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An examination of social desirability confounds in a new ipsative measure of Murray's Psychogenic Needs

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An Examination of Social Desirability Confounds in a New Ipsative Measure of
Murray's Psychogenic Needs

A thesis submitted to the School of Psychology and Social Sciences at
Edith Cowan University
in partial fulfilment of the requirements for the degree of
Doctor of Philosophy

Submitted by

Lisa Harris

August 2015

Supervisors: Dr Greg Dear and Dr Maria Allan

Abstract

A reliable and valid instrument for the direct measurement of the relative strength of psychological needs is currently lacking. In response to this shortcoming, a new ipsative instrument, the Psychogenic Need Scale (PNS), is currently being developed; this is a 190-item forced-choice self-report measure that is based upon Murray's psychogenic needs. For the development of a valid forced-choice instrument, it is critical to minimise the confounding effects of social desirability (the tendency for respondents to describe oneself in the most favourable light). Whilst other measures typically use specifically designed scales to detect social desirability confounds, this approach is unsuitable for forced-choice measures that require respondents to choose between paired statements. Instead, a preferable approach is to reduce or, ideally, eliminate social desirability confounds by ensuring that the two alternative statements in each item pair are equally desirable. However, because the PNS is in the preliminary stages of development, the statements' relative social desirability levels had not yet been systematically investigated. Thus, it was not known whether or not the statements were equally desirable. Accordingly, I attempted this stage of the test's construction. Two main objectives were addressed. The first was to examine the test statements in order to determine whether or not they shared sufficiently equal levels of social desirability. The second was to equalise any differences (should they be detected) by rewording problematic statements to either reduce or increase their social desirability as needed. Upon initial investigation (Phase One of Study One), it was confirmed that there were differences among the statements. Thus, several attempts were made to equalise the relative social desirability levels. After a series of four studies, whereby statements with markedly high or low levels were repeatedly reworded and re-examined, some of the differences were effectively reduced. However, despite these reductions, the overall results demonstrate that problematic differences still exist. It was

concluded that some statements in the PNS are likely to be inherently confounded with high or low social desirability and, thus, cannot be sufficiently adjusted without disrupting the validity of the constructs that they are supposed to measure. On that basis, it is likely that a valid forced-choice measure of Murray's psychogenic needs is not achievable.

The declaration page
is not included in this version of the thesis

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Table of Contents

Abstract.....	i
Declaration.....	iii
Acknowledgements.....	iv
Table of Contents	v
List of Tables	ix
List of Figures.....	x
Chapter One: Introduction	1
Motives and the Psychoanalytic Perspective	4
Motives and the Humanistic Perspective	9
Motives and the Behavioural Perspective	11
Henry Murray and Human Motives: The Theory of Psychogenic Needs.....	12
The Concept of Needs	12
The Concept of Press	13
The Concept of Thema	14
Murray’s Influence and Contemporary Taxonomies	21
Murray’s Need Taxonomy and Personality Assessment	25
The Thematic Apperception Test (TAT).	26
The Personality Research Form (PRF) and the Measurement of Motives.	29
The Edwards Personal Preference Schedule, Ipsative Scaling, and the Measurement of Motives.....	30
Development of a New Instrument for the Ipsative Measurement of Psychogenic Needs.....	36
Chapter Two: Study One	42
Design	42
Phase One.....	43
Quantitative Method	43
Participant Sample	43
Measure: Rank Ordering Task	43
The Problem of Respondent Fatigue.....	44
Materials	45
Data collection	45
Results.....	46

Summary	53
Phase Two	54
Qualitative Method	54
Participant Sample	54
Data Collection	55
Data Analysis and Statement Revision	56
Research Rigour	57
Applying the Qualitative Findings to Statement Revision	58
Dealing with an Unexpected Emergent Theme	59
Findings and Interpretations	61
Themes Pertaining to Statements in the High SD Group	61
Themes Pertaining to Statements in the Low SD Group	67
Emergent Theme Relevant to all Statements	72
Chapter Three: Study Two	76
Aims and Research Questions	76
Phase One	76
Quantitative Method	76
Participant Sample	76
Measure, Materials, and Data Collection	76
Results	77
Summary	81
Phase Two	83
Qualitative Method	83
Participant Sample	83
Data Collection and Analysis	83
Statement Revision	84
Findings and Interpretations	85
Themes Pertaining to Statements in the High SD Group	86
Themes Pertaining to Statements in the Low SD Group	93
Discussion	101
Chapter Four: Study Three	104
Aims and Research Questions	104
Phase One	104

Quantitative Method	104
Participant Sample	104
Measure, Materials, and Data Collection.....	104
Results.....	105
Summary.....	109
Phase Two	111
Qualitative Method	111
Participant Sample	111
Data Collection and Analysis.....	111
Statement Revision	112
Findings and Interpretations	112
Themes Relevant to Statements in the High SD Group.....	112
Themes Relevant to Statements in the Low SD Group	117
Discussion.....	121
Chapter Five: Study Four	124
Aims and Research Questions	124
Phase One.....	124
Quantitative Method	124
Participant Sample	124
Measure, Materials, and Data Collection.....	125
Results.....	125
Summary.....	129
Chapter Six: General Discussion	132
Limitations and Methodological Challenges.....	138
Conclusion.....	142
References	143
Appendices	152
Appendix A: Test Statements (Study One)	153
Appendix B: Instructions for Participants.....	154
Appendix C: Social Desirability Explained (Study One).....	155
Appendix D: Participant Consent Form	156
Appendix E: Participant Information Letter	157
Appendix F: Semi-structured Interview Questions	158

Appendix G: Test Statements (Study Two)	159
Appendix H: Social Desirability Explained (Studies Two-Four).....	161
Appendix I: Graphed Data for Statements Allocated to the Random Group (Study Two).....	162
Appendix J: Test Statements (Study Three).....	165
Appendix K: Statements Allocated to the Random Group (Study Three)	167
Appendix L: Test Statements (Study Four).....	169
Appendix M: Statements Allocated to the Random Group (Study Four)	171
Appendix N: Discarded Statement Alternatives	173
nAchievement.....	173
nUnderstanding.....	174
nNurturance	174
nAbasement	175
nCounteraction.....	175
nPlay	175
nInfavoidance	175
nSex	176
nRejection.....	176
nAggression.....	177
Appendix O: Versions of the Altered Test Statements From Each Study	178

List of Tables

Table 1	Horney's Ten Neurotic Needs	8
Table 2	Alphabetised List of Psychogenic Needs	16
Table 3	Rotter's Six Psychological Needs	22
Table 4	Jackson's Factor Analytic Categories and Corresponding Scales.....	23
Table 5	Reiss' 16 Basic Desires	24
Table 6	Candidate Needs.....	25
Table 7	An Example of Ipsative Scoring.....	32
Table 8	Statements in the Psychogenic Needs Scale.....	37
Table 9	Mean Ranks for Statements in Descending Order (Study One).....	47
Table 10	Qualitative Themes Identified for Statements in the High SD Group.....	62
Table 11	Qualitative Themes Identified for Statements in the Low SD Group	67
Table 12	Mean Ranks for Statements in Descending Order (Study Two)	78
Table 13	Mean Ranks from Study One and Study Two.....	82
Table 14	Qualitative Themes Identified for Statements in the High SD Group.....	86
Table 15	Qualitative Themes Identified for Statements in the Low SD Group	94
Table 16	Mean Ranks for Statements in Descending Order (Study Three)	106
Table 17	Qualitative Themes Identified for Statements in the High SD Group...	113
Table 18	Qualitative Themes Identified for Statements in the Low SD Group ...	117
Table 19	Mean Ranks for Statements in Descending Order (Study Four).....	126
Table 20	The Rank Order of Statements and Their Respective Mean Ranks From Each Study	133

List of Figures

Figure 1	Statements allocated to the High SD Group (Study One)	49
Figure 2	Statements allocated to the Low SD Group (Study One).....	50
Figure 3	Statements allocated to the Random Group (Study One).....	51
Figure 4	Statements allocated to the High SD Group (Study Two)	79
Figure 5	Statements allocated to the Low SD Group (Study Two).....	80
Figure 6	Statements allocated to the High SD Group (Study Three)	107
Figure 7	Statements allocated to the Low SD Group (Study Three).....	108
Figure 8	Statements formerly part of the High SD Group that are now part of the Random Group (Study Three).....	108
Figure 9	Statements allocated to the High SD Group (Study Four)	127
Figure 10	Statements allocated to the Low SD Group (Study Four).....	127
Figure 11	Statements formerly part of the High and Low SD Groups that now belong to the Random Group (Study Four).....	128

Chapter One: Introduction

Personality psychologists have traditionally emphasised internal variables (e.g., traits, cognitions, goals, schemata, motives) as key to building a sufficiently detailed understanding of the individual (McAdams, 2000). Within certain theoretical frameworks, one of the most important of these variables is underlying motives (McAdams, 1994, 1995; McClelland, 1985; Reiss, 2008). In accordance with contemporary theory, motives are both conscious and unconscious forces that give behaviour both its energy and direction (McClelland, 1987; Murray, 1938; Winter, John, Stewart, Klohn, & Duncan, 1998). Often contrasted with traits, they have been described as providing a more detailed level of analysis (McAdams, 1994, 1995; Pervin, 1994).

Researchers who focus on either traits or motives essentially focus on different aspects of personality (Mischel & Shoda, 1998; Murray, 1938; Allport, 1961, cited in Winter et al., 1998). Where traits are descriptive concepts that have to do with recurrent and consistent patterns in behaviour, motives are explanatory concepts that have to do with goals and desired outcomes. Of key concern to motivational theorists, is that all behaviour is goal-oriented and, therefore, shows adaptation according to the demands of the situation. This has considerable implications in terms of how behavioural consistencies and differences are interpreted. For example, where traits are inferred on the basis of particular behavioural patterns, motive theorists argue that such similarities might not necessarily be indicative of the same underlying motive. As Allport (1937) pointed out, it is possible that a particular trait is the expression of a variety of different underlying motives. Consider the following example, whereby:

three individuals [are] rated or measured as equally honest. One of them might be seeking justice, another might be trying always to help others, whilst the third might be trying to maintain his self-esteem or reputation (Allport, 1937, p. 204).

Thus, whilst two or more individuals might make the same behavioural response to a situation, their underlying motives or desired outcomes might differ.

Just as similar patterns of behaviour can have different underlying motives, it is possible for a single underlying motive to produce different patterns of behaviour (Sheldon, Elliot, Kim, & Kasser, 2001). Winter et al. (1998) outlined a simplistic example whereby the hunger motive, for instance, is likely to stimulate a range of different actions depending on the situation or setting, such as, at home, at a restaurant, or on an airplane flight. In each situation, although the behaviours might differ, the underlying motive (and associated goal of consuming food) remains the same.

Contemporary approaches to understanding personality have traditionally favoured either traits or motives as the preferred unit of analysis (Pervin, 1994). However, more recently, researchers have begun to recognise the importance of integrating the two (Mischel & Shoda, 1998; Winter et al., 1998). As McAdams pointed out, traits are descriptive concepts that are useful for estimating a person's "comparative and non-conditional qualities" (McAdams, 1994, p. 146); however, they are also limited in that they lose meaning without a social referent (i.e., the average individual), and they fail to account for the "conditional patterns" (Thorne, 1989, p. 149) of personality. On that basis, traits can never provide more than what McAdams (1994) calls "a psychology of the stranger,... [which is the kind of information that two] ...strangers might quickly glean from" (p. 146) one another through brief social encounters. Whilst this is important information that reflects real differences in personality, a more detailed picture of the individual requires the integration of conditional, contextualised, and individualised (as opposed to comparative) information. This can only be obtained through measuring goal-oriented constructs such as motives.

Currently, clinicians have access to reliable instruments for the quick and convenient measurement of traits (e.g., the NEO-Personality Inventory). However,

progress in establishing an accepted and true measure of general motives has been more difficult. In part, this is likely due to the inherent difficulties associated with measuring motives as, unlike traits, they are not readily measured via fixed behavioural indicators; thus, standard self-report scales are not entirely suitable (discussed later). In addition, whilst many trait theorists have “reached a working consensus” in support of the five-factor model (i.e., extraversion, agreeableness, conscientiousness, neuroticism, and openness; Winter et al., 1998, p. 233)¹, motivational theorists are yet to establish an agreed set of central motives (Sheldon et al., 2001). These two factors combined are likely to have limited the advancement of motives as a useful unit of analysis.

According to Mayer, Faber, and Xu (2007), the most widely used measures of general motives are currently the Thematic Apperception Test (TAT; Murray, 1938) and the Personality Research Form (PRF; Jackson, 1989b), which each measure motives in different ways (discussed later). Both instruments are based upon the work of Henry Murray (1938), who was the first to produce an empirically based taxonomy to operationally define a comprehensive set of *normal* human motives. Commonly referred to as the theory of psychogenic needs, Murray’s work is significant, as it was the first to combine psychoanalytic ideas with systematic research. Today, the 20 motives (psychogenic needs) outlined in his taxonomy constitute an important foundation that remains highly influential in the areas of motivational theory and personality assessment. This is outlined in the following sections, after a brief overview of the other major motive based theories in the field.

¹ There are alternative views. Some advocate three, six, and seven factors as the most appropriate structure. See Pervin (1994) for a discussion.

Motives and the Psychoanalytic Perspective

Early theories on human motives assumed a purely biological basis for motivation, whereby it was understood that the function of all behaviour is, ultimately, to fulfil biological needs (McClelland, 1987; Reeve, 2001). One of the most prominent theories was introduced by Freud (1922) who, influenced by Darwin's theory of evolution, accepted that the final cause of all behaviour is perpetuation of the species². From this perspective, it was assumed that behavioural motives emanate from biological needs which, theoretically, are experienced as psychological tensions that individuals are inherently compelled to satisfy. This motivation arouses need fulfilling behaviour which, in turn, promotes survival of the self and survival of the species.

