-.978
s3q35	I have done things that I don't tell other people about.	3.68	1.290	-.865	-.374
s3q36	I never take things that don't belong to me.	3.84	1.220	-.883	-.189
s3q37	I have taken sick leave from work or school even though I wasn't really sick.	2.68	1.539	.201	-1.541
s3q38	I have never damaged a library book or store merchandise without reporting it.	3.60	1.443	-.662	-.973
s3q39	I have some pretty awful habits.	2.77	1.296	.117	-1.144
s3q40	I don't gossip about other people's business.	3.18	1.233	-.176	-.924
<b>MCSDS</b>					
S3q41	Before voting I thoroughly investigate the qualifications of all the candidates	2.89	1.375	.029	-1.273
S3q42	I never hesitate to go out of my way to help someone in trouble	3.79	.994	-.863	.586
S3q43	It is sometimes hard for me to go on with my work if I am not encouraged	3.15	1.337	-.284	-1.170
S3q44	I have never intensely disliked anyone	2.76	1.343	.228	-1.178
S3q45	On occasion I have had doubts about my ability to succeed in life	3.05	1.318	-.143	-1.116
S3q46	I sometimes feel resentful when I don't get my way	3.00	1.132	-.261	-.887
S3q47	I am always careful about my manner of dress	3.71	1.114	-.702	-.297
S3q48	My table manners at home are as good as when I eat out in a restaurant	3.78	1.132	-.852	-.087
S3q49	If I could get into a movie without paying and be sure I was not seen I	2.32	1.362	.642	-.908

Table 2: Continued

	would probably do it				
S3q50	On a few occasions, I have given up doing something because I thought too little of my ability	2.89	1.273	-.159	-1.191
S3q51	I like to gossip at times	2.37	1.254	.468	-.916
S3q52	There have been times when I felt like rebelling against people in authority even though I knew they were right	2.59	1.373	.279	-1.300
S3q53	No matter who I'm talking to, I'm always a good listener	3.99	.928	-1.087	1.354
S3q54	I can remember "playing sick" to get out of something	2.74	1.477	.151	-1.458
S3q55	There have been occasions when I took advantage of someone	2.32	1.225	.513	-.892
S3q56	I'm always willing to admit it when I make a mistake	3.91	1.014	-1.150	1.200
S3q57	I always try to practice what I preach	4.13	.782	-1.117	2.464
S3q58	I don't find it particularly difficult to get along with loud-mouthed, obnoxious people	3.03	1.239	-.107	-1.055
S3q59	I sometimes try to get even rather than forgive and forget	2.51	1.296	.392	-1.070
S3q60	When I don't know something I don't at all mind admitting it	3.83	1.104	-1.071	.656
S3q61	I am always courteous, even to people who are disagreeable	3.73	.955	-.804	.479
S3q62	At times I have really insisted or having things my own way	3.31	1.104	-.624	-.363
S3q63	There have been occasions when I felt like smashing things	3.20	1.369	-.332	-1.153
S3q64	I would never think of letting someone else be punished for my wrongdoings	3.87	1.279	-1.100	.114
S3q65	I never resent being asked to return a	3.58	1.157	-.700	-.247

Table 2: Continued

	favour				
S4q66	I have never been irked when people expressed ideas very different from my own.	3.43	1.060	-.654	.100
S4q67	I never make a long trip without checking the safety of my car.	3.88	1.107	-1.076	.610
S4q68	There have been times when I was quite jealous of the good fortune of others.	2.80	1.206	-.041	-.878
S4q69	I have almost never felt the urge to tell someone off.	2.61	1.108	.345	-.387
S4q70	I am sometimes irritated by people who ask favours of me.	2.82	1.137	-.054	-.698
S4q71	I have never felt that I was punished without cause.	2.91	1.191	.020	-.758
S4q72	I sometimes think when people have a misfortune; they only got what they deserved.	2.63	1.144	.250	-.600
S4q73	I have never deliberately said something that hurt someone's feelings.	3.08	1.248	-.101	-.884

After the analysis of the distribution of the items, exploratory factor analysis was conducted on both scales in order to determine communalities ( $> 0.2$ ) and factor loadings ( $>0.3$ ). Loadings smaller than 0.30 and communalities smaller than 0.20 indicates that an item is a poor measure of the factor being studied (Child, 2006; Kerlinger & Lee, 2000). First, Principle Component Analysis (PCA) was conducted on both instruments to determine the number of factors to extract. After reviewing the scree plot (Kerlinger & Lee, 2000) it was found that the BIDR are measured by two factors, and the MCSDS by one factor (as confirmed by theory). After this the Maximum Likelihood as extraction method was employed, followed by a varimax rotation on the BIDR (as the two factors was found to be uncorrelated) and no rotation for MCSDS since only one factor was extracted. The BIDR was analysed first with a two-factor solution in order to determine if the items load onto Self-deception and Impression management as theoretical constructs. The two-factor solution explained only 22.006% variance by an eigenvalue of 1 and higher and a goodness-of-fit

model with a chi-square value of 1318.733. The communalities and factor loadings can be viewed in Table 3.

**TABLE 3:** BIDR communalities and factor loadings (first EFA with a two-factor solution)

Nr	Items	$h^2$	Factor	
			1	2
s3q1	My first impression of people usually turns out to be right.	.015	.005	.122
s3q2	It would be very hard for me to break any of my bad habits.	.250	.498	.053
s3q3	I don't care to know what other people really think of me.	.031	.146	.096
s3q4	I have not always been honest with myself.	.384	.612	-.093
s3q5	I always know why I like things.	.069	.233	.120
s3q6	When my emotions are aroused, it biases my thinking.	.333	.576	-.030
s3q7	Once I made up my mind, other people can seldom change my opinion.	.037	.191	.023
s3q8	I am not a safe driver when I exceed the speed limit.	.038	.195	.000
s3q9	I am fully in control of my fate.	.089	.277	.111
s3q10	It's hard for me to shut off a disturbing thought.	.403	.624	.116
s3q11	I never regret my decisions.	.118	.341	.043
s3q12	I sometimes lose out of things because I can't make up my mind soon enough.	.380	.616	.017
s3q13	The reason I vote is because my vote can make a difference.	.039	.196	.029
s3q14	My parents were not always fair when they punished me.	.183	.412	.113
s3q15	I am a completely rational person.	.089	.032	.296
s3q16	I rarely appreciate criticism.	.049	.212	.063
s3q17	I am very confident in my judgments.	.118	.343	.031
s3q18	I have sometimes doubted my ability as a lover.	.359	.595	.069
s3q19	It's all right with me if some people happen to dislike me.	.036	.165	.095

Table 3: Continued

s3q20	I don't always know the reason why I do the things I do.	.466	.681	.046
s3q21	I sometimes tell lies if I have to.	.269	.381	.352
s3q22	I never cover up my mistakes.	.132	.211	.296
s3q23	There have been occasions when I have taken advantage of someone.	.344	.488	.326
s3q24	I never swear.	.051	.014	.224
s3q25	I sometimes try to get even rather than forgive and forget.	.095	.242	.192
s3q26	I always obey laws, even if I'm unlikely to get caught.	.231	.230	.422
s3q27	I have said something bad about a friend behind his or her back.	.371	.594	.132
s3q28	When I hear people talking privately, I avoid listening.	.115	.252	.226
s3q29	I have received too much change from a salesperson without telling him or her.	.246	.371	.329
s3q30	I always declare everything at customs.	.133	.136	.338
s3q31	When I was young I sometimes stole things.	.200	.226	.385
s3q32	I have never dropped litter on the street.	.185	.092	.420
s3q33	I sometimes drive faster than the speed limit.	.067	.241	.093
s3q34	I never read sexy books or magazines.	.172	.157	.384
s3q35	I have done things that I don't tell other people about.	.186	.425	.073
s3q36	I never take things that don't belong to me.	.294	.016	.542
s3q37	I have taken sick leave from work or school even though I wasn't really sick.	.255	.452	.224
s3q38	I have never damaged a library book or store merchandise without reporting it.	.158	.043	.395
s3q39	I have some pretty awful habits.	.225	.463	.104
s3q40	I don't gossip about other people's business.	.067	.074	.249

From Table 3 it is evident that items s3q1, s3q3, s3q5, s3q7, s3q8, s3q9, s3q11, s3q13, s3q14, s3q15, s3q16, s3q17, s3q19, s3q22, s3q24, s3q25, s3q28, s3q30, s3q32, s3q33, s3q34, s3q35, s3q38 and s3q40 did not show communalities ( $h^2$ ) of 0.20 and higher. It also seems from the last two columns for the factor loadings that only items s3q2, s3q4, s3q6, s3q10, s3q11, s3q12, s3q14, s3q17, s3q18, s3q20, s3q21, s3q23, s3q26, s3q27, s3q29, s3q30, s3q31, s3q32,

s3q34, s3q35, s3q36, s3q37, s3q38 and s3q39 seemed to load onto the two-factor model of BIDR. It was first decided to omit the items that showed both low communalities and factor loadings. Furthermore, it was also evident that items s3q21, s3q23 and s3q29 showed double loadings and many of the items seemed to load on the wrong factor. A loading smaller than 0.3 and communalities smaller than 0.2 indicate that an item is a poor measure of the factor being studied (Child, 2006; Kerlinger & Lee, 2000; Pallant, 2007). It was difficult to determine which factor was measured by Self-deception items, and which factor by Impression management items. The decision was therefore made to rather try a one-factor solution with the retained items. After the items were removed, the analysis was re-done and it showed more acceptable communalities and factor loadings as found in Table 3. The variance explained for the remaining items with a one-factor solution was 22.284% and showed an improved model-fit with a chi-square score of 714.767. In Table 4 the new results may be viewed.