Freud (1922) outlined two classes of biologically based motives that, he proposed, exist in the unconscious; namely, sex and aggression. He especially emphasised the sexual motives (termed instincts) as essential to survival (which were later renamed the life instincts). Maintaining Darwin's reproductive focus, Freud argued that the drive for sexual gratification motivates behaviours that service other bodily needs³. These are quite primitive in the early stages of life, but become more complex as one progresses through into adulthood (this is covered by the psychosexual stages of development; a good overview is provided by Hall, Lindzey, & Campbell, 1997). For example, in infancy and early childhood, sexual motives were said to arouse activities such as feeding, suckling, and elimination (Reeve, 2001); however, by adulthood, this broadens substantially to include behaviours that are more socially complex (such as sexual, nurturing, and affiliation behaviours to name a few). Thus, in accordance with Freudian theory, no matter how complex or varied human behaviour becomes, the underlying motive (sexual or aggressive) remains the same.

² This view was also shared by Hull (cited in Weiner, 1992).

³ Freud defined sexual gratification broadly as pleasure seeking, which includes any type of behaviour that reduces tension and is, therefore, pleasurable.

Freud's insistence on the primacy of sexual motives was a source of contention among a number of his contemporaries, with many theorists advocating alternative views (discussed later). However, his assumptions were most successfully challenged by Bowlby (1969, 1988), who demonstrated that the proposed link between sexual motives and attachment was erroneous. Freud had concluded, on the basis of his clinical work with adult patients, that attachment is derived from sexual motives, and usually forms with the mother because she is the source of physiological gratification (e.g., mainly through feeding⁴). However, Bowlby took a more investigative approach by conducting observational studies with children and infants, as well as drawing upon the work of several researchers who studied attachment behaviour directly (e.g., Lorenz, 1935; Harlow 1959; Harlow & Zimmerman, 1959; Scott, 1963; Griffin & Harlow, 1966, all cited in Bowlby, 1969).

From this body of research, Bowlby (1969) collated evidence that, not only does attachment develop irrespective of a caregiver's ability to provide food (or meet other physiological needs), but that its disruption results in a significantly impaired ability to interact with others as well as the surrounding environment. It became clear that healthy attachment served to establish internal working models that facilitate other social competencies, as well as the ability to navigate and explore novel surroundings (Bretherton, 1992; Shaver & Mikulincer, 2005). On that basis, attachment was established as a psychological motive that exists in its own right; that is not merely a derivative of sexual or hunger motives and, further, is essential to healthy on-going development. With this, Freud's primacy of sexual motives was discredited, and so too was the overall assumption that psychological motives are secondary to physiological needs.

⁴ Other researchers, such as the behaviourists Hull and Watson, also viewed attachment as an associative bond that is derived from feeding (cited in Weiner, 1992)

Although Bowlby began his work in the 1950s, a number of theorists to precede him had already begun to de-emphasise the biological basis of behaviour. Many designated other aspects of psychoanalytic theory as more central to personality (McAdams, 2000). Where some developed the role of ego adaptation (e.g., Erikson and Hartmann), others stressed the importance of social and cultural influences (e.g., Horney and Fromm), and others emphasised the inner representations of interpersonal relationships (e.g., Fairbairn, Winnicott, and Kohut). Of the many theorists to expand upon and revise Freud's ideas, those who placed particular emphasis on the role of psychological motives included Alfred Adler (1930) and Karen Horney (1937, 1945).

Both Adler and Horney took issue with Freud's over-emphasis on sexual motives and, instead, identified themes related to weakness and vulnerability as more central to shaping the personality. Adler (1930), for example, proposed that behaviour is largely driven by learned power related motives (rather than biological urges) which, in his view, develop from feelings of inferiority in childhood. From his perspective, the experience of being weaker than, and inferior to, adults marks the beginning of a lifelong struggle to overcome inferiority. Adler referred to this tendency as striving for superiority, which he proposed to be the major motivating force under which all other motives are subsumed.

For Horney (1937, 1945), the primary motivating forces for personality are rooted in anxieties and insecurities within interpersonal relationships; these, again, develop as a result of childhood experience. Similar to Adler's notion of childhood inferiority, Horney suggested that feelings of helplessness and vulnerability are a natural part of childhood, but are typically managed with the help of loving parental guidance (Hall et al., 1997). However, where there are disturbances within the parent-child relationship, the child's sense of security is threatened, thereby creating feelings of isolation, helplessness, and hostility. This causes what Horney referred to as basic

anxiety (which carries through into adulthood), whereby one's experience of self is that of being helpless and isolated within a potentially hostile environment (similar to Erikson's notion of basic mistrust; cited in Ryckman, 2004).

In order to cope with these feelings, Horney (1937, 1945) theorised that one must find a way to restore a sense of security within relationships. To this end, a number of irrational beliefs and defensive strategies develop, whereby the aim (although unconscious) is to obtain love or exert power over others. Horney outlined these strategies as ten acquired motives (called needs), which become established as the predominant drivers of behaviour (presented in Table 1). She later categorised these needs into three neurotic trends⁵ of moving toward others (compliance), moving against others (aggression), and moving away from others (withdrawal). Where moving toward others has to do with needs for affection and approval, moving against others has to do with needs for recognition and power, and moving away from others has to do with needs for independence and self-sufficiency⁶. In healthy individuals, all three trends are harmoniously balanced, whereby one is equally motivated by, and able to effectively negotiate the fulfilment of all ten needs. However, in neurotic individuals, this balance is disrupted, whereby one trend becomes the dominant driver of behaviour – so much so that the individual is no longer self-determined, but compelled by his or her neurotic needs.

⁵ Horney focused mainly on neurotic patients and spent little time discussing the healthy personality, thus, she referred to needs and trends as “neurotic”.

⁶ Horney summed up each category as represented by the following irrational beliefs: “if you love me, you will not hurt me”; “if I have power, nothing can hurt me”; and “if I withdraw, nothing can hurt me” (1937, pp. 96-99).

Table 1

Horney's Ten Neurotic Needs

The neurotic need for affection and approval.

The need for affection; sensitivity to rejection; strong inhibitions about asserting one's own wishes; and the tendency to please others.

The neurotic need for a partner who will take over one's life.

To be driven by dependence on others and extreme fears of being abandoned or left alone.

The neurotic need to restrict one's life within narrow borders.

The tendency to avoid situations that risk failure or humiliation; the need for safety through modesty, rigidity, routine, and orderliness.

The neurotic need for power.

Striving for power in order to overcome anxiety, weakness, and inferiority.

The neurotic need to exploit others.

A distrustful disposition toward others and the need to exploit others in order to feel safe.

The neurotic need for social recognition and prestige.

The tendency to evaluate everything (including one's self) on the basis of social recognition and prestige.

The neurotic need for personal admiration.

To adopt and present an idealised self-image as a means of avoiding painful feelings of self-contempt.

The neurotic ambition for personal achievement.

The need to achieve and be the best in many areas; to be superior to, and defeat others.

The neurotic need for self-sufficiency and independence.

To maintain interpersonal distance for fear of becoming vulnerable with others.

The neurotic need for perfection and unassailability.

To compensate for personal flaws; to avoid mistakes and appear as perfect in order to avoid criticism.

Adapted from Horney (1937, 1945)

Whilst each of these theories have provided a useful framework for understanding human motivation, as objectives and standards in personality research and assessment have changed (Barenbaum & Winter, 2003; McAdams, 2000), the classifications have failed to meet contemporary demands. One of the main objectives for personality researchers at the time was to establish an in-depth and unique (idiographic) picture of the individual. However, contemporary perspectives tend to favour a more nomothetic approach, whereby the aim is to assess groups of individuals on an established set of criteria. From this perspective, the classifications outlined by Freud (1922) and Adler (1930), in particular, are too limited; with only one or two classes of motives outlined, it becomes difficult to differentiate one person from the next (recall that Freud defined only two classes of motives and Adler defined only one).

In addition, all three of the above theories have suffered strong criticism regarding their lack of an empirical basis (McClelland, 1987; Ryckman, 2004). The psychoanalytic paradigm has traditionally favoured clinical description over empirical inquiry; thus, the concepts presented are primarily based on clinical work with patients rather than rigorous research (Hall et al., 1997; McAdams, 2001; Reeve, 2001). This clearly raises questions about data reliability, as well as the external validity of the conclusions drawn. Indeed, the theoretical concepts presented tend to be negative and over-representative of pathology; thus, they are not readily applicable to the normal population⁷.

Motives and the Humanistic Perspective

A more positive perspective on human motives was later proposed by the humanistic theorists, such as Carl Rogers (1961) and Abraham Maslow (1954, cited in Maddi & Costa, 2007). Maslow, in particular, argued that existing psychoanalytic theories were too negative (McClelland, 1987; Reeve, 2001), and insisted that a more

⁷ Whilst Horney's writings can be applied to healthy functioning individuals, her writings were mostly concerned with the neurotic personality.

balanced perspective should include the study of healthy individuals and not just those who are mentally ill. Accordingly, he conducted careful study of “exemplary” individuals (such as Albert Einstein, and Abraham Lincoln), and found evidence for what he called a basic “impulse toward growth” (cited in McClelland, 1987, p. 40).

Maslow (1954, cited in Reeve, 2001) proposed that growth related motives (needs) are present within all individuals, and make up the last of a series of stages that people progress through sequentially. Commonly referred to as the hierarchy of needs, he identified five clusters (stages) of motives that are arranged in a hierarchy in terms of strength. The strongest needs are at the bottom (the physiological needs), which must be fulfilled before the next stages become relevant (these include the safety needs, the love and belongingness needs, followed by the esteem needs⁸). The final stage is made up of the self-actualisation or growth needs, which are theoretically the weakest, and only become relevant for a small percentage of individuals. Maslow proposed that various circumstances (i.e., poverty or oppression) will force people to dedicate their time and energy to the lower stages, which blocks their transition to higher order needs. Thus, whilst self-actualisation needs exist within all individuals, their relative weakness means that they are prone to frustration and are, therefore, realised by very few people (for a good overview, see Reeve, 2001).

Whilst Maslow’s hierarchy of needs “gained wide acceptance... [during] the mid-twentieth century” (McClelland, 1987, p. 42), his theory suffered at least three major criticisms as outlined by Burger (2004). Firstly, his methods were not scientifically rigorous, as he conducted, what he called, “holistic analysis” (p. 318) of subjects who displayed characteristics that he personally held in high regard; secondly, he did not adequately account for how needs interact with, and are aroused by, circumstances within the environment; and finally, the hierarchical structure of needs

⁸ These are collectively referred to as deficiency needs.

was never substantiated. Indeed, research conducted by the attachment theorists (outlined previously) suggests that people strive to fulfil various needs simultaneously rather than according to any universal hierarchical structure. However, despite these shortcomings, Maslow's theory made an important contribution to the field of psychology, as he popularised a more positive way of thinking about human motivation (McClelland, 1987).

Motives and the Behavioural Perspective

Although the behavioural paradigm is not typically concerned with problems of personality, it is acknowledged here as a highly influential area of research that has impacted many areas of psychology. A full discussion of the behaviourist movement is beyond the scope of this thesis; however, it is important to recognise its influence in establishing a scientific study of human motivation (good discussions can be found in Maddi, 2001 and McClelland, 1987). Where the theories outlined previously relied on verbal data from human subjects, the behaviourists (i.e., Thorndike and Hull) focussed on behaviours that could be observed and measured directly. Researchers were concerned with general laws of invariant ways that organisms respond to the surrounding environment (Maddi, 2001); this is opposed to addressing questions of the different ways in which internal factors are imposed upon the environment. To this end, research was typically conducted with lower animals under tightly controlled conditions, and concepts related to conscious experience (e.g., "inner wishes, thoughts, and expectations"; McClelland, 1987, p. 69) were largely ignored. The appeal was that it offered the promise of a clear and simple understanding of behaviour; however, the appropriateness of generalising the findings to human beings was seriously questioned.

Henry Murray and Human Motives: The Theory of Psychogenic Needs

Whilst each of the above theories have made an important contribution to understanding human motives, contemporary perspectives owe much to the work of Henry Murray (1938). Where the above theories focus almost entirely upon either internal or external determinants of behaviour, Murray argued that a comprehensive understanding of the individual must account for the interaction of internal and external variables. Although primarily influenced by variants of psychoanalytic theory, (McClelland, 1987), Murray recognised the need for a more scientific (rather than intuitive) approach. Thus, in a pioneering attempt to combine psychoanalytic ideas with systematic research (Barenbaum & Winter, 2003), Murray assembled a team of researchers to conduct a series of in-depth studies with a sample of 51 male college students. After gathering extensive data over a four year period, he devised a complex system integrating a host of variables that make up the first empirically based theory of “normal personality” (Barenbaum & Winter, 2003, p. 188). However, whilst his theory presents an extensive array of ideas, the discussion here is limited to the three major theoretical concepts that best describe his “unique view of human beings” (Hjelle & Ziegler, 1992, p. 156); namely, need, press, and thema.

The Concept of Needs

Murray’s most enduring contribution to the field of personality was his taxonomy of motives termed psychogenic needs (Hjelle & Ziegler, 1992; Shultz, 1976; Triplet, 1992). Murray (1938) described needs as internal dynamic entities that both “seek out” (p. 24) and respond to aspects of the environment; a definition that is most consistent with motives as they are known today (McAdams, 1995; Winter et al., 1998). Within the environment lie various circumstances (termed press), which can be either facilitating or frustrating to need satisfaction. Consistent with dominant drive theory at the time (ie., Freud, 1922; Hull, cited in Weiner, 1992), Murray (1938) primarily

conceptualised needs in terms of tension reduction (but also acknowledged the human inclination to induce tension and seek stimulation). Accordingly, needs that are frustrated (or pressed) will become increasingly intense, and will periodically exert greater influence over one's thoughts, feelings, perceptions, and actions. This effectively directs one's behaviour (either consciously or unconsciously) toward tension reduction, which is brought about through need satisfaction.

Murray believed that a scientifically viable theory of personality must be based upon a system that is extensive enough to adequately reflect the "complexity of human motives" (Hall & Lindzey, 1957, p. 171). Thus, he felt that existing theories that reduced behaviour to only one or two basic drives were oversimplified (e.g., Adler and Freud). On the basis of his research, Murray found evidence for up to 20⁹ qualitatively different psychological motives (psychogenic needs) as potential drivers of behaviour¹⁰. Theoretically, whilst most needs are represented within most individuals, they differ in intensity from one person to the next. Through a combination of inherited attributes and lived experience (mainly in childhood but also throughout adulthood), each individual's needs become organised in a unique hierarchy according to strength. This hierarchy represents a personalised and somewhat stable framework of personality, whereby one's strongest needs tend to be the dominant drivers of behaviour. On that basis, each individual's personality is expressed via the relative strength of his or her needs.

The Concept of Press

In order to account for the external influences on behaviour, Murray introduced the concept of press to describe aspects of the environment that are either facilitating or frustrating to need satisfaction. As Murray explained, "the press of an object [or circumstance has to do with] what it can *do to* the subject or *for* the subject (Murray,

⁹ Some reviews quote 27 or 28 psychological needs (e.g., Hjelle & Ziegler, 1992; Liebert & Spiegler, 1998; Rotter, 1954); however, this number includes needs that were excluded from Murray's (1938) study as well as those that he described as composites of other needs.

¹⁰ He also identified a list of 12 physiological (viscerogenic) needs but identified psychogenic needs as most relevant to personality.

1938, p. 121); thus, it affects the well-being of the individual in some way. According to Murray, press can either be real (alpha press) or perceived (beta press), however, the latter is most influential in terms of evoking behaviour. For example, if one *perceives* hostility in his or her surroundings, then he or she will respond (in some way) to this perception regardless of whether or not the hostility exists in reality (Hjelle & Ziegler, 1992).

According to Murray, the way in which one interprets the surrounding environment is largely dependent upon past experience. From this perspective, certain press can be powerful evokers of behaviour because they arouse expectations of what is to come. In other words, what is “pressive” (Murray, 1938, p. 119) about an event or situation is, not necessarily the event itself but, rather, one’s expectations about how he or she will be affected (termed pressive apperception). These expectations are largely based upon lived experience and the common press that one has encountered in the past. As Murray explained:

Pressive apperceptions are largely determined, as investigations have shown, by the impressions and integrations which have occurred in the brain as the result of past experiences. Pressive apperception, indeed, may be defined as a process by which a present situation excites images (conscious or unconscious) that are representative of pressive situations of the past.

On that basis, a thorough understanding of the individual requires some understanding of the common press that one has been exposed in his or her past.

The Concept of Thema

Murray introduced the terms thema and serial thema to describe how needs and press interact to produce behaviour. Where thema refers to a single behavioural episode, serial thema refers to recurrent need-press interactions that can become characteristic of an individual’s behaviour. One of Murray’s (1936, 1938) main assumptions was that

people are fundamentally self-regulating beings who interact intelligently with their surrounding environment. Thus, over time, stylistic behavioural patterns begin to emerge as people become more experienced in meeting their most intensive needs (consciously or unconsciously) and adapting to common press. Put simply, people begin to habitually employ modes of conduct that have proven most effective in the past (for example, where one person might tend to respond to aggressive press with aggressive behaviour, another might tend towards avoidant behaviour). Thus, for each individual, recurrent need-press interactions tend to become more closely associated and, in turn, become established as characteristic patterns in a person's life (see Murray, 1938 for a discussion of thema, serial and unity thema, need integrate, and complexes); some of which can "recruit so much emotion and... psychodynamic activity that they take on a self-defining prominence within a particular personality" (McAdams, 2008, p. xv).

On the basis of the above, Murray's approach to understanding personality rests largely with identifying how one's unique composition of needs influences the way one perceives and responds to the surrounding environment (Groth-Marnat, 2003, 2009). Thus, a major focus of his research was to establish a reliable measure of needs that identifies one's most dominant needs, and captures their relative intensity for each individual (the most well-known is the TAT, discussed later). As part of this process, Murray made a concerted effort to ensure clear empirical definitions for each of the needs in his taxonomy. Given the different ways in which needs manifest, he proposed that to "rely on a single operational definition" (Murray, 1938, p. 125) was problematic. Therefore, he comprehensively outlined each need in terms of goals, effects, and desired outcomes, as well commonly associated actions, cognitions, and emotions. A condensed version of each of his definitions is listed in Table 2.

Murray's (1938) theory represents one of the earliest attempts to capture the complexity of human behaviour in its entirety. Where existing theories tended to focus

almost exclusively upon either internal or external determinants of behaviour, Murray emphasised a complex interaction of the two (as well as conscious and unconscious forces, and past and present influences). Thus, whilst there were some problems with aspects of his research (i.e., sample biases, questionable statistics, and an over-reliance on retrospective reports, to name a few), his theory constitutes an important step in bridging the gap between the psychoanalytic and behavioural perspectives that dominated at the time.

Table 2

Alphabetised List of Psychogenic Needs

nAbasement

Desires: To submit passively to external force; to accept injury, blame, criticism, or punishment; to surrender; to become resigned to fate; to admit inferiority, error, wrong-doing, or defeat; to confess and atone; to blame, belittle, or mutilate the self; to seek and enjoy pain, punishment, illness, and misfortune.

Actions: To adopt a passive, meek, humble, or submissive attitude; to stand aside, take a back seat, let others push by and have the best; to submit to coercion and domination without rebellion or complaint; to allow oneself to be talked down; to allow oneself to be bullied.

nAchievement

Desires: To accomplish something difficult; to master, manipulate, or organise physical objects, human beings, or ideas as rapidly and as independently as possible; to overcome obstacles and attain a high standard; to excel oneself; to rival and surpass others; to increase self-regard by the successful exercise of talent.

Actions: To make intense, prolonged, and repeated efforts to accomplish something difficult; to work with singleness of purpose towards a high and distant goal; to have the determination to win; to try to do everything well; to be stimulated to excel by the presence of others; to enjoy competition; to exert will power; to overcome boredom and fatigue.

nAffiliation

Desires: To draw near and enjoyably co-operate or reciprocate with an allied other, who resembles or likes the subject; to please and win the affection of a cathected other; to adhere and remain loyal to a friend.

Actions: To meet and make the acquaintance of others; to form, maintain, or accept interactions with others; to show good will and love; to do things that please another; to avoid wounding; to allay opposition.

nAggression

Desires: To overcome opposition forcefully; to fight or revenge an injury; to attack, injure, or kill another; to oppose forcefully or punish another; to belittle or maliciously ridicule another.

Actions: To move and speak in an assertive, forceful, and threatening manner; to jostle and push others out of the way; to curse and blame those who impede one's progress; to adopt a terrifying attitude and take the best by force; to experience fits of rage.

nAutonomy

Desires: To get free, shake off restraint, break out of confinement; to resist coercion and restriction; to avoid or quit activities prescribed by domineering authorities; to be independent and free to act according to impulse; to be unattached, unconditioned, or irresponsible; to defy conventions.

Actions: To do as one pleases regardless of rules or conventions; to refuse to be tied down by family obligations or by a definite routine of work; to avoid organised athletics or regular employment; to view marriage as a form of captivity; to love adventure, change, or seclusion (where one is free to do as he or she likes).

nCounteraction

Desires: To master or make up for a failure by re-striving; to obliterate a humiliation by resumed action; to overcome weaknesses and repress fear; to search for obstacles and difficulties to overcome; to maintain self-respect and pride.

Actions: The actions are the same for those of nAchievement, but they are done for the sake of pride or honour; to re-enact (after a trauma) the same event until anxiety is mastered or, after a failure, to try to accomplish that very thing; re-striving for achievement.

nDefendence

Desires: To defend the self against assault, criticism, and blame; to conceal or justify a misdeed, failure, or humiliation; to vindicate the ego.

Actions: to defend oneself physically or verbally; to be on guard and bristle when criticised; to have a chip on one's shoulder; to interpret harmless remarks as slurs.

nDeference

Desires: To admire, praise, honour, and support a superior other; to eagerly yield to the influence of an ally; to emulate and exemplar; to conform to custom.

Actions: To conform to the wishes of a superior or admired other; to accept the leadership of a more experienced other.

nDominance

Desires: To control one's environment; to influence or direct the behaviour of others by suggestion, seduction, persuasion, or command; to convince others to behave in accordance with one's needs and sentiments; to convince others of the rightness of one's opinion.

Actions: To influence others; to lay down principles of conduct, give a decision, or settle an argument.

nExhibition

Desires: To make an impression; to be seen and heard; to excite, amaze, fascinate, entertain, shock, intrigue, amuse, or entice others.

Actions: To be conspicuous by wearing colourful clothing; to seek the limelight or pose for effect; to talk a good deal, hold the floor, or monopolise conversation; to attract attention and enjoy an audience; to entertain others; to speak or perform in public.

nHarmavoidance

Desires: To avoid pain, physical injury, illness, and death; to escape from a dangerous situation, or take precautionary measures.

Actions: To avoid danger; to be cautious and hesitant about undertaking something; to hang back or shy away from a perilous situation.

nInfavoidance

Desires: to avoid humiliation; to quite embarrassing situations; to avoid conditions that may lead to the belittlement, scorn, derision, or indifference of others; to refrain from action because of the fear of failure.

Actions: to avoid or stop doing something that one does not do well; to avoid repeating a failure; to fear rejection or be hesitant to make friendly advances; to avoid tests of strength and skill; to avoid doing things in public; to avoid strangers or critical audiences; to avoid the company of superior contemptuous others; to associate with inferiors.

nNurturance

Desires: To give sympathy and gratify the needs of a helpless other; to help someone who is weak, disabled, tired, inexperienced, defeated, humiliated, lonely, dejected, sick, or mentally confused; to assist and other in danger; to feed, help, support, console, protect, comfort, nurse, or heal.

Actions: To be particularly attracted to the young, the unfortunate, and the sorrowing; to enjoy the company of children and animals; to be liberal with time, energy, and money when compassion is aroused; to be moved by the distress of others; to feel more affectionate when another exhibits a weakness.

nOrder

Desires: To put things in order; to achieve cleanliness, arrangement, organisation, neatness, tidiness, and precision.

Actions: To be neat and clean in personal appearance; to keep a routine, arrange work, and have a special place for everything; to write neatly; to keep accounts; to aim for perfection in details; to keep a room in order.

nPlay

General: The tendency to act for fun without further purpose; it is random, whimsical, fantasy driven behaviour, which releases internal tension, but achieves no exterior effects.

nRejection

Desires: To separate oneself from a negatively cathected other; to exclude, abandon, expel or remain indifferent to an inferior other; to snub or jilt another.

Actions: Vulnerability to annoying, coarse, rude, vulgar, stupid, boring, childish, mean, presumptuous, or unattractive others; to be sensitive, easily repelled, or hard to please; to adopt a disdainful, forbidding, superior attitude; to remain aloof and indifferent; to be a severe critic; to be unwilling to suffer fools; to demand a high standard of ability, intelligence, wit, or imagination; to be very discriminating and critical in the choice of friends and exemplars.

nSentience

Desires: To seek and enjoy sensuous impressions.

Actions: To seek and find delight in the enjoyment of sense impressions; to have delicate, sensitive perceptions.

nSex

Desires: To form and further an erotic relationship; to have sexual intercourse.

Actions: To make advances: to “pick-up” or seduce a sexually appealing other; to enjoy the company of the opposite sex; to be fond of mixed parties and dancing.

nSuccorance

Desires: To have one’s needs gratified by the sympathetic aid of an allied other; to be nursed, supported, sustained, surrounded, protected, loved, advised, guided, indulged, forgiven, consoled; to remain close to a devoted protector; to always have a supporter.

Actions: To attract or seek out nurturant others; to be particularly drawn to nurturant or sympathetic others who are in a position to give advice, aid, or support; to crave affection and tenderness; to accept favours unhesitatingly.

nUnderstanding

Desires: To abstract and discriminate among concepts; to synthesise ideas and arrive at generalisations that are comprehensive and verifiable.

Actions: To ask or answer general questions; interest in theory; to analyse events and generalise; to discuss and argue; emphasise logic and reason; to self-correct or criticise; insistent attempts to make thoughts correspond to fact; deep interest in abstract formulations, science, mathematics, or philosophy.

Murray's Influence and Contemporary Taxonomies

Murray's theory has been credited with providing psychologists with a "vocabulary of human motives that has... [continued to shape] work in the field ever since" (McClelland, 1987, p. 44). In particular, his taxonomy of needs has formed an important foundation for the development of other taxonomies, which were later proposed by theorists such as Rotter (1954), Jackson (1989b) and, more recently, by Reiss (2004, 2008) and Sheldon et al. (2001) to name a few. Perhaps the most well-known are those proposed by Rotter (1954) and Jackson (1989b), who each attempted to refine and reduce Murray's taxonomy into a smaller, more manageable number of constructs (outlined in Tables 3 and 4). Where Rotter collapsed the taxonomy into six broad constructs (called need values) on a conceptual basis (which is not entirely clear), Jackson (1989b) arrived at six categories through a combination of "theoretical considerations" (p. 2) and factor analytic studies using the PRF scales.