**TABLE 4:** BIDR communalities and factor loadings (second EFA with a one-factor solution)

Nr.	Items	$h^2$	Factor
s3q2	It would be very hard for me to break any of my bad habits.	.224	.474
s3q4	I have not always been honest with myself.	.379	.616
s3q6	When my emotions are aroused, it biases my thinking.	.334	.578
s3q10	It's hard for me to shut off a disturbing thought.	.330	.574
s3q11	I never regret my decisions.	.111	.333
s3q12	I sometimes lose out of things because I can't make up my mind soon enough.	.355	.596
s3q14	My parents were not always fair when they punished me.	.174	.417
s3q18	I have sometimes doubted my ability as a lover.	.317	.563
s3q20	I don't always know the reason why I do the things I do.	.430	.656
s3q21	I sometimes tell lies if I have to.	.191	.437
s3q23	There have been occasions when I have taken advantage of someone.	.301	.549
s3q26	I always obey laws, even if I'm unlikely to get caught.	.084	.290
s3q27	I have said something bad about a friend behind his or her back.	.374	.612

Table 4: Continued

s3q29	I have received too much change from a salesperson without telling him or her.	.176	.420
s3q30	I always declare everything at customs.	.040	.199
s3q31	When I was young I sometimes stole things.	.093	.305
s3q32	I have never dropped litter on the street.	.052	.002
s3q34	I never read sexy books or magazines.	.004	.066
s3q35	I have done things that I don't tell other people about.	.195	.442
s3q36	I never take things that don't belong to me.	.015	.121
s3q37	I have taken sick leave from work or school even though I wasn't really sick.	.241	.491
s3q38	I have never damaged a library book or store merchandise without reporting it.	.002	.040
s3q39	I have some pretty awful habits.	.240	.490

As can be viewed in Table 4, the following remaining items showed low communalities (s3q11, s3q14, s3q21, s3q26, s3q29, s3q30, s3q31, s3q32, s3q34, s3q35, seq36, and s3q38). Furthermore, other than low communalities, items s3e30, s3q32, s3q34, s3q36 and s3q38 showed low loadings. The items not mentioned showed loadings of 0.30 and higher onto the one factor-solution of BIDR and acceptable communalities. The mentioned items were omitted for further analysis and the new results can be viewed in Table 5. The variance explained by the remaining items with a one factor-solution was 38.501% with a better goodness-of-fit with a chi-square value of 93.328 indicating that the remaining items showed a relatively good fit with the factor.

**TABLE 5:** BIDR communalities and factor loadings (third EFA with a one-factor solution)

Nr.	Items	$h^2$	Factor
s3q2	It would be very hard for me to break any of my bad habits.	.245	.495
s3q4	I have not always been honest with myself.	.378	.615
s3q6	When my emotions are aroused, it biases my thinking.	.369	.607
s3q10	It's hard for me to shut off a disturbing thought.	.365	.604
s3q12	I sometimes lose out of things because I can't make up my mind soon enough.	.372	.610
s3q18	I have sometimes doubted my ability as a lover.	.339	.582

Table 5: Continued

s3q20	I don't always know the reason why I do the things I do.	.468	.684
s3q23	There have been occasions when I have taken advantage of someone.	.245	.495
s3q27	I have said something bad about a friend behind his or her back.	.350	.591
s3q37	I have taken sick leave from work or school even though I wasn't really sick.	.204	.452
s3q39	I have some pretty awful habits.	.238	.488

As can be viewed from Table 5, all the remaining 11 items show acceptable values when viewing the communalities and factor loadings. These items were used for further descriptive and inferential evaluation.

With the MCSDS, the same analysis was carried out as with the BIDR. The Principle Component Analysis (PCA) showed a one factor for the MCSDS, with an eigenvalue of 1 and higher. In the next table, the one-factor solution for the MCSDS instrument's 33 items was conducted after this utilising the Maximum Likelihood as extraction method. A disappointing goodness-of-fit value of 1413.500 (chi-square) was found, while the 33 items explained 16.586% variance with a one-factor solution. The communalities and factor loadings can be viewed in Table 6.

**TABLE 6:** MCSDS communalities and factor loadings (first EFA with one-factor solution)

Nr.	Items	$h^2$	Factor
S3q41	Before voting I thoroughly investigate the qualifications of all the candidates	.003	.056
S3q42	I never hesitate to go out of my way to help someone in trouble	.053	.231
S3q43	It is sometimes hard for me to go on with my work if I am not encouraged	.202	.449
S3q44	I have never intensely disliked anyone	.028	.167
S3q45	On occasion I have had doubts about my ability to succeed in life	.238	.488
S3q46	I sometimes feel resentful when I don't get my way	.292	.540
S3q47	I am always careful about my manner of dress	.073	.270
S3q48	My table manners at home are as good as when I eat out in a	.071	.266

Table 6: Continued

	restaurant		
S3q49	If I could get into a movie without paying and be sure I was not seen I would probably do it	.212	.460
S3q50	On a few occasions, I have given up doing something because I thought too little of my ability	.323	.568
S3q51	I like to gossip at times	.355	.596
S3q52	There have been times when I felt like rebelling against people in authority even though I knew they were right	.317	.563
S3q53	No matter who I'm talking to, I'm always a good listener	.111	.334
S3q54	I can remember "playing sick" to get out of something	.322	.567
S3q55	There have been occasions when I took advantage of someone	.309	.556
S3q56	I'm always willing to admit it when I make a mistake	.059	.243
S3q57	I always try to practice what I preach	.108	.329
S3q58	I don't find it particularly difficult to get along with loud-mouthed, obnoxious people	.000	.013
S3q59	I sometimes try to get even rather than forgive and forget	.203	.451
S3q60	When I don't know something I don't at all mind admitting it	.001	.022
S3q61	I am always courteous, even to people who are disagreeable	.029	.170
S3q62	At times I have really insisted or having things my own way	.220	.469
S3q63	There have been occasions when I felt like smashing things	.398	.631
S3q64	I would never think of letting someone else be punished for my wrongdoings	.004	.063
S3q65	I never resent being asked to return a favour	.008	.088
S4q66	I have never been irked when people expressed ideas very different from my own.	.029	.171
S4q67	I never make a long trip without checking the safety of my car.	.022	.147
S4q68	There have been times when I was quite jealous of the good fortune of others.	.296	.544
S4q69	I have almost never felt the urge to tell someone off.	.016	.126
S4q70	I am sometimes irritated by people who ask favours of me.	.191	.437
S4q71	I have never felt that I was punished without cause.	.006	.080
S4q72	I sometimes think when people have a misfortune; they only got what they deserved.	.164	.406

Table 6: Continued

S4q73	I have never deliberately said something that hurt someone's feelings.	.034	.186
-------	--	------	------

Once again, the Maximum Likelihood was used on the full 33-item version of the MCSD as extraction method in the initial analysis. The variance explained from all the 33 items of MCSDS was 16.586%. The results on the communalities and factor loadings are also displayed.

From Table 6 it is evident that items: S3q41, S3q42, S3q44, S3q47, S3q48, S3q53, S3q56, S3q57, S3q58, S3q60, S3q61, S3q64, S3q65, S3q66, S3q67, S3q69, S3q71, S3q72, S3q73 did not show communalities of 0.20 and higher. It also seems from the last column for the factor loadings that items: S3q41, S3q44, S3q47, S3q48, S3q58, S3q60, S3q61, S3q64, S3q65, S3q66, S3q67, S3q69, S3q71, and S3q73 did not load onto the one-factor model of MCSDS. All of these items also showed low communalities. The decision was made to omit the items that showed both inefficient values of communalities and factor loadings (a similar decision was made with the BIDR items). After the items were removed, the analysis was re-done and it showed more acceptable communalities and factor loadings than in Table 6. The variance explained for the remaining items was 28.189% and showed an improved chi-square value of 396.040. In Table 7 the new results may be viewed.