Table 3

Rotter's Six Psychological Needs

Recognition-Status

The need to be considered competent in a professional, social, occupational, or play activity. The need to be more skilled or better than others.

Protection-Dependency

The need to have another person, or group of people, prevent frustration or punishment; to provide for the satisfaction of other needs.

Dominance

The need to direct or control the actions of other people, including members of family and friends.

Independence

The need to make one's own decisions and to rely on oneself, together with the need to develop skills for obtaining satisfactions directly without the help of others.

Love and Affection

The need for acceptance and to be liked by others; to be unconcerned with social or professional position of friends, but seeks their warm regard.

Physical Comfort

Learned need for physical satisfaction that has become associated with the gaining of security.

Taken from Rotter, 1954, p. 132.

Table 4

Jackson's Factor Analytic Categories and Corresponding Scales

Category	Scales	Opposing scales
Impulse Expression and Control	Impulsivity Change	Harmavoidance Order Cognitive Structure
Orientation toward Work and Play	Achievement Endurance	Play
Orientation toward Direction from Others	Succorance	Autonomy
Intellectual and Aesthetic Orientations	Understanding	Sentience
Degree of Ascendancy	Dominance	Abasement
Degree and Quality of Interpersonal Orientation	Affiliation Nurturance Exhibition Social Recognition	Aggression Defence

Taken from Jackson, 1989, p. 3.

More recently, Reiss (2004, 2008) conducted his own factor analytic work to arrive at 16 motives (called basic desires); however, ten of the motives in his taxonomy are, by his own acknowledgement, the same as those outlined in Murray's (see Table 5). Sheldon et al. (2001) drew from a number of perspectives (including Murray's) in an attempt to discover motives that are most fundamental to psychological well-being. They arrived at a list of five psychological needs (reduced from ten), which also bare substantial similarities to those proposed by Murray (see Table 6). Thus, it is clear that Murray's taxonomy continues to influence current thinking in the field and, despite continued efforts to refine his work, his original taxonomy still has currency today. Of the various taxonomies that have since been proposed, none have surpassed Murray in terms of sustainability and influence across multiple areas including theory, research, and assessment (Barenbaum & Winter, 2003).

Table 5

Reiss' 16 Basic Desires

Basic Desire	Definition
Acceptance	The desire to avoid criticism or rejection
Curiosity	The desire for cognition
Eating	The desire for food
Family	The desire to raise one's own children
Honour	The desire to behave morally
Idealism	The desire for social justice
Independence	The desire for self-reliance
Order	The desire for structure
Physical Activity	The desire to move one's muscles
Power	The desire for influence of will
Romance	The desire for sex
Saving	The desire to collect
Social Contact	The desire for friendship
Status	The desire for prestige
Tranquillity	The desire for inner peace
Vengeance	The desire to get even

Taken from Reiss, 2008, p. 24.

Table 6

Candidate Needs Compiled by Sheldon et al, 2001, p. 326

Candidate need	Definition
Autonomy*	To feel that activities are self-chosen and self-endorsed
Competence*	To feel effective in chosen activities
Relatedness*	To feel a sense of closeness with some others
Physical Thriving	To feel that biological requirements are satisfied
Security*	To feel a sense of order and predictability
Self-Esteem*	To feel sense of personal worthiness and importance
Self-Actualization	To feel that they are moving toward an ideal version of the self
Pleasure-Stimulation	The need for pleasurable stimulation
Money-Luxury	To attain material possessions
Popularity-Influence	To attain social dominance

Note: Asterisks show the final five in the taxonomy

Murray's Need Taxonomy and Personality Assessment

Murray's need taxonomy forms the basis of a number of personality measures (such as the Stern Activities Index and McClelland's measures of achievement, affiliation, and power); however, the most widely used are the TAT, the PRF, and the Edwards Personal Preference Schedule¹¹ (EPPS; Edwards, 1954). All three instruments measure all or most of the needs in Murray's taxonomy; however, each employs different techniques, which extract different (but complementary) types of data (Barenbaum & Winter, 2003; Camara, Nathan, & Puente, 2000; Mayer et al., 2007). Where the TAT and the EPPS may be used to help construct an idiographic picture of the individual, the PRF is designed to answer more nomothetic related questions¹². Each has their unique strengths and limitations, which are briefly discussed below.

¹¹ Use of the EPPS has declined sharply in recent decades (Mayer et al., 2007).

The Thematic Apperception Test (TAT). The TAT is a well-known projective instrument that was developed by Murray and his collaborators (Morgan & Murray, 1935 cited in Murray, 1938), which requires respondents to construct elaborate stories in response to a series of ambiguous pictures. The stories can be interpreted either quantitatively or qualitatively, whereby the aim is either to measure need intensity and duration (using rating scales), or to identify themes using clinical judgement. The rationale for the test is based on the assumption that respondents unconsciously project their own motives through storytelling, which is advantageous, not only for revealing one's underlying need structure, but also as a means of bypassing one's conscious or unconscious defences. This allows clinicians to gain access to information that respondents might not be consciously aware of, or are unwilling to disclose (Cohen & Swerdlik, 2005; Cohen, Swerdlik, & Phillips, 1996; Groth-Marnat, 2003, 2009; Mayer et al., 2007; Murray, 1938, 1963; Teglassi, 2001; Winter et al., 1998).

Whilst the TAT quickly became (and remains) a popular instrument in both clinical and research settings¹³ (Mayer et al., 2007), its reliability and validity remains a topic of much debate within the literature (Anastasi & Urbina, 1997; Groth-Marnat, 2003, 2009; Hicks, 1970; Spangler, 1992; Tuerlinckx, DeBoeck, & Lens, 2002; Wohl & Palmer, 1970). This is largely due to the complex nature of the verbal data, which means that interpretations are usually based upon qualitative analysis which, in turn, means that the usual procedures for determining reliability are not suitable. The issue is also further complicated by the existence of a number of interpretive systems (that depart from Murray's), and the lack of consensus regarding a chosen or preferred system (Groth-Marnat, 2003, 2009). This makes it difficult to draw general conclusions about reliability, as adequate reliability for one system does not necessarily mean adequate reliability for another.

¹³ By 1955, over 300 TAT related articles had been published. This number has steadily increased to over 1700 in 2007 (Groth-Marnat, 2003; Mayer et al., 2007).

Additionally, because the TAT is comprised of different cards that are intended to measure distinct areas of functioning, establishing internal consistency is also difficult (Groth-Marnat, 2003, 2009; Teglassi, 2001). Given that the TAT requires respondents to be creative with their stories, respondents are likely to intentionally construct different stories within the same, as well as between, administrations. Thus, measures such as split-half reliability and test-retest reliability are not entirely suitable (as one would expect the correlations to be low). However, studies have shown that, when respondents are instructed not to worry about whether or not their stories are similar across repeated administrations, reliability tends to be good with correlations ranging from .48 to .60 (Lundy, 1985; Winter et al., 1998). That said, it is difficult to determine whether or not this finding is more reflective of internal consistency or the respondents' abilities to remember and reproduce the same stories (Groth-Marnat, 2003, 2009).

One of the main criticisms of the TAT is based on the assumption that both the TAT and corresponding self-report measures are simply different ways of accessing the same information (McClelland, Koestner, & Weinberger, 1989; Teglassi, 2001; Winter et al., 1998). Thus, studies reporting low correlations between the two measures are often interpreted as indicating poor validity for one or the other (Lilienfeld, Wood, & Garb, 2000). However, research suggests that projective and self-report tests tap into different motivational systems (namely, implicit and explicit motives; Emmons & McAdams, 1991) which, although are not completely distinct from one another, predict different kinds of behaviour (McClelland, 1985; McClelland et al., 1989). Where implicit motives tend to predict long-term behavioural outcomes, explicit (or self-attributed) motives tend to predict short-term behaviour in specific settings. Thus, one cannot necessarily conclude that low correlations between projective and self-report measures are indicative of poor validity.

Further to the above, it is important to remember that a number of scoring systems for the TAT produce ipsative scores, which are not suitable for comparison with normative scores. Ipsative scoring means that each construct is measured relative to other constructs within the same individual (thereby making intra-individual comparisons). This differs from the normative scaling that is typically used for self-report measures, whereby each construct is measured in absolute terms and is interpreted against the normal population (known as inter-individual comparisons). In short, ipsative and normative scoring rely on completely different scaling systems that are designed to address different questions. Therefore, whilst there should be some level of agreement across ipsative and normative scores with respect to respondents' strongest motives, one would expect the correlations to be low (McClelland, 1985). Thus, correlational analyses between the TAT and relevant self-report measures (such as the PRF) are not an effective means of examining validity.

Despite the criticism regarding the psychometric properties, the TAT has remained a popular instrument within clinical settings. However, there is some evidence that its use has been declining in recent years. Some researchers have suggested that this could be due to practical reasons, such as the increasing pressure on clinicians to be “proficient in a wider variety of instruments” (Groth-Marnat, 2003, p. 480). This leaves less time for the extensive training needed to administer and interpret projective tests correctly. Additionally, the TAT has a lengthy administration time, which means that it is not necessarily a cost-effective choice of instrument. Thus, it is possible that clinicians are turning to other modes of assessment, such as direct interviews and self-report questionnaires, which are more time efficient. Whilst these methods do not have the same advantages as the TAT (such as bypassing conscious defences) and do not access precisely the same information, they are, nevertheless, a more cost effective method of extracting important and useful data.

The Personality Research Form (PRF) and the Measurement of Motives.

The most popular self-report measure of general motives is the PRF (Mayer et al., 2007), which is a well-constructed normative instrument that draws heavily upon Murray's taxonomy of needs¹⁴ (Fowler, 1986). Unlike the TAT, which has attracted much criticism over its psychometric properties, the PRF has generally been well received as studies examining reliability and validity have consistently yielded positive results. (Hogan, 1989). Data reported in the manual indicate good internal consistency, with KR20 correlations for the standard scales ranging from .78 to .94, and for the parallel forms ranging from .60 to .87. Test-retest and odd-even reliabilities are also good, ranging from .80 to .96, and .50 to .91, respectively (see Jackson, 1989b). Studies examining construct validity have also yielded positive results. Correlations between separate ratings of relevant behaviours, as well as peer and self-ratings across different settings are as high as .74 (Jackson & Guthrie, 1968 cited in Jackson, 1989b).

However, whilst the PRF is generally accepted as a reliable and accurate measure of an individual's traits and typical behaviours, it is not necessarily an ideal instrument for measuring motives. As noted earlier, the various ways in which motives manifest (both between and within individuals) means that they are not necessarily measurable via fixed behavioural indicators. Thus, endorsement of a particular pattern of behaviour does not necessarily equal endorsement of the corresponding motive it supposedly measures. For example, whilst two respondents might endorse the statement "I like to read several books on a topic at the same time" (item 42 of the PRF Form-E; Jackson, 1989a, p. 2), one might be motivated by Understanding (which is the intended construct), whereas the other might be motivated by Social Recognition (both of which are scales on the PRF). On that basis, endorsing a particular pattern of behaviour does not necessarily reveal anything about his or her underlying motives.

¹⁴ Depending on the form (there are long and short forms), the PRF assesses 15 to 22 of the constructs originally defined by Murray (Jackson, 1989b).

In addition, as a normative instrument, the PRF is unable to provide an ipsative picture of one's motives; that is, the strength of one's motives in comparison to his or her other motives. Recall that, in accordance with Murray's theory, an adequate understanding of one's personality rests largely with identifying his or her dominant motives (needs)¹⁵. Thus, extracting this information is essential if one is to build a complete picture of the individual. However, as normative tests are designed to identify the strength of one's needs in comparison to the normal population, the PRF is not sensitive to the subtle differences between an individual's need strengths. This denies clinicians the opportunity to learn something about an individual's experience when multiple needs of similar strength are pressed. Whilst this information can be obtained by the TAT, the problems with such a lengthy projective measure have been outlined previously. Thus, a more direct and time efficient means of measuring relative need strength is desirable. One such attempt was made by Edwards (1954), who developed the EPPS, which is discussed below.

The Edwards Personal Preference Schedule, Ipsative Scaling, and the Measurement of Motives. The EPPS is a self-report forced-choice scale that attempts to measure 15 needs that were identified by Murray (11 of which appeared in his final taxonomy). The advantage of the forced-choice format is that it provides a quick and convenient measure of the relative strength of a respondent's needs, which can be used to supplement normative tests and create a more detailed picture of the individual. However, it also introduces a number of special properties that are unique to ipsative data, which complicate questions of reliability and validity (Baron, 1996; Hicks, 1970; Horton, 1974). Unfortunately, these properties were not accounted for during the tests construction; thus, crucial questions of reliability and validity remain unaddressed.

¹⁵ Other theorists that emphasise "ipsative relationships between different personality and motivational structures" include Lewin 1935, Rogers 1947, and Cattell 1965 (Cited in Saville & Willson, 1991)

A key feature of ipsative tests is that the forced-choice format means that the sum of scores for the measured constructs (scales) for any respondent is always fixed (Baron, 1996; Hicks, 1970; Meade, 2004). This means that the scores for the different constructs are not independent. This is because the nature of forced-choice tests is such that each item is made up of a choice between two statements that each represents different scales. Thus, when a respondent chooses one statement over another, this effectively produces a higher score on one scale, but also a lower score on the other. For example, consider the scenario in Table 7, whereby a respondent is presented with two items and is asked to select the statement that best describes him or her. For each item, a choice of statement b) produces a positive score on one scale (extraversion), but also produces a score of zero on the other. Thus, no matter how the response set differs, the differences will only impact the way in which the scores are allocated across the scales; the total score will always remain the same.

The implication of ipsative scoring is that it creates mathematical dependencies among the scales. Because higher scores on some scales inevitably means lower scores on others, the scales are, therefore, both negatively correlated and artificially constrained (Hicks, 1970; Meade, 2004). On that basis, the conventional methods for investigating reliability and validity are not suitable. Unfortunately, however, this problem seems to be poorly understood within the literature, as studies that directly address the reliability validity of the EPPS often employ inappropriate statistical procedures that produce spurious results (e.g., Edwards, 1954; Edwards & Abbott, 1973). As such, the limited research in the area is often confusing and uninterpretable. For example, data reported in the manual presents low inter-correlations between the EPPS scales as evidence of independence (Edwards, 1954). However, this conclusion is incorrect as, with ipsative data, low correlations are an artefact of artificial restrictions

on the correlation coefficients. On that basis, they cannot be used as evidence of independence among the scales.

Table 7

An Example of Ipsative Scoring

Item	Score
Item 1	
a). I rarely plan ahead (impulsivity)	0
b). I am comfortable with large crowds (extraversion)	1
Item 2	
a). I like to follow a routine (conscientiousness)	0
b). I feel at ease around others (extraversion)	1
	<hr/> Total
	2

Additionally, there are a small number of studies whereby researchers have wrongly attempted to correlate the EPPS with other normative measures. For instance, the manual reports correlations between the EPPS and the Taylor Manifest Anxiety Scale as well as the Guildford-Martin Personnel Inventory as evidence of convergent validity. A similar study was conducted by Edwards & Abbott (1973), who attempted to correlate the EPPS with the Edwards Personality Inventory (EPI) and the PRF. However, correlating ipsative and normal measures is not only inadvisable due to the artificial constraints outlined above, but it is also conceptually erroneous because the instruments use completely different scaling systems. As Hammond and Barrett (1996) have explained, an ipsative scale uses aspects of “the individual to create its own standard” (p. 136), which is useful for comparing variables within an individual. For example, “a patient’s condition may be viewed as having either improved or declined relative to the patient’s own average or relative condition” (p. 136). This is in contrast to normative scales, which measure absolute differences, and reflect an individual’s standing on a given criterion in comparison to the normal population. In short, ipsative and normative instruments measure different phenomena, and there “is no necessary

relationship between personality needs measured normatively and the same personality needs measured ipsatively” (Horton, 1974, p. 336).

The EPPS has also received criticism over the lack of evidence regarding substantive validity (Horton, 1974). The 225 items that comprise the test are made up of nine statements per need, which are paired with 28 other statements (eight statements are used three times, and one statement is used four times). However, there is no evidence to indicate that the statements are equivalent in terms of the extent to which they measure a given need (McKee, 1972). Thus, where “one scale might be represented by... [statements] that are high measures of [a given] need, another might be represented by... [statements] that are relatively low measures” (p. 367). This potentially influences the choice between pairs at the item level, which thereby corrupts how the scores are allocated across the scales. Thus, whether or not the test produces an accurate representation of the relative strength of a respondents needs is unknown.

In addition, reliability of the EPPS has not been established. The manual reports split-half reliability coefficients as evidence of internal consistency; however, these estimates are likely inflated because the test uses the same statements three or four times in different pairs. Test-retest reliability coefficients are also reported; however, the time one and time two administrations were separated by only a one week period. Caputo, Psathas, and Plapp (1966) noted this shortcoming, and conducted their own study examining test-retest reliability. However, they left an excessive period of time between administrations (15 months) making it difficult to draw conclusions from the findings. A more appropriate time frame was used by Mann (1958), who left three weeks between time one and time two administrations. Mann found test-retest reliabilities to be adequate (ranging from .74 to .88); however, further studies are needed in order to draw any meaningful conclusions.

Adding to the above concerns, one of the major shortcomings of the EPPS is Edward's failure to advise the reader as to the nature of ipsative data. As previously mentioned, ipsative tests may only be used to make intra-individual comparisons and are not suitable for making comparisons across individuals. However, the manual makes no mention of this and, further, includes normative data that are supposedly relevant to different populations. This is a serious error that is misleading to test users, who will likely confuse the EPPS as interchangeable with the more frequently encountered normative measures (Horton, 1974). Indeed, a number of studies can be found in the literature that mistakenly used the EPPS to make inter-individual comparisons (e.g., Cantwell, 1991; Caputo, Plapp, Hanf, & Anzel, 1965; French, 1958; Gebhart & Hoyt, 1958). Perhaps this could have been avoided had the manual clearly outlined appropriate uses of the test.

A further criticism of the EPPS has to do with Edwards' claim to have controlled out social desirability confounds by ensuring that the paired statements on each item share equal social desirability¹⁶. Edwards attempted this by matching pairs of statements using a group of students' judgements on the social desirability levels of individual statements. However, the problem with this approach is that it does not account for how judgements on social desirability might change once the statements have been paired. What Edwards fails to acknowledge, is that although two statements might be assigned the same social desirability value when judged independently, there might be clear differences between the statements when judged conjointly (Corah et al., 1958). This raises questions over whether or not the paired statements do, in fact, share equal levels of social desirability.

This question was investigated by Corah et al., (1958), who examined the statements that measure six of the needs in the EPPS (Achievement, Order, Succorance,

¹⁶ Edwards reasoned that the forced-choice format would be an effective means of controlling social desirability confounds as long as the test statements were matched on social desirability levels.

Abasement, Heterosexuality, and Aggression). A group of 81 students were presented with 30 item pairs and instructed to select the most socially desirable statement. If the pairs were matched on social desirability, then one would expect each statement to be chosen on an equal number of occasions. However, the results found that Achievement was judged as most socially desirable on seven occasions (out of a possible 10), followed by order on four occasions, Succorance and Abasement on three occasions out of 10, Heterosexuality on two occasions, and Aggression on one occasion. The correlation between social desirability indices and choice of statements was .88, indicating that the statements do not share equal social desirability when paired.

A critical shortcoming of the EPPS is that it measures an incomplete and unusual selection of Murray's needs, with no explanation as to why certain needs were included and others omitted. There are 15 needs measured by the EPPS and, whilst all appear in Murray's book, *Explorations of Personality*, four (namely, Change, Endurance, Intraception, and Heterosexuality) were eliminated from his final taxonomy on the grounds that they are composites of other needs. On that basis, whilst the EPPS measures 15 needs that were outlined by Murray, only 11 of these needs actually appear in Murray's final taxonomy. Thus, not only does the EPPS provide an incomplete measure of Murray's psychogenic needs, but it also includes an atypical selection of needs for reasons that are not explained.

In addition, Edwards attempts to capture the needs via fixed behavioural indicators which, as outlined previously, are not an effective means of accessing underlying motives. For example, consider the scenario whereby two respondents endorse the statement "I like to do things for my friends" (item 81 in the EPPS test booklet; Edwards, 1954, p. 4). Where one person might be motivated by the need to care for others (Nurturance), the other might be trying to avoid rejection and maintain relationships (Harmavoidance and/or Affiliation). Thus, because the statement does not

include information on what about the act is satisfying or tension reducing, the question of what motivates the respondent to endorse the statement remains unanswered.

In light of the above problems, the EPPS has attracted much criticism regarding its technical properties. Indeed, one reviewer described the test as an “exercise in test construction [rather] than... a serious entry into the market of validated tests” (Heilbrun, 1972, p. 366). This is unfortunate as, not only can an ipsative measure of Murray’s needs provide clinicians with a quick and convenient means of measuring need strength directly, but it can also be an effective means of controlling for different response sets that are common to normative tests (such as acquiescence and central tendency; Saville & Willson, 1991). Thus, a well-constructed ipsative instrument would be a valuable tool to complement existing measures.

Development of a New Instrument for the Ipsative Measurement of Psychogenic Needs

In light of the problems with the EPPS, a reliable and valid ipsative instrument that directly measures the relative strengths of a respondent’s needs is currently lacking. In response to this shortcoming, a new ipsative scale is currently being developed (Duane, 2004); a 190-item self-report measure of psychogenic needs (the Psychogenic Needs Scale [PNS]). The 190 items are formed by pairing 20 test-statements with one another¹⁷. Each test-statement is a concise definition of one of the needs in Murray’s (1938) taxonomy.

As a first step in the test’s development, Duane paid special attention to constructing the statements. To this end, she collected data from a panel of experts with specialist knowledge of Murray’s theory and, through a series of structured consultations (known as the Delphi technique), systematically refined and revised the statements over a one year period. During this phase, she sought to address the

¹⁷ Each of the 20 statements was paired with in the same way one constructs a pairwise correlation matrix: by comparing every variable with every other variable.

following criteria: (1) to effectively capture the core meaning of each need; (2) to ensure that the statements depict desired outcomes (and are, therefore, not just behavioural indicators) and; (3) to ensure that the statements share equal social desirability (in order to reduce confounds). She eventually arrived at the below list of statements, which represents Murray's complete taxonomy.

Table 8

Statements in the Psychogenic Needs Scale

Test statement	Measured need
Being able to admit to, apologise for, and accept the consequences of my actions.	nAbasement
Being able to work toward producing or achieving something that is difficult to do.	nAchievement
Being able to experience the company of other people, regardless of the type or quality of relationship.	nAffiliation
Being able to forcefully overcome opposition or beat an opponent.	nAggression
Being able to do things in my own way, without others directing me.	nAutonomy
Being able to continue striving to reach a goal rather than admit defeat.	nCounteraction
Being able to defend myself against blame and justify my opinions or actions.	nDefendence
Being able to follow the directions of a respected leader.	nDeference
Being able to direct or influence others.	nDominance
Being able to attract and hold the attention of other people.	nExhibition
Being able to avoid pain, injury, or a risk of any harm.	nHarmavoidance
Being able to avoid any risk of embarrassment or humiliation.	nInfavoidance
Being able to comfort and care for another person.	nNurturance
Being able to keep myself and my belongings neat, tidy and in order.	nOrder
Being able to have fun	nPlay
Being able to experience a variety of sensory stimulation (different smells, interesting sounds and sights, textures to touch, etc.)	nSentience
Being able to obtain comfort and support and to be cared for by another person.	nSuccorance
Being able to have my sexual needs fulfilled/satisfied.	nSex
Being able to avoid or ignore people whom I don't enjoy being with.	nRejection
Being able to learn new things and fully understand them.	nUnderstanding

For the development of a valid ipsative instrument, it is critical to minimise the confounding effects of social desirability. Social desirability (or socially desirable responding) refers to the tendency for respondents to describe themselves in the most favourable light (Helms, Holden, & Ziegler, 2015; Streiner & Norman, 2003). This can be due either to unconscious biases in self-regard (known as self-deception) or deliberate deception whereby respondents seek to project a specific impression (known as faking good; MacCann, Ziegler, & Roberts, 2011). In normative tests, social desirability confounds can result in respondents choosing “yes” or “most like me” to the socially desirable items. Whilst ipsative tests are an effective means of eliminating these kinds of response sets, problems with social desirability can still occur. In ipsative tests, whereby respondents are required to choose between paired statements for each item, they will simply choose the most socially desirable statement in the item pair. If this occurs, the result is an invalid measure of the constructs in question (in this case, psychogenic needs).

Normative measures typically use specifically designed scales to detect social desirability confounds (Bäckström, Björklund, & Larsson, 2009; Helms et al., 2015); these are usually comprised of a combination of desirable and undesirable items. Generally speaking, desirable items tend to describe honest, friendly, conscientious, conventional, and courteous characteristics, whereas undesirable items tend to describe sexual behaviours, selfishness, dishonesty, and aggressiveness (Jackson, 1989b; Millon, Millon, Davis, & Grossman, 2009; Paulhus, 1998). High scores on these scales are generally indicative of faking or self-deception. However, although this approach might be effective for normative scales, it is unsuitable for ipsative measures. In ipsative measures the social desirability confounds are removed by ensuring that the two statements in each item pair are equally socially desirable (Bäckström et al., 2009;

Streiner & Norman, 2003). This is achieved via carefully constructing the semantic content of each item.

Research has shown that it is possible to reword previously socially desirable test items to make them less desirable. Bäckström et al., (2009) made a series of semantic changes to items from the International Personality Item Pool (IPIP-100; a five-factor inventory), and found that a major general factor related to social desirability was reduced. The authors further concluded that this was achieved without altering the meaning of the items “in any crucial way” (Bäckström et al., 2009, p. 25). Whilst this differs from matching social desirability levels in an ipsative format it, nevertheless, demonstrates that neutral levels of social desirability can be achieved through carefully constructed wording.

In ipsative tests, it is not critical to achieve *neutral* social desirability (although this would be ideal), but to achieve *equal* social desirability among paired statements. As previously mentioned, Duane (2004) sought to establish equal levels of social desirability among all statements that comprise the PNS during their construction. Whilst this differs from equating social desirability after the statements are paired it is, nonetheless, the first step toward this outcome. However, as the test is in the preliminary stages of development, this aspect of the statements is yet to be systematically investigated. As such, the purpose of this research was to assist with this stage of the statements’ construction. To this end, two main aims were addressed. The first was to systematically examine the statements in order to determine whether or not they share sufficiently equal levels of social desirability. The second was to equalise any differences (should they be detected) by rewording statements with comparatively high

or low social desirability so that they are equalised with the remaining statements¹⁸.

Four specific research questions were addressed:

1. Do all 20 statements that comprise the psychogenic need scale (PNS) share sufficiently equal levels of social desirability?
2. If the relative social desirability levels are not equal, which statements are clearly more or less socially desirable than the others?
3. How does the wording of these statements contribute to the statements' clearly high or low levels of social desirability?
4. How can the wording of these statements be changed so that they are equalised with the other statements?