**TABLE 7:** MCSDS communalities and factor loadings (second EFA with one-factor solution)

Nr.	Items	$h^2$	Factor
S3q42	I never hesitate to go out of my way to help someone in trouble	.032	.179
S3q43	It is sometimes hard for me to go on with my work if I am not encouraged	.228	.477
S3q45	On occasion I have had doubts about my ability to succeed in life	.250	.499
S3q46	I sometimes feel resentful when I don't get my way	.291	.540
S3q49	If I could get into a movie without paying and be sure I was not seen I would probably do it	.222	.471
S3q50	On a few occasions, I have given up doing something because I thought too little of my ability	.327	.572
S3q51	I like to gossip at times	.364	.604

Table 7: Continued

S3q52	There have been times when I felt like rebelling against people in authority even though I knew they were right	.327	.572
S3q53	No matter who I'm talking to, I'm always a good listener	.071	.269
S3q54	I can remember "playing sick" to get out of something	.352	.593
S3q55	There have been occasions when I took advantage of someone	.326	.570
S3q57	I always try to practice what I preach	.075	.274
S3q59	I sometimes try to get even rather than forgive and forget	.199	.447
S3q62	At times I have really insisted or having things my own way	.228	.478
S3q63	There have been occasions when I felt like smashing things	.396	.630
S4q68	There have been times when I was quite jealous of the good fortune of others.	.310	.557
S4q70	I am sometimes irritated by people who ask favours of me.	.186	.431
S4q72	I sometimes think when people have a misfortune; they only got what they deserved.	.170	.413

From Table 7, it seems that S3q42, S3q53, S3q57, S3q59, S3q70 and S3q72 show low communalities, while S3q42, S3q53 and S3q57 showed low loadings on the one-factor solution. All these items were omitted for further analysis. In Table 8, the final set of remaining items may be viewed.

**TABLE 8:** MCSDS communalities and factor loadings (third EFA with a one-factor solution)

Nr.	Items	$h^2$	Factor
S3q43	It is sometimes hard for me to go on with my work if I am not encouraged	.258	.508
S3q45	On occasion I have had doubts about my ability to succeed in life	.279	.528
S3q46	I sometimes feel resentful when I don't get my way	.296	.544
S3q49	If I could get into a movie without paying and be sure I was not seen I would probably do it	.222	.471
S3q50	On a few occasions, I have given up doing something because I thought too little of my ability	.352	.594
S3q51	I like to gossip at times	.340	.583
S3q52	There have been times when I felt like rebelling against people in	.329	.574

Table 8: Continued

	authority even though I knew they were right		
S3q54	I can remember "playing sick" to get out of something	.373	.611
S3q55	There have been occasions when I took advantage of someone	.317	.563
S3q62	At times I have really insisted or having things my own way	.207	.455
S3q63	There have been occasions when I felt like smashing things	.393	.627
S4q68	There have been times when I was quite jealous of the good fortune of others.	.294	.542

According to Table 8, the remaining 12 items showed acceptable levels of factor loadings on the one factor of MCSDS and show efficient communalities. The variance explained by the 12 items is 36.277% and achieved a chi-square value of 115.903. These items were used for further analysis.

Both the factors of BIDR and MCSDS are computed, and in the next table the descriptive statistics, alpha coefficients and the product-moment correlations can be viewed. The correlations were done between the two instruments in order to determine the convergent validity of both scales.

**TABLE 9:** Descriptive statistics, Cronbach alpha coefficients and Product-moment correlations of the one-dimensional BIDR and MCSDS

Dimensions	Mean	<i>SD</i>	Skewne ss	Kurtosi s	$\alpha$	1
1. Social Desirability	2.812	.792	.241	.416	.836	1
BIDR						
2. Social Desirability	2.812	.774	.197	.394	.838	.820+**
MCSDS						

$\alpha$  – Indicate the Cronbach alpha coefficients

\* - Indicate statistical significance on level 0.01

++ - Indicate practical significance on level 0.50 and higher (large effect)

As indicated in Table 9, it seems that both scales (BIDR and MCSDS) are normally distributed. Furthermore, both scales show acceptable internal consistencies ( $\alpha < .70$ ). It is

also evident that both scales positively correlate with a large effect to each other (.820), which confirms that both scales have convergent validity.

## Discussion

The general objective of this study was to determine if two of the world's most used social desirability scales can be fairly and objectively used within a South African population sample. The following will be an examination of the specific objectives, limitations of the study and recommendations for future research.

Item performance and distribution results of both the BIDR and MCSDS were investigated (both was measured by a 5-point Likert scale). The results of the full 33-item version of the MCSDS and full 40-item version of the BIDR showed that both these scales had normal distribution. This indicated that all items showed skewness ( $<2$ ) and kurtosis ( $<4$ ) (DeCarlo, 1997). This means that none of the items analysed had deviated from the normal distribution, which would have indicated the presence of clustering of scores (Asiwe, Jorgensen & Hill, 2014). This further indicates that participants did not respond sporadically to the items of both instruments and answered items consistently. When looking at the mean scores of the Likert response scale for both social desirability scales it was found that the average mean was around 2.812, which indicates that the respondents had a tendency to answer towards a "Somewhat Disagree" and "Somewhat Disagree/Agree" response. This suggests that most of respondents were unsure of their feelings towards the items or not overly biased towards either side of the scale. Another reason could be because respondents sometimes misunderstood the meaning of an item and responded to it from their own interpretation rather than its intended meaning (Colton & Covert, 2007). The very nature of the items, the intention being to measure socially desirable or undesirable behaviour, could also have affected the response by the participants (Kulas & Stachowski, 2012; Paulhus, 1984; 1991).

Construct validity was indicated by examining the variance explained, chi-square, factor loadings and communalities. The BIDR consists of 40 items with 20 supposed to measure on IM and 20 on SDE. During this study, however, only 7 items from the proposed SDE factor and 4 items from IM with a total of 11 were found valid to use with the sample population. The first exploratory factor analysis with a two-factor solution showed low

variance explained and an inefficient model fit. After using maximum likelihood as extraction method and removing low performing items, a single factor analysis indicated a variance explaining 38.501%. This indicates that the remaining items ultimately only represent 38.5% of the construct being measured and are therefore below the cut-off recommended score of 50% (Streiner; 1994). However, Ping (2009) stated that if instruments were new or unknown to participants, and the researcher(s) aimed to add to theory pertaining to the use of certain instruments in a new context, a below average variance explained is acceptable (if the additional model-fit indices show good results). From the results it is clear that the initial variance explained improved when removing the items that did not show desirable communalities and loadings. Items s3q2 (*It would be very hard for me to break any of my bad habits.*), s3q4 (*I have not always been honest with myself.*), s3q6 (*When my emotions are aroused, it biases my thinking*), s3q10 (*It's hard for me to shut off a disturbing thought*), s3q12 (*I sometimes lose out of things because I can't make up my mind soon enough*), s3q18 (*I have sometimes doubted my ability as a lover*), s3q20 (*I don't always know the reason why I do the things I do.*), s3q23 (*There have been occasions when I have taken advantage of someone*), s3q27 (*I have said something bad about a friend behind his or her back*), s3q37 (*I have taken sick leave from work or school even though I wasn't really sick*), and s3q39 (*I have some pretty awful habits*) loaded successfully onto one factor. When assessing the retained items, it is obvious that item performance is not based on specific criteria for item retainment (Hill *et al.*, 2013). Usually long-worded items or double barrel items are omitted after factor analysis. In this case it seems that this was not the case.

The BIDR also ended up with a successful reliability value of  $\alpha = .836$  (Cicchetti, 1994; Nunnally & Bernstein, 1994). Having a Cronbach alpha coefficient  $\alpha > .70$  is of importance to these types of test. Cronbach alpha is a numerical coefficient of reliability that ranges from 0 to 1 and used to define the reliability of factors extracted from dichotomous types of instrument scoring (i.e. Likert type) (Reynold & Santos, 1999). Item scores closer to 1 or  $\alpha > .70$  suggest that the items are measuring the same construct. Therefore the closer the “ $\alpha$ ” is to 1, the higher reliability is presumed to be. This indicate an acceptable score according to Nunnaly (1978) since a score should be at least 0.7. This in turn demonstrates that the scores of a measurement are accurate, consistent and/or stable (Struwig & Stead, 2010). It also means that the retained items measure the factor of social desirability (as defined within the theory of BIDR) not randomly.

The results of the full 33-item version of the MCSDS as a measure of social desirability in the South African context did not prove successful regarding the literature. After the initial exploratory factor analysis, the MCSDS with a one-factor solution had a very low total variance explained, factor loadings and communalities. With the maximum likelihood extraction method items were eliminated that showed low communalities and factor loadings in order to improve variance explained and model fit. Thereafter the remaining 12 items of the MCSDS showed a variance explained of 36.277% with the items S3q43 (*It is sometimes hard for me to go on with my work if I am not encouraged*), S3q45 (*On occasion I have had doubts about my ability to succeed in life*), S3q46 (*I sometimes feel resentful when I don't get my way*), S3q49 (*If I could get into a movie without paying and be sure I was not seen I would probably do it*), S3q50 (*On a few occasions, I have given up doing something because I thought too little of my ability*), S3q51 (*I like to gossip at times*), S3q52 (*There have been times when I felt like rebelling against people in authority even though I knew they were right*), S3q54 (*I can remember "playing sick" to get out of something*), S3q55 (*There have been occasions when I took advantage of someone*), S3q62 (*At times I have really insisted of having things my own way*), S3q63 (*There have been occasions when I felt like smashing things*), and S4q68 (*There have been times when I was quite jealous of the good fortune of others*) that successfully loaded onto a single factor. Streiner (1994) suggests that factors in a study should explain at least 50% of the common variance. Therefore it is recommended that items with weak communalities ought to be removed to increase the overall variance explained (Floyd & Widaman, 1995). The remaining 12 items, however, showed acceptable levels of communalities. Furthermore, as with the retained items of the BIDR, no specific reasons could be provided for the performance of the remaining items. Most items seem to be either double barrel or long-worded. The only suggestion would be that these items are easily understandable for the participants.

The Cronbach alpha coefficient MCSDS after exploratory factor analysis was  $\alpha = .838$ , which is reliable and also adheres to the general guidelines of  $\alpha > .70$  (Cicchetti, 1994; Nunnally & Bernstein, 1994). It is noteworthy to note that the internal consistency of both the BIDR and MCSDS are very close together in value. It makes sense if one assesses the retained items for both instruments. The wording and structure seems to be similar in nature when reviewing the items.

To summarise the evaluation of the results thus far, most of the items had to be discarded from both these measures. Therefore, one can consider a few alternative factors that may have caused this. Oakland (2004) warns that people from different countries and cultures have their own views when it comes to testing and administering social desirability tests. This could have affected the way the diverse South African sample in this study may have completed the questionnaires and reacted to items. This was confirmed by Lalwani, Shavitt and Johnson (2006) in their findings that individuals from collectivistic (more African cultures) and individualistic (European white cultures) cultural backgrounds tend to respond differently to social desirability statements. Individuals tend to respond to surveys based on their cultural experiences, whether or not it may be of a socially desirable nature (Johnson, & Van Der Vijver, 2003). Respondent errors could also have contributed to this outcome, such as non-response errors, response bias, and purposively falsifying answers (Foxcroft & Roodt, 2009). Some of the items may have been potentially offensive and/or inappropriate for the participants. This was the case in the global BIDR study by Steenkamp, De Jong and Baumgartner (2010).

After the factors were computed (by using the retained items), further analysis took place on the developed factors. Convergent validity was analysed by looking at the product-moment correlation between the dimensions of BIDR and the MCSDS which showed a positive relationship ( $r = .820$ ) with a large effect. This relationship has also been found in other studies where the MCSDS and the BIDR correlate with one another at .71 (Paulhus, 1988 cited in Paulhus, 1991) and .53 (Ventimiglia & MacDonald, 2012). This indicates a strong relationship between the two measures, measuring the same construct (Pallant, 2007), which is not unexpected since the retained items of both instruments are similar in wording. The value found indicates that the dimensions of BIDR and MCSDS show convergent validity.

Both the MCSDS and the BIDR eventually loaded onto a single factor after analysis. As the BIDR did not show two factors as intended, one might rethink whether social desirability can really only be classified as multiple constructs. This supports the recommendation by Helmes and Holden (2003) that a “greater attention to theoretical definitions at the level of the discrimination of social desirability from related constructs would be essential” to help solve this problem (p. 1022).

## Practical implications

The results of the study provide a sample of items that can untimely be used in combination with other personality measures to detect whether an individual has been showing respond bias. This could potentially enhance decision making during assessments in the workplace. As this study used a diverse South African population group, test users can be assured that these items have been tested within a representative sample. However, it should be kept in mind that the items was only in English and could be open to respondent error if an individual is not proficient in English.

## Limitations

There are several limitations that need to be taken into account in this study. The results obtained for the psychometric properties (specifically low variance explained) of both instruments are still a problem that needs to be addressed and studied closer. Although the population was diverse in terms of ethnic and language distribution, this study did not evenly include all representative individuals of the population since only working individuals were used. These results can therefore not be generalised to the whole population (rural vs. urban; pensioners, etc.). The study was conducted by means of an internet questionnaire and respondents' computer literacy and computer anxiety were not determined and some respondents may have been negatively influenced (Foxcroft, 2004). A larger sample size could have improved the data's validity as a larger sample can strengthen the statistical power of the results (Osborne & Costello, 2004). This study was a cross-sectional study and thus the data was collected over a single period and the results cannot be compared to that of a longitudinal study. Both questionnaires were completed in English, which could not have been the first language of all participants, although they understood that the questionnaires would be in English. The possibility exists, however, that subtle variations in the understanding of the item content could have influenced results. Alternative statistical programs could have been consulted to substantiate the findings.

## Recommendations

This study provides a platform for future studies using the MCSDS and the BIDR with these items having been tested within a relatively diverse participant sample in this study. The

creation of a shortened version of both measures is possible for a South African population. A more in-depth study and identification of the different individual cultures of each respondent could be included be taken into consideration regarding how they might answer socially desirable statements. Duplicate studies could use a paper-and pencil version of the questionnaire that could provide a different conclusion (Lubbe, 2012). As an English questionnaire, this might have affected the results therefore future studies could include a translation for the items used. Deeper theoretical research/insight needs to be done on the factor structure of social desirability and ways to control for this phenomenon other than in a questionnaire format need to be explored.

## Conclusions

The conclusion of the results indicates that although many items had to be removed from the analysis, the remaining items does show very good reliability, and can therefore be used for future research. The study also contributes to the existing literature that questions the factor construct of social desirability by only finding a single factor for both the BIDR and the MCSDS.

## REFERENCES

- Anderson, C, Flynn, F, & Spataro, S (2008). Personality and organizational culture as determinants of influence. *Journal of Applied Psychology, 93*(3). 702-710
- Andrews, P., & Meyer, R. G. (2003). Marlowe-Crowne Social Desirability Scale and short form C: Forensic norms. *Journal of Clinical Psychology, 59*, 483-492.
- Asiwe, D. N., Jorgensen, L. I., & Hill, C. (2014). The development and investigation of the psychometric properties of a burnout scale within a South African agricultural research institution. *SA Journal of Industrial Psychology, 40*(1), Art. #1194, 14 pages. <http://dx.doi.org/10.4102/sajip.v40i1.1194>
- Ballard, R. (1992). Short forms of the Marlowe-Crowne Social Desirability Scale. *Psychological Reports, 71*, 1155-1160.
- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment, 9*, 9-30.
- Baumeister, R. F. (1993). Lying to yourself: The enigma of self-deception. In M. Lewis, & C. Saarni (Eds.), *Lying and deception in everyday life* (166-183). New York, NY: Guilford Press.
- Becker, G. (2000). How important is transient error in estimating reliability? Going beyond simulation studies. *Psychological Methods, 5*(3), 370-379.
- Beretvas, S., Meyers, J., & Leite, W. (2002). A reliability generalization study of the Marlowe-Crowne Social Desirability Scale. *Educational and Psychological Measurement, 62*(4), 570-589.
- Bonanno, G. A., Rennicke, C., & Dekel, S. (2005). Self-enhancement among high-exposure survivors of the September 11th terrorist attack: Resilience or social maladjustment? *Journal of Personality and Social Psychology, 88*, 984-998.
- Bourgeois, A. E., Loss, E., Meyers, M. C., & LeUnes, A. D. (2003). The athletic coping skills inventory: Relationship with impression management and self-deception aspects of socially desirable responding. *Psychology of Sport and Exercise, 4*(2), 71-79.
- Cable, D. M., & Parsons, C. K. (2001). Socialization tactics and person-organization fit. *Personnel Psychology, 54*(1), 1-23.
- Callaway, R. J. (2004). *Confirmatory factor analyses of two social desirability scales and the investigation of their contribution to measures of well-being* (Published master's dissertation). Available from [https://circle.ubc.ca/bitstream/id/25451/ubc\\_2009\\_fall\\_callaway\\_rob.pdf](https://circle.ubc.ca/bitstream/id/25451/ubc_2009_fall_callaway_rob.pdf).

- Castello, A. B., & Osborne, J. W. (2005). Best practices in Exploratory Factor Analysis: Four recommendations for getting the most from your analysis. *Practical Assessment Research & Evaluation, 10*(7), 1 – 9.
- Child, D. (2006). *The essentials of factor analysis* (3rd ed.). New York, NY: Continuum International Publishing Group.
- Chung, J., & G. S. Monroe (2003). Exploring SD bias. *Journal of Business Ethics, 44*, 291-302.
- Cicchetti, D.V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment, 6*, 284-290. Retrieved from <http://dx.doi.org/10.1037/1040-3590.6.4.284>
- Classen, R. M. (2011). *Investigation of the optimal response scale for personality measurement: Computer-based testing*. (Unpublished master's dissertation). North-West University, Potchefstroom, South Africa.
- Colton, D., & Covert, R. W. (2007). *Designing and constructing instruments for social research and evaluation*. San Francisco, CA: Jossey-Bass.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*(4), 349-354.
- DeCarlo, L. T. (1997). On the meaning and use of kurtosis. *Psychological Methods, 2*, 292-307.
- Deshields, T. L., Tait, R. C., Gfeller, J. D., & Chibnall, J. T. (1995). Relationships between social desirability and self-report in chronic pain patients. *Clinical Journal of Pain, 11*, 189-193.
- Dodaj, A. (2012). Social desirability and self-reports: Testing a content and response-style model of socially desirable responding. *Europe's Journal of Psychology, 8*(4), 651-666.
- Edwards, A. L. (1957). *The social desirability variable in personality assessment and research*. New York, NY: Dryden.
- Ehrhart K. H. (2006). Job characteristic beliefs and personality as antecedents of subjective person-job fit. *Journal of Business and Psychology, 21*(2), 193-226.
- Floyd, F. J., & Widaman, K. F. (1995). Factor analysis in the development and refinement of clinical assessment instruments. *Psychological Assessment, 7*(3), 286-299.
- Foxcroft, C. D. (2004). Planning a psychological test in the multicultural South African context. *SA Journal of Industrial Psychology, 30*(4), 8-15.
- Foxcroft, C., & Roodt, G. (2009). *Introduction to psychological assessment in the South African context*. Cape Town, South Africa: Oxford University Press.