¹⁸ It is recognised that the statements can never be made exactly equal; the aim is to make them sufficiently equal so that no one statement is clearly identifiable as more or less socially desirable than the others.

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Chapter Two: Study One

Design

The sequential explanatory design, outlined by Creswell (2003), was adopted for the current study. This is a mixed-method design that is comprised of two phases; quantitative followed by qualitative. In the first phase, I examined the test statements to determine whether or not they differed on social desirability. To this end, participants were asked to complete a ranking task, whereby the statements were ranked from most to least socially desirable. It was expected that any statements with clearly high or low social desirability levels would be readily identified and ranked accordingly by participants. This would lead to systematic ranking patterns, whereby the respective statements would be repeatedly ranked toward the top or bottom of the range.

During Phase One, qualitative data were also collected in preparation for Phase Two (concurrent data collection; Ivankova, Creswell, & Stick, 2006). The purpose of Phase Two was to ascertain why certain statements were readily identified by participants as more or less socially desirable than the others. Thus, upon completing the ranking task, a proportion of participants were interviewed about their choices, and asked to comment on why they had ranked particular statements in the top and bottom locations. These data were then analysed, and the findings used to revise the statements in order to increase or decrease their respective social desirability levels and equalise them with the remaining statements.

Phase One

Quantitative Method

Participant Sample

A convenience sample of 59 participants was recruited by snowballing from undergraduate psychology students at Edith Cowan University (ECU), Perth, Western Australia. Participants ranged in age from 18 to 63 years ($M = 36.07$, $SD = 10.18$), and the majority were women (71%). Designated cultural affiliation categories included Anglo-Australian, Asian, and Indigenous-Australian (as shown on the participant consent form in Appendix D). Most participants identified their cultural affiliation as Anglo-Australian (85%), 7.5% identified as Asian, and 7.5% identified as “other”. It is acknowledged that volunteer bias means that the sample is not representative of the broader Australian population. Participants did not receive any remuneration for their participation.

Measure: Rank Ordering Task

Since there is no gold standard for comparing social desirability levels across a series of items, a ranking task was designed for the current study: participants were presented with the 20 statements that comprise the PNS, and asked to rank them on the basis of social desirability (1 being the most socially desirable and 20 being the least). As mentioned previously, the ranking was employed as a means of exposing relative differences among the statements, as those with clearly high or low social desirability levels would be readily identified and ranked accordingly by participants. This would lead to systematic ranking patterns, whereby the same statements would be repeatedly identified and ranked as most and least socially desirable by participants. That is, participants would agree upon statements ranked in the upper and lower locations in the overall rank order.

In contrast, statements that share approximately equal levels of social desirability were expected to be ranked randomly by participants. This is based on the assumption that equal levels of social desirability would lead to increased difficulty with discriminating between the statements when completing the forced ranking task. If this occurred for all statements, then there would be no agreement among participants with respect to statements ranked in the upper and lower locations.

In summary, one of two ranking patterns was expected to emerge for each statement which, in turn, provides a basis for drawing conclusions about the respective social desirability levels. A pattern of consistent rankings toward one end of the range suggests relatively high or low social desirability, whereas random rankings across the range suggests moderate or approximately equal social desirability. Should the former occur for one or more statements, then it can be concluded that there are problematic differences among the statements that are likely to compromise test validity. Should the latter occur for all 20 statements, then it can be concluded that the social desirability levels are approximately equal.

The Problem of Respondent Fatigue

Given that the above task required participants to evaluate a large number of statements (20), it was recognised that respondent fatigue was likely to occur part way through the task. The problem of respondent fatigue has to do with the tendency for participants to become bored with the task and more careless with their responses (Ben-Nun, 2008). Whilst this would ordinarily pose a problem for data quality, it was less of a problem for the current research. Because statements with clearly high or low social desirability were expected to be most easily identified, it was expected that participants would rank these statements first (presumably while task motivation is still high). Given that the objective of the research was to expose these very statements, participant motivation became less critical once these statements had been identified. Thus, as long

as participants were motivated to select their first few (presumably most and least socially desirable) statements, they had contributed meaningful data. Whether or not statements in the middle range (those that are moderately desirable) were ranked with the same precision was less of a concern.

Materials

The test statements were presented to participants on 20 16 x 4 cm cards (one statement per card as shown in Appendix A). A written set of task instructions (Appendix B) and an explanation of social desirability (Appendix C) were used to ensure instructions were consistent. A separate data form was used to record the order in which each participant ranked the statements, and a digital voice recorder was used to record the interviews conducted with participants. Written questionnaires were used to collect participant demographic information (Appendix D).

Data collection

Participants were provided with an information sheet outlining the purpose of the research and the nature of the study (Appendix E). This also addressed ethical considerations including how data may be used and the right to withdraw without consequence. After obtaining written consent, participants read a detailed set of task instructions and an explanation of social desirability. Participants were then presented with the statements on 20 individual cards, and asked to place them in descending order from most to least socially desirable (one being the most socially desirable and 20 being the least). This was a forced choice task, meaning that no tied ranks could be assigned. Cards were presented to participants using quasi-randomized procedures (a different order each time) to ensure that responses were not influenced by the order in which the cards were presented. Once participants had ranked the statements, the order was recorded on a separate data sheet. Completion time ranged from 15-30 minutes.

Results

Data obtained from the ranking task were analysed using the Statistical Package for the Social Sciences (SPSS version 18). Kendall's coefficient of concordance (Kendall's W) was calculated as a means of examining the degree of agreement among the participants' rank orders. Inter-rater agreement was significant, $W(19, N = 59) = 0.34, p < .05$, indicating that participants showed some agreement on the overall rank order of statements.

With significant inter-rater agreement confirmed, statements that were repeatedly ranked in the upper and lower locations were identified on the basis of the mean ranks (presented in Table 9). This was guided by the assumption that should a statement be ranked in each location on an equal number of occasions, then this would produce a mean rank that is equal to the overall median of 10.5. On that basis, if a statement's mean rank differs markedly from 10.5, then it can be inferred that the statement was ranked with some consistency in the upper or lower locations and was, therefore, consistently judged as most or least socially desirable. For example, a mean rank of one indicates that the respective statement was ranked as most socially desirable on every occasion.

Given these assumptions, it was important to establish the point at which a mean value may be considered as *markedly* different from the median. Unfortunately, there are no generally accepted statistical methods to guide this decision¹⁹. Cluster analysis was considered as one possibility, but was ruled out because it is typically used as a means of partitioning a sample on the basis of chosen variables. This is quite different from the aim of the current analysis, which is to partition the variables themselves. Also, the nature of the ranked data means that the statements are not independent of one

¹⁹ Several independent statistical advisors were consulted on this issue.

another and, thus, assumptions of independence (a requirement of cluster analysis) are not met (see Hair, Anderson, Tatham, & Black, 1998; and Ho, 2006).

Table 9

Mean Ranks for Statements in Descending Order (Study One)

Statements representing each need	Mean rank	<i>SD</i>
Being able to work toward producing or achieving something that is difficult to do. (<i>nAchievement</i>)	5.41	3.65
Being able to learn new things and fully understand them. (<i>nUnderstanding</i>)	5.85	3.98
Being able to admit to, apologise for, and accept the consequences of my actions. (<i>nAbasement</i>)	6.36	4.91
Being able to comfort and care for another person. (<i>nNurturance</i>)	6.61	4.96
Being able to continue striving to reach a goal rather than admit defeat. (<i>nCounteraction</i>)	7.02	4.66
Being able to have fun (<i>nPlay</i>)	7.34	4.58
Being able to experience the company of other people, regardless of the type or quality of relationship. (<i>nAffiliation</i>)	8.69	4.85
Being able to follow the directions of a respected leader. (<i>nDeference</i>)	9.03	4.36
Being able to attract and hold the attention of other people. (<i>nExhibition</i>)	9.92	4.78
Being able to do things in my own way, without others directing me. (<i>nAutonomy</i>)	10.92	4.44
Being able to direct or influence others. (<i>nDominance</i>)	10.97	4.82
Being able to experience a variety of sensory stimulation (different smells, interesting sounds and sights, textures to touch, etc.) (<i>nSentience</i>)	11.31	5.71
Being able to obtain comfort and support and to be cared for by another person. (<i>nSuccorance</i>)	11.54	5.88
Being able to keep myself and my belongings neat, tidy and in order. (<i>nOrder</i>)	11.91	4.86
Being able to avoid pain, injury, or a risk of any harm. (<i>nHarmavoidance</i>)	12.31	5.44
Being able to defend myself against blame and justify my opinions or actions. (<i>nDefence</i>)	12.61	4.37
Being able to avoid any risk of embarrassment or humiliation. (<i>nInfavoidance</i>)	14.00	4.46
Being able to have my sexual needs fulfilled/satisfied. (<i>nSex</i>)	15.44	4.68
Being able to avoid or ignore people whom I don't enjoy being with. (<i>nRejection</i>)	16.39	3.39
Being able to forcefully overcome opposition or beat an opponent. (<i>nAggression</i>)	16.40	5.01

With no other accepted statistical methods available, the rule of equal thirds was established, whereby the statements were partitioned into three groups by dividing the total range into equal thirds (each with a sub-range of 6.33). Statements with mean values of less than 7.33 were regarded as repeatedly ranked in the upper range and were, therefore, classified as the High SD Group. Statements with mean values greater than 13.67 were regarded as repeatedly ranked in the lower range and were, therefore, classified as the Low SD Group. All other statements (those with mean values that fall between 7.33 and 13.67) were considered sufficiently close to the median to be regarded as ranked randomly; these statements were classified as the Random Group.

With these parameters in place, the statements were partitioned in the following ways. Statements allocated to the High SD Group included nAchievement, nUnderstanding, nAbasement, nNurturance, and nCounteraction. As shown in Table 9, the mean value for each of these five statements is less than 7.33. The data distributions (shown in Figure 1) confirm repeated rankings within the top half of the range. Each graph shows that the majority of cases fall between ranks 1 and 10, and the data distributions for nAchievement and nUnderstanding show no cases falling above rank 15.

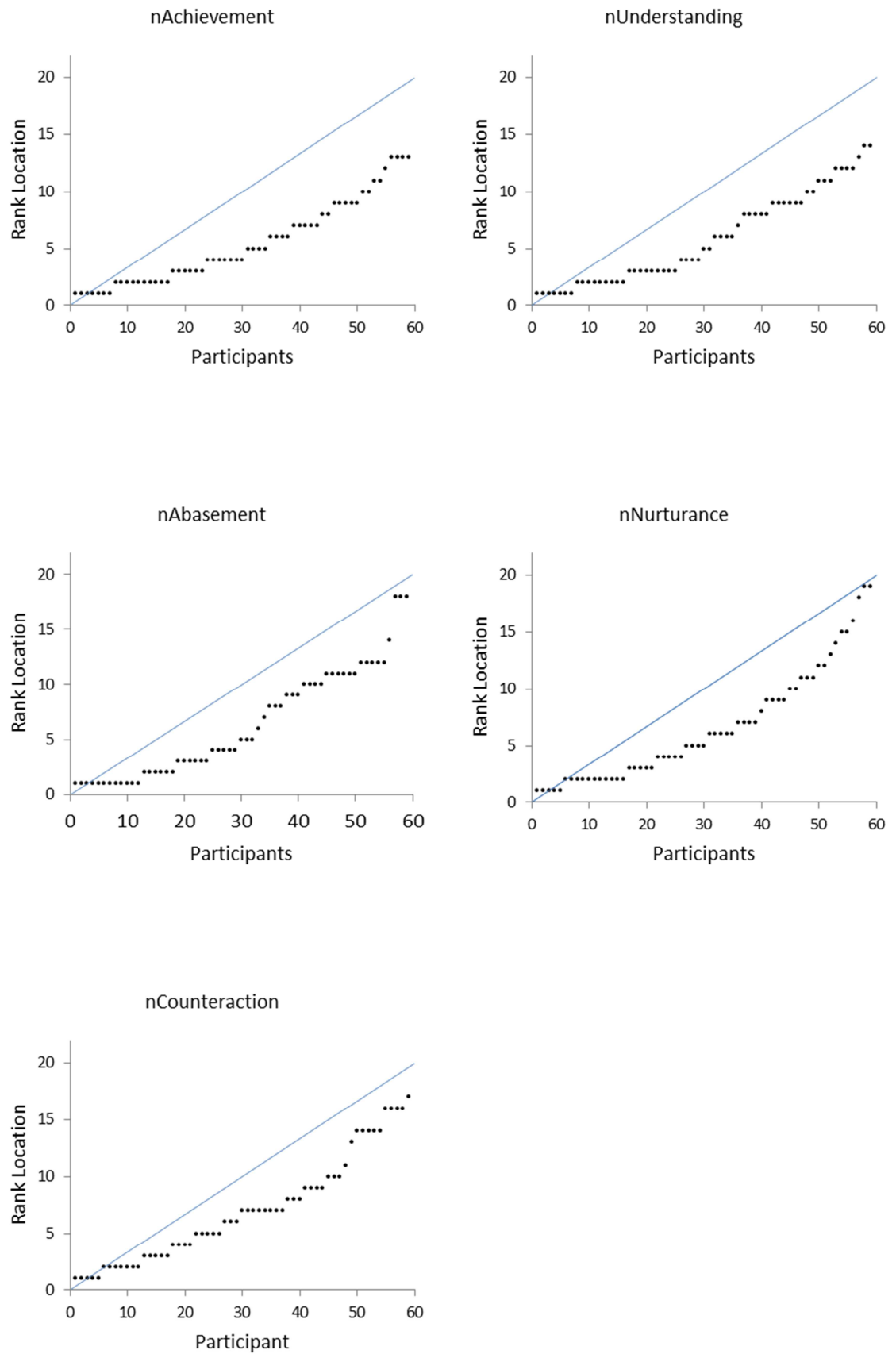


Figure 1. Statements allocated to the High SD Group.