- Galić, Z., & Jerneić, Ž. (2006). Socially desirable responding in various motivational contexts: A test of Paulhus' model of social desirability. *Suvremena Psihologija*, 9, 155-170.
- Goffin, R. D., & Christiansen, N. D. (2003). Correcting personality tests for faking: A Review of popular personality tests and an initial survey of researchers. *International Journal of Selection and Assessment*, 11, 340-344.
- Golin, S., Terrell, T., Weitz, J., & Drost, P. L. (1979). The illusion of control among depressed patients. *Journal of Abnormal Psychology*, 55, 454-457.
- Hadaway, C. K., P. L., Marler, P. L., & Chaves. M. (1993). What the polls don't show: A closer look at U.S. church attendance. *American Sociological Review*, 58, 741-52.
- Helmes, E., & Holden, R. R. (2003). The Construct of Social Desirability: One or Two Dimensions? *Personality and Individual Differences*, 34(6), 1015–1023.
- Hill, C., Nel, J. A., Van de Vijver, F. J. R., Meiring, D., Valchev, V. H., Adams, B., & De Bruin, G. P. (2013). Developing and testing items for the South African Personality Inventory. *South African Journal of Industrial Psychology*, 39(1), 1122 - 1134. ISSN 0258-5200.
- Hippel, W., & Trivers, R. (2011). The evolution and psychology of self-deception. *Behavioral and Brain Sciences*, 34, 1-16.
- Hirschfeld, R. R., Thomas, C. H., & McNatt, D. B. (2008). Implications of self-deception for self-reported intrinsic and extrinsic motivational dispositions, and actual learning performance: A higher-order structural model. *Educational and Psychological Measurement*, 68, 154-173.
- Holden, R., Starzyk, K., McLeod, L., & Edwards, M. (2000). Comparisons among the Holden Psychological Screening Inventory (HPSI), the Brief Symptom Inventory (BSI), and the Balanced Inventory of Desirable Responding (BIDR). *Assessment*, 7(2), 163-175.
- IBM SPSS Statistics. (2013). *IBM SPSS Statistics for Windows, Version 22.0*. Armonk, NY: IBM Corporation.
- Johnson, T. P., & Van de Vijver, F. J. R. (2003). Social desirability in cross-cultural research. In J. A. Harkness, F. J. R. Van de Vijver & P. Ph. Mohler (Eds.), *Cross-cultural survey methods* (pp. 195-204). New York, NY: Wiley.
- Judge, T. A., Klinger, R., Simon, L. S., & Yang, I. W. F. (2008). The contributions of personality to organizational behavior and psychology: Findings, criticisms, and future research directions. *Social and Personality Psychology Compass*, 2, 1-19.

- Kamdar, D., & Van Dyne, L. (2007). The joint effects of personality and workplace social exchange relationships in predicting task performance and citizenship performance. *Journal of Applied Psychology, 92*(5), 1286.
- Kerlinger, F. N., & Lee, H. B. (2000). *Foundations of behavioural research* (4th ed). London, UK: Wadsworth.
- Kluemper, D. H. (2008). Trait emotional intelligence: The impact of core-self evaluations and social desirability. *Personality and Individual Differences, 44*, 1402-1412.
- Kreuter, F., Presser, S., & Tourangeau, R. (2008). Social Desirability bias in CATI, IVR, and web surveys. *Public Opinion Quarterly, 72*(5), 847-865.
- Kulas, J. T., & Stachowski, A. A. (2012). Social desirability in personality assessment: A variable item contamination perspective. *The International Journal of Educational and Psychological Assessment, 11*, 23-42.
- Lalwani, A. K., Shavitt, S., & Johnson, T. (2006). What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology, 90*, 165-178. doi:10.1037/0022-3514.90.1.165
- Lee, K., Ashton, M. C., & De Vries, R. E. (2005). Predicting workplace delinquency and integrity with the HEXACO and five-factor models of personality structure. *Human Performance, 18*(2), 179-197.
- Lee, S. & Klein, H. J. (2002). Relationships between conscientiousness, self-efficacy, self-deception, and learning over time. *Journal of Applied Psychology, 87*(6), 1175-1182.
- Leite, W. L., & Beretvas, S. N. (2005). Validation of scores on the Marlowe-Crowne Social Desirability Scale and the Balanced Inventory of Desirable Responding. *Educational and Psychological Measurement, 65*(1), 140-154.
- Li, A. and Bagger, J. (2006) Using the BIDR to distinguish the effects of impression management and self-deception on the criterion validity of personality measures: a meta-analysis. *International Journal of Selection and Assessment, 14*, 131-141.
- Li, A., & Bagger, J. (2007). The balanced inventory of desirable responding (BIDR) a reliability generalization study. *Educational and Psychological Measurement, 67*(3), 525-544.
- Loo, R., & Loewen, P. (2004). Confirmatory factor analyses of scores from full and short versions of the Marlowe-Crowne Social Desirability Scale. *Journal of Applied Social Psychology, 34*(11), 2343-2352.

- Loo, R., & Thorpe, K. (2000). Confirmatory factor analyses of the full and short versions of the Marlowe-Crowne Social Desirability Scale. *The Journal of Social Psychology, 140*, 628-635.
- Lubbe, M. H. (2012). *Test mode equivalence in a South African personality context: Paper-and-pencil vs. computerised testing*. (Unpublished master's dissertation). North-West University, Potchefstroom, South Africa.
- Magnus, J., Viswesvaran, C., Deshpande, S., & Joseph, J. (2006). Social desirability: the role of over-claiming, self-esteem, and emotional intelligence. *Psychology Science, 48*(3), 336-356.
- Mann, S. J., & James, G. D. (1998). Defensiveness and essential hypertension. *Journal of Psychomatic Research, 45*, 139-148.
- Martin, B. A., Bowen, C. C., & Hunt, S. T. (2002). How effective are people at faking on personality questionnaires? *Personality and Individual Differences, 32*, 247-256.
- Morgeson, F. P., Campion, M. A., Dipboye, R. L., Hollenbeck, J. R., Murphy, K., & Schmitt, N. (2007). Reconsidering use of personality tests in personnel selection contexts. *Personnel Psychology, 60*, 683-729.
- Nordholm, L. A. (1974). A note on the reliability and validity of the Marlowe-Crowne Scale of Social Desirability. *Journal of Social Psychology, 93*, 139-140.
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York, NY: McGraw-Hill.
- Nunnally, J. (1978). *Psychometric theory*. New York, NY: McGraw-Hill.
- Osborne, J. W., & Blanchard, M. R. (2011). Random responding from participants is a threat to the validity of social science research results. *Frontiers in Quantitative Psychology and Measurement, 1*, 1-7.
- Osborne, J. W., & Costello, A. B. (2004). Sample size and subject to item ratio in principal components analysis. *Practical Assessment, Research & Evaluation, 9*(11). Retrieved July 1, 2014 from <http://PAREonline.net/getvn.asp?v=9&n=11>.
- Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS version 15* (3rd ed.). New York, NY: McGraw-Hill.
- Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology, 46*(3), 598-609. doi: 10.1037/0022-3514.46.3.598.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychology attitudes* (pp. 17-59). San Diego, CA: Academic Press.

- Paulhus, D. L. (1994). *Balanced Inventory of Desirable Responding*: Reference manual for BIDR Version 6. Unpublished manuscript, University of British Columbia, Vancouver, Canada.
- Paulhus, D. L. (2002). Socially desirable responding: the evolution of a construct. In H. I. Braun & D. N. Jackson (Eds.), *The role of constructs in psychological and educational measurement* (pp. 49-69). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Paulhus, D. L., & John, O. P. (1998). Egoistic and moralistic bias in self-perceptions: The interplay of self-deceptive styles with basic traits and motives. *Journal of Personality*, *66*, 1024-1060.
- Paunonen, S. V., & LeBel, E. P. (2012). Socially desirable responding and its elusive effects on the validity of personality assessments. *Journal of Personality and Social Psychology*, *103*, 158-175.
- Ping, R. A. (2009). *Is there any way to improve Average Variance Extracted (AVE) in a Latent Variable (LV)?* Retrieved from <http://home.att.net/~rpingjr/ImprovAVE1.doc>
- Randall, D. M., & Fernandes, M. F. (1991). The social desirability response bias in ethics research. *Journal of Business Ethics*, *10*, 11-23.
- Reynold, J., & Santos, A. (1999). *Cronbach's alpha: A tool for assessing the reliability of scales*. Retrieved October 30, 2014, from <http://www.joe.org/joe/1999april/tt3.php/>
- Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of clinical psychology*, *38*(1), 119-125.
- Risko, E. F., Quilty, L. Y., & Oakman, J. M. (2010). Socially Desirable Responding on the web: Investigating the Candor Hypothesis. *Journal of personality assessment*, *87*(3), 269-276.
- Robins, R. W., & Beer, J. S. (2001). Positive illusions about the self: Short-term benefits and long-term costs. *Journal of Personality and Social Psychology*, *80*, 340-352.
- Rosse, J. G., Stecher, M. D., Miller, J. L., & Levin, R. A. (1998). The impact of response distortion on pre-employment personality testing and hiring decisions. *Journal of Applied Psychology*, *83*, 634-644.
- Rothstein, M. G., & Goffin, R. D. (2006). The use of personality measures in personnel selection: What does current research support? *Human Resource Management Review*, *16*, 155-180.
- Salgado, J. F. (2005). Personality and social desirability in organizational settings: Practical implications for work and organizational psychology. *Papelesdel Psicologico*, *26*, 115-128.

- Salkind, N. J. (2009). *Exploring research* (7th ed). London, UK: Pearson Prentice Hall.
- Saunders, E. (2002). *Assessing Human Competence: Practical Guidelines for the South African Manager*. Johannesburg, South Africa: Knowres Publishing.
- Schmidt, F. L., & Hunter, J. E. (1999). Theory testing and measurement error. *Intelligence*, 27, 183-198.
- Schmidt, F. L., Le, H., & Ilies, R. (2003). Beyond alpha: An empirical examination of the effects that different sources of measurement error have on reliability estimates for measures of individual differences constructs. *Psychological Methods*, 8, 206-224.
- Scroggins, W. A., Thomas, S. L., & Morris, J. A. (2008). Psychological testing in personnel selection, Part I: A century of psychological testing. *Public Personnel Management*, 37(1), 99-109.
- Stead, G. B., & Watson, M. B. (1998). Career research in South Africa: Challenges for the future. *Journal of Vocational Behaviour*, 52, 289-299.
- Steenkamp, J. B. E. M., De Jong, M. G., & Baumgartner, H. (2010). Socially desirable response tendencies in survey research. *Journal of Marketing Research*, 47(2), 199-214.
- Stöber, J., Dette, D. E., & Musch, J. (2002). Comparing continuous and dichotomous scoring of the balanced inventory of desirable responding. *Journal of Personality Assessment*, 78(2), 370-389.
- Streiner, D. L. (1994). Figuring out factor: The use and misuse of factor analysis. *Canadian Journal of Personality*, 39, 135-140.
- Struwig, F. W., & Stead, G. B. (2010). *Planning, reporting and reporting research*. Cape Town, South Africa: Pearson Education South Africa.
- Suhr, D. D. (2006). *Exploratory or confirmatory factor analysis?: Statistics and Data Analysis*. Retrieved from <http://www2.sas.com/proceedings/sugi31/200-31.pdf>
- Tan, L., & Grace, R. C. (2008). Social desirability and sexual offenders: A review. *Sexual Abuse: A Journal of Research and Treatment*, 20(1), 61-87.
- Tanaka-Matsumi, J., & Kameoka, V. A. (1986). Reliabilities and concurrent validities of popular self-report measures of depression, anxiety, and social desirability. *Journal of Consulting and Clinical Psychology*, 54(3), 328-33.
- Tatman, A. W., Swogger, M. T., Love, K., & Cook, M. D. (2009). Psychometric properties of the Marlowe-Crowne Social Desirability Scale with adult male sexual offenders. *Sex Abuse: A Journal of Research and Treatment*, 21, 21-34.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210.

- Uziel, L. (2010a). Look at me, I'm happy and creative: The effect of impression management on behavior in social presence. *Personality and Social Psychology Bulletin*, 36, 1591-1602.
- Uziel, L. (2010b). Rethinking social desirability scales: From impression management to interpersonally oriented self-control. *Perspectives on Psychological Science*, 5, 243-262.
- Ventimiglia, M., & MacDonald, D. A. (2012). An examination of the factorial dimensionality of the Marlowe Crowne Social Desirability Scale. *Personality and Individual Differences*, 52, 487-491.
- Vispoel, W. P., & Tao, S. (2013). A generalizability analysis of score consistency for the Balanced Inventory of Desirable Responding. *Psychological Assessment*, 25(1), 94-104.
- Viswesvaran, C., & Ones, D. (1999). Meta-analyses of fakability estimates: Implications for personality measurement. *Educational and Psychological Measurement*, 59(2), 197-210.
- Warnecke, R. B., Johnson, T. P., Chavez, N., Sudman, S., O'Rourke, D. P., Lacey, L., & Horm, J. (1997). Improving question wording in surveys of culturally diverse populations. *Annals of Epidemiology*, 7(5), 334-342.
- Zerbe, W. J., & Paulhus, D. L. (1987). Socially desirable responding in organizations: A re-conception. *Academy of Management Review*, 12, 250-264.
- Zuckerman, M., & O'Laughlin, R. R. (2006). Self-enhancement by social comparison: A prospective analysis. *Personality and Social Psychology Bulletin*, 32, 751-760.

## CHAPTER 3

### CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

This chapter presents the final conclusions regarding the literature review and the empirical study according to the objectives of this study. This will be followed by the various limitations and recommendations for future studies.

#### 3.1 CONCLUSIONS

Personality testing has grown in all aspects of the modern world of world and therefore accurate and reliable measures can be an important tool in the decision-making processes (Foxcroft & Roodt, 2009; Goodstein & Lanyon, 1999; Judge, Klinger, Simon, & Yang, 2008; Salgado, 2005). In order to successfully use these measures, however, they need to be valid and reliable to the construct and population for which they are intended (Foxcroft & Roodt, 2009; Struwig & Stead, 2001).

*The first objective of this study was to conceptualise social desirability and the instruments measuring this phenomenon according to literature.*

The two measures in this study were created to measure social desirability tendencies during self-report measures. This is a form of response bias in which an individual over-reports on socially desirable behaviour and/or under-reports on socially undesirable behaviour (Crowne & Marlowe, 1960; Foxcroft & Roodt, 2009; Paulhus, 1991; Zerbe & Paulhus, 1987). Self-report personality measures are being used more and more for recruitment and selection within organisations (Rothstein & Goffin, 2006). Therefore to accurately apply such measures for work purposes, they need to be without personal bias and a way to ensure this is through using social desirable instruments alongside personality measures.

The first measure to be analysed was the Marlowe-Crowne Social Desirability Scale (MCSDS) created in the late 1950s, and aimed to find a way to measure the social desirable tendency without imposing any pathological assumptions from the participants (Crowne & Marlowe, 1960). The MCSDS was created to clearly distinguish between item content that

was to be measured and the need for an individual to present in a socially desirable way during an assessment. Compared to other measures at the time, studies found that only the MCSDS clearly indicated actual positive self-bias from participants and more true to the real concept of social desirability (Crowne & Marlowe, 1960; Ventimiglia & MacDonald, 2012). With multiple studies finding varied factors and constructs for the MCSDS, the single construct theory of a “*need for approval*” was focused on during this study. The motivation behind this measure, however, was that the average person would not normally overly behave and respond in a socially desirable manner and thus individuals with a high need for approval score might be indicating a greater tendency to show socially desirable behaviour (Leite & Beretav, 2005).

The second measure that was looked at was the Balanced Inventory of Desirable Responding (BIDR) created in 1989 (Paulhus, 1991). This instrument was constructed based on the theory that social desirability is a combination of both Impression Management (IM) and self-deception enhancement (SDE). Whereas IM is associated more with what we usually think of as social desirability exhibiting a tendency to over-report on what is socially more acceptable and to under-report on less socially desirable behaviour, SDE is quite different. SDE is more sophisticated in that it is a form of belief that the individual perceives to be true even though there is evidence to contradict that belief (Lazar, 1999). This makes the testing of SDE difficult because at the time the individual is not consciously aware that he/she is showing self-deception.

***The second objective was to determine the item performance and distribution of both the BIDR and MCSDS***

Through analysing the data distribution, descriptive statistics showed a normal distribution of the data. A normal distribution in this type of study indicates that the participants did not overly skew their responses towards the positive or the negative end of the scale (Pallant, 2007). When the mean scores of these measures were examined the results showed that the respondents tended to answer with “*Somewhat Disagree*” to “*Somewhat Disagree/Agree*” responses. This could be because of item ambiguity, personal bias or they might have felt uncomfortable with the socially desirable items.