Statements allocated to the Low SD Group included nAggression, nRejection, nSex, and nInfavoidance, as each of these statements has a mean value of greater than 13.67. As shown in Figure 2, the first three statements clearly show clustered distributions above 15, and the latter shows the majority of cases falling between ranks 10 and 20.

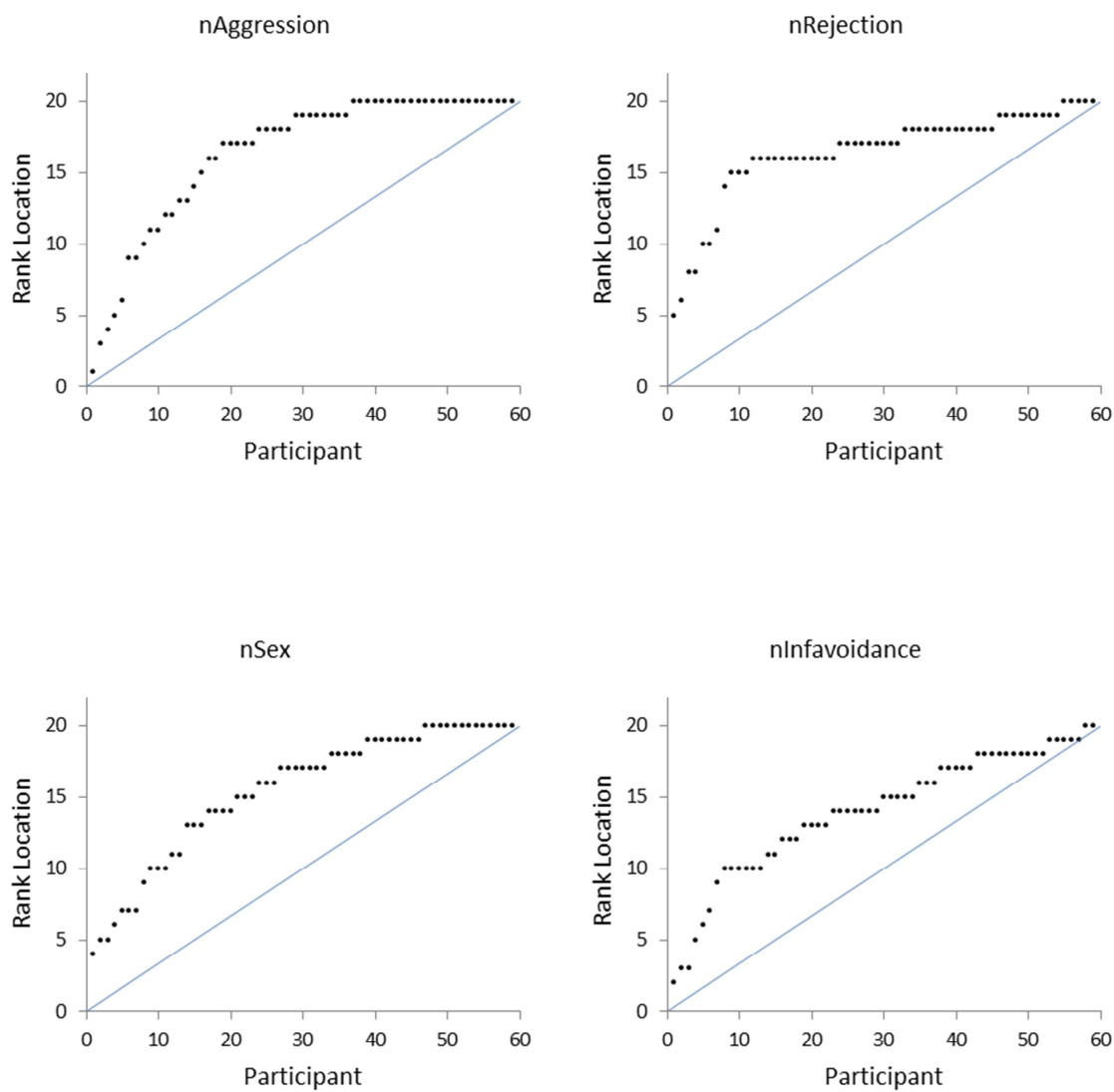


Figure 2. Statements allocated to the Low SD Group.

All remaining statements were allocated to the Random Group. These included nPlay, nAffiliation, nDeference, nExhibition, nAutonomy, nDominance, nSentience, nSuccorance, nOrder, nHarmavoidance, and nDefendence. The Data distributions for these statements are shown below in Figure 3.

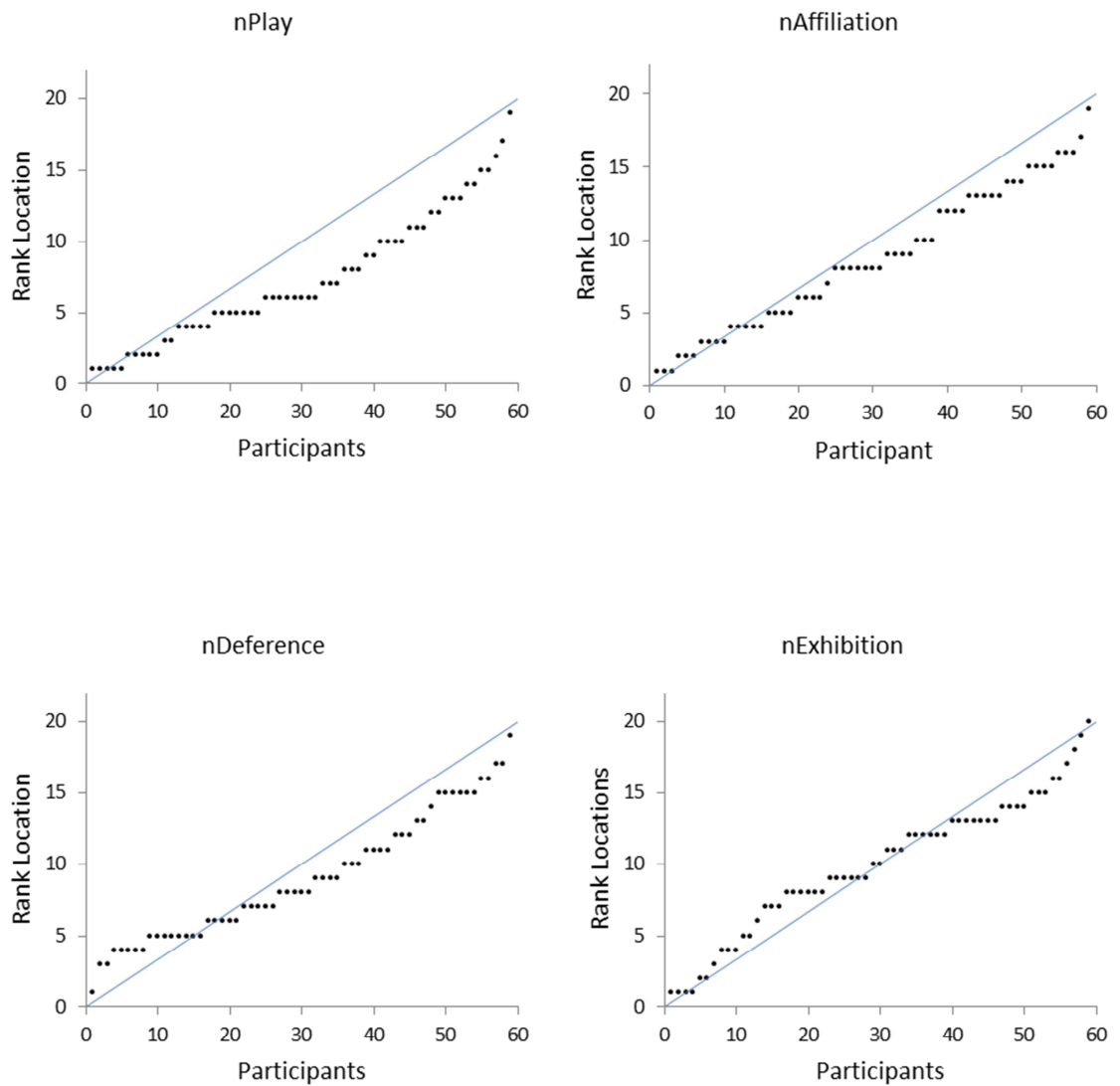


Figure 3. Statements allocated to the Random Group.

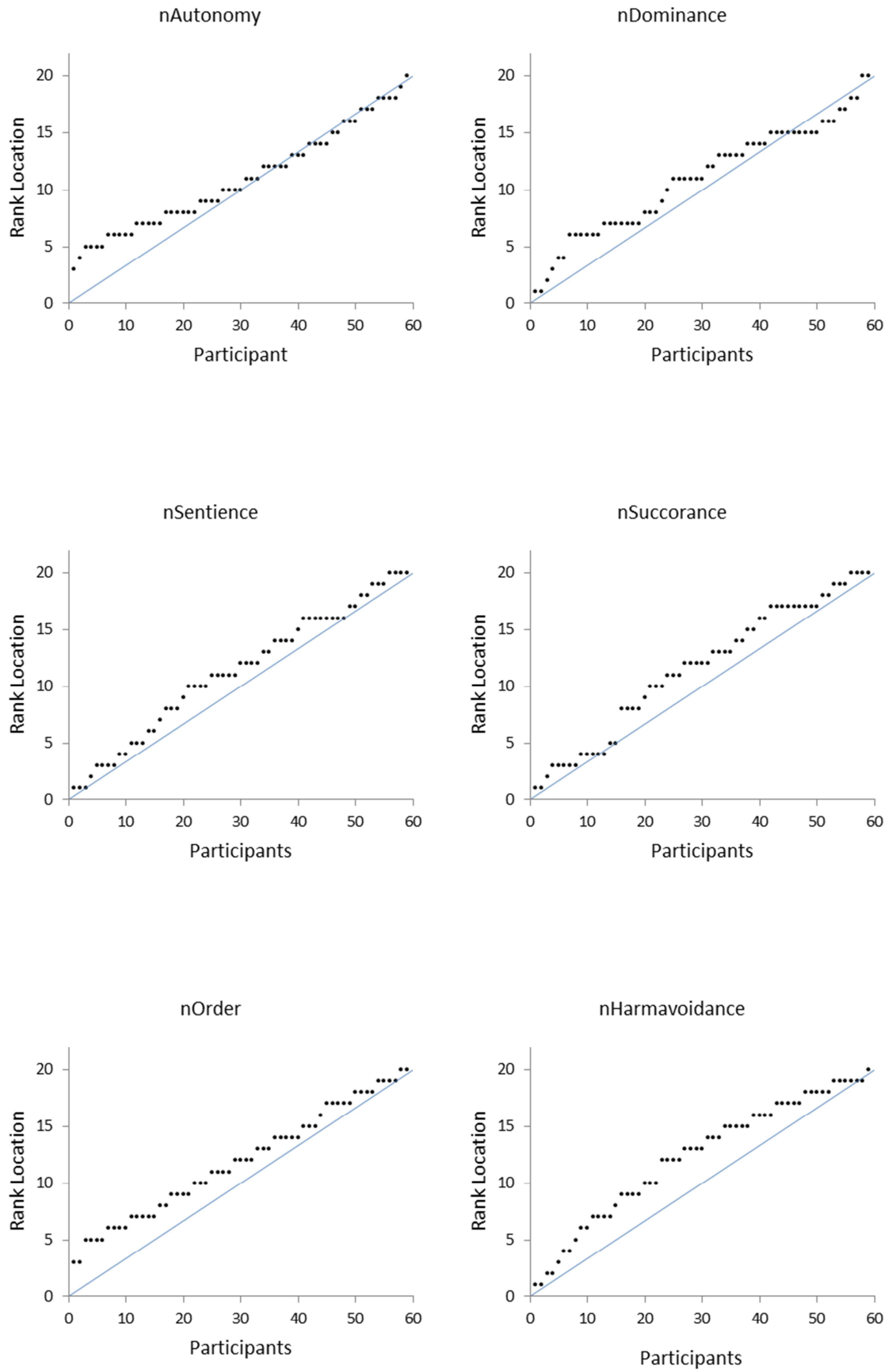


Figure 3 (continued). Statements allocated to the Random Group.

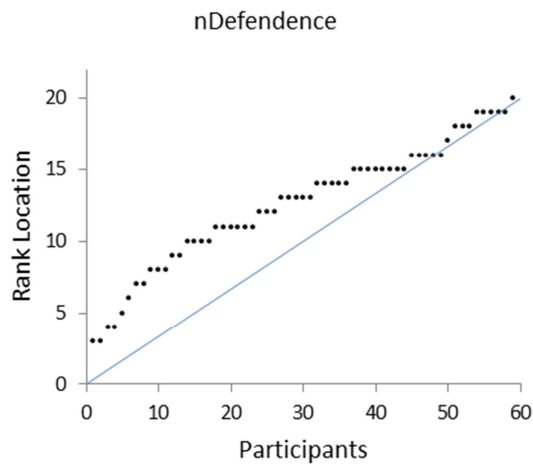


Figure 3 (continued). Statements allocated to the Random Group.