***Objective three was to determine the construct validity of the BIDR and MCSDS.***

The first measure to be analysed was the BIDR. After using exploratory factor analysis and maximum likelihood as extraction method and removing items that showed poor performance, a single-factor structure emerged. The remaining items showed a combination of the original IM and SDE items. The measure also resulted in satisfactory internal consistency and goodness-of-fit value, although the variance explained by the single factor was rather low. Next to be examined was the 33-item MCSDS. Again exploratory factor analysis and maximum likelihood were conducted and items had to be removed from this scale. A single-factor model was used as this scale was originally meant to assess in the analysis. As with the BIDR, the MCSDS's remaining items provided very good internal consistency for the measure with a single factor, but still a variance explained below the recommended score. This can lead to the discussion of whether the problem stems from the diverse population used, the sample size or perhaps that construct of social desirability in itself.

***Objective four aimed to determine the convergent validity of the BIDR and MCSDS.***

Firstly, from literature it is said that the creator of the BIDR found a common theme between his instrument (BIDR) and the MCSDS (Paulhus, 1984). Both the BIDR and the MCSDS showed reliable results from their remaining items within the sample of this study and resulted in correlating with each other on a practical large effect. This relationship on a significant practical level has also been found in similar studies (Paulhus, 1988 cited in Paulhus, 1991; Ventimiglia & MacDonald, 2012).

. The average mean for both these scales was also very similar, indicating that the respondents answered the two measures in the same manner on the scale (Pallant 2007). Both these questionnaires also ended up loading onto a single factor with similar reliability coefficients; mean scores and even their standard deviations were similar.

Objective five was to make future recommendations for future research concerning social desirability research in South Africa and will subsequently be discussed.

## 3.2 LIMITATIONS

Although the measures after analysis provided very good desirable internal consistency and convergent validity, their variance explained is still a problematic issue.

This study attempted to use as diverse a South African population sample as possible. A larger sample size and wider demographic group could yield different results. The results from this study cannot therefore be generalised to the greater South African population. This diversity and heterogeneity of the population could have influenced the data (Burger, 2011; Li & Reb, 2009). This was confirmed by Lalwani, Shavitt, and Johnson (2006) in finding that individuals from collectivistic and individual cultural backgrounds tend to respond differently to impression management and self-deception statements. Individuals tend to respond to surveys based on their cultural experiences, whether or not it may be of a socially desirable nature (Johnson, & Van Der Vijver, 2003). As these two measures were originally created for a more homogeneous population, Oakland (2004) warns that people from different countries and cultures have their own views when it comes to testing and those administering the tests. This could have affected the way in which the diverse sample in this study may have completed the questionnaires and reacted to the items.

The data was gathered via a computer-based internet questionnaire. Therefore responses can differ from original pen-and-paper based questionnaires. Although this could have affected the data, studies into this topic have not ultimately confirmed if pen-and-paper in all areas is superior to computer-based data collection (Classen, 2011; Foxcroft, 2004; Joinson, 1999; Joubert & Kriek, 2009; Noyes & Garland, 2008).

Due to the difficulty of obtaining participants and the length of the questionnaire, a desired 10 to 1 subject to item ratio could not be achieved. The length of the survey should also be taken into consideration as longer questionnaires can influence the participation and dropout rate or participant fatigue (Penwarden, 2013, Struwig, & Stead, 2001).

As this study was done at a single point in time a longitudinal study could provide different or even better results. According to Struwig and Stead (2001), a study over time provides a description of variables and their relationship over time.

South Africa has a long history of diversity problems and this is not to say that even though all the participants understood English, they may not have interpreted the statements in the same way. This then goes against the ethical principles for the assessment process of individuals being discriminated against, because they are not fully proficient in English (Foxcroft & Roodt, 2019; Watson, Davis & Foxcroft, 2006).

### **3.3 RECOMMENDATIONS**

Recommendations for organisations and future research studies will be discussed.

#### **3.3.1 Recommendations for the organisation**

As already discussed, personality measures are currently being used more and more in industry for selection, placement and development. Effective and reliable measures are needed for this purpose. Having such measures to test for social desirability or response bias, organisations can use it as a tool alongside other assessments and interviews for employee screening purposes. The results of this study did not find the full versions of both the BIDR and the MCSDS to be valid, but certain items from both measures did show high internal consistency. It is therefore not recommended that the original versions of these measures to be used in a South African workplace as more research is needed on the psychometric properties of these measures.

From this study it is evident that there are items that do measure a concept of social desirability, but they are clearly distinct from similar items that yielded poor fit to the concept. A better phrasing and/or understanding of statements relating to the tendency to portray oneself in a better light within a South African population are needed.

From the findings of Uziel, (2010a; 2010b), organisations may want to pay closer attention to those individuals who do exhibit more socially desirable tendencies. Do these individuals perhaps hold traits that could be of benefit to the organisation or are they undesirable traits as it is thought to be in the literature.

### 3.3.2 Recommendations for future research

As there are items from these two measures that may be regarded as reliable for a diverse population, the possibility exists for the creation of a shortened version for both of these instruments. A shortened version of the MCSDS does exist, but was not used in this study. The final remaining items of the MCSDS correlated with a short-form version proposed by Reynolds (1982) (Form C) with 6 items: S3q43, S3q46, S3q50, S3q52, S3q55, and S4q68 having a common presence in both studies. Other short forms include the short versions by Strahan and Gerbasi (1972) in which 8 of the remaining items in this study correspond with a short 13-item form M-C (XX) including: S3q46, S3q51, S3q52, S3q54, S3q55, S3q62, S3q63, and S3q68 in which the other two versions only have four items from M-CX1 and four items from M-C 2 X2 corresponding to this study. When looking at related short versions of the BIDR, only five of the remaining items: s3q2, s3q4, s3q10, s3q20, and s3q27 matched the 20-item shortened global BIDR version by Steenkamp, De Jong, and Baumgartner (2009).

Other recommendations for future research might be to duplicate this study using a more traditional pen-and-paper survey method, a larger sample size, to focus on a single demographic group within South Africa or to translate the questionnaire into the other languages within the country to better facilitate the understanding of the items.

Items might need to be reviewed and revised within the culture and norms of South Africa. This may refer to certain words, phrases, and the understanding of terms that are used in these items. This approach is used when theories on personality try to generalise a construct onto a population group for which it was not originally designed (Cheung, Van de Vijver & Leong, 2011). Therefore in a diverse culture, such as that in South Africa, researchers may want to approach the notion of social desirability from a more bottom-up perspective as recommended by Kemp (2014). This will allow researchers to investigate social desirability from an insider's (within a different cultural group) perspective to the theory of being perceived as desirable with regard to the current social norms of that specific culture.

As only one factor was found, not the two-factor structure proposed by Paulhus (1991), coupled with a relatively low variance explained for both measures, some considerations need to be mentioned. Bearing in mind that numerous other studies also could not indicate a

solid two-factor structure (Helmes & Holden, 2003; Li & Li, 2008; Ballard, 1992; Leite & Beretvas, 2005), the problem might require a closer examination of the nature of social desirability. Is it a part of normal personality or a deliberate action by the individual? Is it mostly conscious or unconscious, and how does it really affect workplace performance? Future research needs to be conducted more extensively and for a specific population group to answer these questions.

## REFERENCES

- Ballard, R. (1992). Short forms of the Marlowe-Crowne Social Desirability Scale. *Psychological Reports, 71*, 1155-1160.
- Burger, J. M. (2011). *Personality* (8th ed.). Wadsworth, CA: Cengage Learning.
- Cheung, F. M., Van de Vijver, F. J. R., & Leong, F. T. L. (2011). Toward a new approach to the study of personality in culture. *American Psychologist, 66*, 593-603.
- Classen, R. M. (2011). *Investigation of the optimal response scale for personality measurement: Computer-based testing*. (Unpublished master's dissertation) North-West University, Potchefstroom, South Africa.
- Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology, 24*(4), 349-354.
- Foxcroft, C. (2004). Planning a psychological test in the multicultural South African environment. *South African Journal of Industrial Psychology, 30*(4), 8-15.
- Foxcroft, C., & Roodt, G. (2009). *An introduction to psychological assessment in the South African context*. Oxford, UK: Oxford University Press.
- Goodstein, L. D, & Lanyon, R. I. (1999). Applications of personality assessment to the workplace: a review. *Journal of business and psychology, 13*(3), 291-322.
- Helmes, E., & Holden, R. R. (2003). The Construct of Social Desirability: One or two dimensions? *Personality and Individual Differences, 34*(6), 1015-23.
- Johnson, T. P., & Van de Vijver, F. J. R. (2003). Social desirability in cross-cultural research. In J. A. Harkness, F. J. R. Van de Vijver, & P. P. Mohler (Eds.), *Cross-cultural survey methods* (pp. 195-204). New York, NY: Wiley.
- Joinson, A. (1999). Social Desirability, anonymity and internet-based questionnaires. *Behaviour Instruments and Computers, 31*(3), 433-438.
- Joubert, T., & Kriek, H. J. (2009). Psychometric comparison of paper-and-pencil and online personality assessments in a selection setting. *SA Journal of Industrial Psychology, 35*(1), 78-88.
- Judge, T. A., Klinger, R., Simon, L. S., & Yang, I. W. F. (2008). The contributions of personality to organizational behavior and psychology: Findings, criticisms, and future research directions. *Social and Personality Psychology Compass, 2*, 1-19.

- Kemp, T. (2014). An exploration of social desirability within the white Afrikaans group (Unpublished master's mini-dissertation). North-West University, Potchefstroom, South Africa.
- Lalwani, A. K., Shavitt, S., & Johnson, T. (2006). What is the relation between cultural orientation and socially desirable responding? *Journal of Personality and Social Psychology, 90*, 165-178. doi:10.1037/0022-3514.90.1.165
- Lazar, A. (1999). Deceiving oneself or self-deceived? On the formation of beliefs "under the influence". *Mind, New Series 108*(430), 265-290.
- Leite, W. L., & Beretvas, S. N. (2005). Validation of scores on the Marlowe-Crowne Social Desirability Scale and the Balanced Inventory of Desirable Responding. *Educational and Psychological Measurement, 65*(1), 140-154.
- Li, A., & Reb, J. (2009). A cross-nations, cross-cultures, and cross-conditions analysis on the equivalence of the balanced inventory of desirable responding. *Journal of Cross-Cultural Psychology, 40*(2), 214-233.
- Li, F., & Li, Y. (2008). The balanced inventory of desirable responding (BIDR): A factor analysis. *Psychological Reports, 103*(3), 727-731.
- Noyes, J. M., & Garland, K. J. (2008). Computer- vs. paper-based tasks: Are they equivalent? *Ergonomics, 51*(9), 352-375.
- Oakland, T. (2004). Use of Educational and Psychological Tests Internationally. *Applied Psychology: In International Review, 53*(2), 157 – 172.
- Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS version 15* (3rd ed.). New York, NY: McGraw-Hill.
- Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology, 46*(3), 598-609. doi: 10.1037/0022-3514.46.3.598.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychology attitudes* (pp. 17-59). San Diego, CA: Academic Press.
- Penwarden, R. (2013). *Finding the correct survey length*. Retrieved from <http://fluidsurveys.com/university/finding-the-correct-survey-length/>
- Reynolds, W. M. (1982). Development of reliable and valid short forms of the Marlowe-Crowne Social Desirability Scale. *Journal of clinical psychology, 38*(1), 119-125.
- Rothstein, M. G., & Goffin, R. D. (2006). The use of personality measures in personnel selection: What does current research support? *Human Resource Management Review, 16*, 155-180

- Salgado, J. F. (2005). Personality and social desirability in organizational settings: Practical implications for work and organizational psychology. *Papelesdel Psicologico*, 26, 115-128.
- Steenkamp, J. B. E. M., De Jong, M. G., & Baumgartner, H. (2010). Socially desirable response tendencies in survey research. *Journal of Marketing Research*, 47(2), 199-214.
- Strahan, R., & Gerbasi, K. C. (1972). Short, homogenous versions of the MCSDS. *Journal of Clinical Psychology*, 28, 191-193.
- Struwig, F. W., & Stead, G. B. (2001). *Planning, reporting and reporting research*. Cape Town, South Africa: Pearson Education South Africa
- Uziel, L. (2010a). Look at me, I'm happy and creative: The effect of impression management on behavior in social presence. *Personality and Social Psychology Bulletin*, 36, 1591-1602.
- Uziel, L. (2010b). Rethinking social desirability scales: From impression management to interpersonally oriented self-control. *Perspectives on Psychological Science*, 5, 243-262.
- Ventimiglia, M., & MacDonald, D. A. (2012). An examination of the factorial dimensionality of the Marlowe Crowne Social Desirability Scale. *Personality and Individual Differences*, 52, 487-491.
- Watson, A., Davis, C., & Foxcroft, C. D. (2006, July 6 - 8). *The assessment of English Second Language test-takers: Issues and implications*. Paper presented at a symposium on Monolingual and Multilingual Testing at the 5th Conference of the International Test Commission on Psychological and Educational Test Adaptation across Languages and Cultures, Brussels, Belgium.
- Zerbe, W. J., & Paulhus, D. L. (1987). Socially desirable responding in organizations: A re-conception. *Academy of Management Review*, 12, 250-264.

## APPENDIX A

### LIST OF ITEMS OF THE MCSDS and the BIDR

**Table A1:** List of items from the Balanced Inventory of Desirable Responding (Paulhus, 1984, 1991)

Original items of the BIDR	Remaining items after EFA
My first impression of people usually turns out to be right.	It would be very hard for me to break any of my bad habits.
It would be very hard for me to break any of my bad habits.	I have not always been honest with myself.
I don't care to know what other people really think of me.	When my emotions are aroused, it biases my thinking.
I have not always been honest with myself.	It's hard for me to shut off a disturbing thought.
I always know why I like things.	I sometimes lose out of things because I can't make up my mind soon enough.
When my emotions are aroused, it biases my thinking.	I have sometimes doubted my ability as a lover.
Once I made up my mind, other people can seldom change my opinion.	I don't always know the reason why I do the things I do.
I am not a safe driver when I exceed the speed limit.	There have been occasions when I have taken advantage of someone.
I am fully in control of my fate.	I have said something bad about a friend behind his or her back.
It's hard for me to shut off a disturbing thought.	I have taken sick leave from work or school even though I wasn't really sick.
I never regret my decisions.	I have some pretty awful habits.
I sometimes lose out of things because I can't make up my mind soon enough.	
The reason I vote is because my vote can make a difference.	

---

My parents were not always fair when they punished me.

I am a completely rational person.

I rarely appreciate criticism.

I am very confident in my judgments.

I have sometimes doubted my ability as a lover.

It's all right with me if some people happen to dislike me.

I don't always know the reason why I do the things I do.

I sometimes tell lies if I have to.

I never cover up my mistakes.

There have been occasions when I have taken advantage of someone.

I never swear.

I sometimes try to get even rather than forgive and forget.

I always obey laws, even if I'm unlikely to get caught.

I have said something bad about a friend behind his or her back.

When I hear people talking privately, I avoid listening.

I have received too much change from a salesperson without telling him or her.

I always declare everything at customs.

When I was young I sometimes stole things.

I have never dropped litter on the street.

I sometimes drive faster than the speed limit.

I never read sexy books or magazines.

I have done things that I don't tell other people about.

---

---

I never take things that don't belong to me.

I have taken sick leave from work or school even though I wasn't really sick.

I have never damaged a library book or store merchandise without reporting it.

I have some pretty awful habits.

I don't gossip about other people's business.

---

**Table A2:** List if items from the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960)

<b>Original items of the MCSDS</b>	<b>Remaining items after EFA</b>
Before voting I thoroughly investigate the qualifications of all the candidates	It is sometimes hard for me to go on with my work if I am not encouraged
I never hesitate to go out of my way to help someone in trouble	On occasion I have had doubts about my ability to succeed in life
It is sometimes hard for me to go on with my work if I am not encouraged	I sometimes feel resentful when I don't get my way
I have never intensely disliked anyone	If I could get into a movie without paying and be sure I was not seen I would probably do it
On occasion I have had doubts about my ability to succeed in life	On a few occasions, I have given up doing something because I thought too little of my ability
I sometimes feel resentful when I don't get my way	I like to gossip at times
I am always careful about my manner of dress	There have been times when I felt like rebelling against people in authority even though I knew they were right
My table manners at home are as good as when I eat out in a restaurant	I can remember "playing sick" to get out of something
If I could get into a movie without paying and be sure I was not seen I would probably do it	There have been occasions when I took advantage of someone

---

On a few occasions, I have given up doing something because I thought too little of my ability

At times I have really insisted or having things my own way

I like to gossip at times

There have been occasions when I felt like smashing things

There have been times when I felt like rebelling against people in authority even though I knew they were right

There have been times when I was quite jealous of the good fortune of others.

No matter who I'm talking to, I'm always a good listener

I can remember "playing sick" to get out of something

There have been occasions when I took advantage of someone

I'm always willing to admit it when I make a mistake

I always try to practice what I preach

I don't find it particularly difficult to get along with loud mouthed, obnoxious people

I sometimes try to get even rather than forgive and forget

When I don't know something I don't at all mind admitting it

I am always courteous, even to people who are disagreeable

At times I have really insisted or having things my own way

There have been occasions when I felt like smashing things

I would never think of letting someone else be punished for my wrongdoings

I never resent being asked to return a favour

I have never been irked when people

---

---

expressed ideas very different from my own.

I never make a long trip without checking the safety of my car.

There have been times when I was quite jealous of the good fortune of others.

I have almost never felt the urge to tell someone off.

I am sometimes irritated by people who ask favours of me.

I have never felt that I was punished without cause.

I sometimes think when people have a misfortune; they only got what they deserved.

I have never deliberately said something that hurt someone's feelings.

---