Summary

On the basis of the results from the quantitative analysis, the 20 statements that comprise the PNS do not share sufficiently similar social desirability. Although the value for W is small (weak to moderate), significant inter-rater agreement suggests that participants had agreed on the rank order for at least some of the statements. The mean values in Table 9 demonstrate that a proportion of statements were systematically ranked in the top and bottom locations, as values that differ markedly from 10.5 indicate repeated rankings toward one end of the range. This means that a proportion of statements were consistently ranked by participants as most and least socially desirable in relation to the others. On that basis, it appears that there are clear differences in social desirability that compromise test validity.

With differences in social desirability confirmed, the statements were partitioned into groups so that those with relatively high and low levels could be selected for further analysis in the next phase. This might seem like a simple task, however, establishing parameters for what is regarded as high, moderate, and low social desirability posed some difficulties. Looking at the mean ranks, the difference between nDefence and nInfavoidance is comparatively large at 1.39. One could argue that there is a logical

basis for drawing a distinction between moderate and low social desirability at this point. However, drawing a similar distinction at the opposite end of the range is more difficult as there are no two mean values that appear obviously different from one another. As such, this was not a plausible option for differentiating between moderate and high social desirability statements.

With no accepted statistical procedures to help establish the parameters, the only option was to impose arbitrary cut-offs on the mean ranks. Therefore, the entire range was divided into equal thirds as a means of partitioning the statements into high, moderate, and low social desirability. This meant that all statements with mean values less than 7.33 were regarded as having high social desirability (the High SD Group), and those with mean values greater than 13.67 were regarded as having low social desirability (the Low SD Group). With these parameters in place, a total of nine statements (five in the High SD Group, and four in the Low SD Group) were identified for further qualitative investigation and revision. This is discussed in the next phase.

Phase Two

Qualitative Method

Participant Sample

From the sample of participants who had completed the ranking task, 22 were selected to take part in qualitative interviews. The subset was selected simply by inviting the participants to volunteer additional time in order to discuss the decisions they had made when ranking the statements. The final convenience sample comprised of 8 men and 12 women ranging from 18 to 57 years of age ($M = 31.95$, $SD = 11.90$). Fifteen participants identified themselves as Anglo-Australian, one as Asian, and the remaining four identified their ethnicity as “other”.

Data Collection

Data were collected via semi-structured interviews conducted individually with each participant immediately following the ranking task (thereby following concurrent data collection procedures). At this stage of the research (prior to quantitative analysis), it was not known which statements (if any) required further investigation. This made it difficult to determine whether or not the point of saturation²⁰ was met for the relevant statements. However, whilst this is recognised as a limitation, it was the only feasible option because, had the interviews been delayed, participants might not have been able to recall how they had ranked the statements and would not have been able to contribute sufficiently rich and meaningful data to guide subsequent revision of the statements.

An interview schedule was used to guide the interviews and ensure some consistency in topics addressed (as recommended by Patton, 1990; and Smith, 1995). The schedule was comprised of four open-ended questions (Appendix F); however, additional probes and follow-up questions were generated during each interview. This allowed me to adapt to the discussion and respond to emerging topics (also recommended by Burgess-Limerick & Burgess-Limerick, 1998). Accordingly, the interviews followed a funnelled-down structure, whereby questions began very general, but became more specific in order to probe for further information (a technique described by Breakwell, 1995; and Smith, 1995).

The opening question invited participants to comment generally on the task (for example, “how difficult did you find the task?”). This question was primarily intended to ease participants into the interview and facilitate rapport building. Next, participants were asked to identify statements that were easier to rank, as it was expected that they were likely to respond by pointing out statements perceived as most or least socially

²⁰ In qualitative research, saturation refers to the point at which data is repeated from multiple sources, and no new, relevant information emerges (Morse, 1994). This helps the researcher determine the point at which data collection should cease.

desirable. Consistent with this assumption, participants typically pointed to the first and last two to five statements in the rank order, reporting that they were readily identifiable as most and least socially desirable, respectively. Once these statements were identified, I was able to generate follow-up questions about how they were perceived and why - extracting more detailed information where necessary (for example, “what is it about this statement that makes it more [or less] socially desirable”).

The interviews ranged from 20 to 30 minutes in duration, and all data were audio-recorded. After the first few interviews, the contents were immediately reviewed in order to ensure that the questions were effectively extracting rich and relevant data. This led to some minor revisions of the questioning schedule (see Appendix F); questions four²¹ and five²² were omitted from subsequent interviews as they were leading participants to discuss statements ranked in the middle locations (and, thus, extracting superfluous data). One question (question three; “what does this statement say about a person?”) was added to subsequent interviews in order to extract more detail about statements judged as most or least socially desirable.

Data Analysis and Statement Revision

Data were analysed using the thematic analysis procedure described by Braun and Clarke (2006). All recorded qualitative data were transcribed verbatim, de-identified, and edited for readability. All transcripts were then checked against the original corresponding audio-recordings in order to ensure their accuracy²³. Each transcript was then read repeatedly in order to become familiar with the data, and to develop initial analytic interests (as recommended by Braun & Clarke, 2006; Miles & Huberman, 1994; Patton, 2002; and Smith, 1995). This process began as soon as possible after each interview.

²¹ Question four was “tell me about the statements you found more difficult to rank.”

²² Question five was “how confident are you with the order you have chosen?”

²³ A procedure recommended by Morse (1994).

The objective for analysis was not to provide a detailed overview of the entire data corpus (the entire content of all interviews), but to focus specifically on data related to statements with problematic levels of social desirability. As such, once the quantitative analysis (Phase One) was complete, all units of text relating to the nine statements in the High and Low SD Groups²⁴ were extracted from the data corpus (along with the surrounding data to prevent loss of context). These units were then compiled into nine individual data sets (see Braun & Clarke, 2006), which were then mined separately in order to identify themes pertaining to each statement.

During this phase, all meaningful units of text were coded regardless of whether or not they appeared immediately related to the research questions. Codes were assigned using a semantic approach, which means that they were assigned on the basis of participants' explicit comments rather than attempting to interpret anything *beyond* what was actually said (as described by Braun & Clarke, 2006). The codes were then grouped into candidate themes, and assigned provisional definitions, before being reviewed to ensure sufficient and substantiating data. During this process, some themes were collapsed into single themes, others separated, and others discarded. The process resulted in 13 individual themes relating to statements in the High and the Low SD Groups.

Research Rigour

Credibility of the thematic analysis was maintained by adhering to the data collection and analysis procedures outlined above²⁵ (for a discussion, see Miles & Huberman, 1994). In addition, the final themes from one data set were reviewed by a supervising researcher in order to confirm that interpretations were logical and that coding was exhaustive. Although a second researcher is sometimes employed to verify

²⁴ Namely, statements for nAchievement, nUnderstanding, nAbasement, nNurturance, nCounteraction, nInfavoidance, nSex, nRejection, and nAggression.

²⁵ In qualitative research, credibility is equivalent to internal validity.

the entire qualitative analyses, this was not possible for the current study as the resources to complete such a labour intensive task were not available.

Although member checking²⁶ is typically used as a means of confirming credibility (Guba, 1981; Nagy & Viney, 1994), this technique was not used for the current study due to the nature of the data obtained. Because the topic for investigation was a trivial task rather than a significant personal experience, it is unlikely that participants would have been able to accurately recall how they had completed the task or how they had responded to the qualitative questions. As such, an alternative method was used whereby participants' comments were paraphrased and re-stated at the time of interviewing to ensure that I had accurately understood what they had meant (recommended by Moutsakas, 1990; and Patton, 2002)

Applying the Qualitative Findings to Statement Revision

As the qualitative themes were established, each was systematically reviewed within the context of the research questions. Initial ideas on how particular terms and phrases were contributing to the social desirability problems were explored. These were expanded upon by making iterative comparisons between the data and the relevant aspects of Murray's theory (the relevant need definitions). A number of suggestions for specific changes were generated (i.e., substituting, adding, or deleting words or phrases), which were then formulated into modified versions of each statement.

During this process, the main considerations were, not only to influence the statements' social desirability but, also, to protect the integrity of the relevant underlying need construct. Since the statements had already undergone a peer review process as part of their construction, every effort was made to retain as much of the existing wording as possible, unless there was a compelling reason to make more drastic

²⁶ Member checking is a means of confirming that the researcher's interpretations are consistent with what the participants had meant. It usually involves a second meeting between the researcher and the participant.

changes. Any differences that emerged between the data and the underlying need constructs (as defined by Murray, 1938) were explored, and attempts to reconcile the differences were incorporated into the suggested changes.

Following these procedures, several different versions of each statement were developed and compiled into lists. These lists were then presented (via email) to two supervising researchers for further comment, along with summaries of the qualitative findings and written justifications for the suggested changes. Both researchers²⁷ responded via email, offering additional suggestions where appropriate. After carefully considering their suggestions, some additional versions were generated, others modified, and others discarded. The final lists were comprised of up to 17 different versions per statement.

Dealing with an Unexpected Emergent Theme

The above outlines procedures that were limited to addressing specific research questions about particular statements. However, as analysis and statement revision progressed, one theme began to emerge, which broadened the scope for analysis and, ultimately, altered the course of the current study. Although the emergent theme was not specifically related to the research questions, it revealed a notable problem with the statements and, thus, was important for statement revision and development. As such, it was important to take advantage of the additional line of inquiry²⁸. Accordingly, as the theme began to emerge the analytic focus was returned to all data sets before returning to the remaining transcripts. Again, the purpose was not to provide an overview of the entire data corpus, but to extract additional data relevant to the emergent theme. This procedure lead to one additional theme that is applicable across statements.

²⁷ One with specialised knowledge of Murray's theory of psychogenic needs, and the other with specialised knowledge of psychometric testing.

²⁸ These are guidelines proposed by Huberman and Miles (2002).

The precise nature of the theme and the problem is explained in detail in the appropriate sections of this thesis (Findings and Interpretations). However, for reasons of clarity, it is also briefly mentioned here. It became apparent that the statements conveyed skills or abilities that can be voluntarily called upon or *switched off* as the situation called for. Because this is quite different from the properties of needs as they are defined by Murray (1938)²⁹, the appropriateness of continuing with the current study was called into question. In light of this, I met with the supervising researchers to present the findings and discuss how to proceed. At that point, the contents of the emergent theme were carefully reviewed in conjunction with Murray's definition of psychogenic needs. After careful consideration, it was agreed that the problem needed to be resolved before attempting to address individual social desirability problems. A number of ideas on how to correct the problem were generated and discussed, before it was eventually agreed that a standard change needed to be implemented across all statements (discussed later). The intention was to realign the statements with Murray's definition of needs.

Clearly, implementing the above change potentially impacted the statements' social desirability. As such, it was decided that no other changes should be made to the statements at this stage. Instead, it was agreed that the statements must first be re-examined in order to establish whether or not the groups compiled in Phase One still accurately reflected the relative social desirability levels (this is described in Study Two). However, although the remaining qualitative findings were not acted upon at this time, they are still potentially useful and relevant for addressing individual social desirability problems at a later stage. As such, they are fully illustrated in the next section.

²⁹ As outlined earlier, needs are not merely "switched off" when met with environmental frustrations; rather, they become increasingly intense and will lead the individual to act with even greater urgency. Thus, they cannot simply be "switched off" as the individual sees fit.

Findings and Interpretations

This section outlines the 14 themes that were identified via the thematic analysis. The thirteen themes that address the social desirability problems for individual statements are presented first. Given that implementing the associated changes was delayed for the time being, the proposed alternative versions of each statement are not discussed at this stage. However, some general conclusions regarding suggested changes are briefly presented, so that they may be compared with Study Two and Three findings at a later stage. Finally, the single emergent theme that applied to all statements is fully illustrated.

In order to clearly illustrate the themes, participants' quotes are included (in italics) in each section. This also helps to demonstrate that the findings are logically derived from the data. In order to enhance clarity, some quotes were edited according to guidelines proposed by Morse (1994), who stated that it is acceptable to remove stammers and extraneous sections of sentences provided that the meaning of the quote remains untouched. In such instances, the following criteria are used: An ellipse (...) indicates that words have been omitted (such as repeated words), but the meaning remains unchanged; and square brackets indicate that my own words have been added in order to enhance clarity.

Themes Pertaining to Statements in the High SD Group

Statements allocated to the High SD Group included nAchievement, nUnderstanding, nAbasement, nNurturance, and nCounteraction. Following the results from Phase One, the goal for analysis was, firstly, to understand why participants had perceived the statements as highly desirable in relation to the others and, secondly, to extract any information that might help generate ideas on how to lower the social desirability. As shown in Table 10, six themes were identified (one theme per statement

with the exception of nNurturance, which had two); each is discussed in the following sections.

Table 10

Qualitative Themes Identified for Statements in the High SD Group

Statement	Corresponding themes
nAchievement	Working hard is admirable
nUnderstanding	Openness to new and personally enriching experiences
nAbasement	Abasement is a desirable way to respond to personal mistakes
nNurturance	Nurturing others shows compassion Nurturing is part of a reciprocal relationship
nCounteraction	Perseverance has both positive and negative connotations

nAchievement. For the nAchievement statement³⁰, participants emphasized the process of working toward a goal over and above reaching the goal itself. Working toward a chosen goal was described as evidence of one's determination, inner strength, and willingness to work hard (e.g., *"that shows strength of character; that you don't give in too easily"* P4). Participants described these qualities as more important than skill level or ability (e.g., *"the average student that's [sic] really trying hard is sometimes more commendable than that naturally smart person at the top of the class"* P5). On that basis, participants felt that the *"...the actual process; the amount of effort you put into actually getting toward the goal"* (P5) was the socially desirable aspect of the statement. This was considered more desirable than reaching the goal itself.

These comments indicate that the statement conveys a message of hard work rather than high achievement. This is problematic as, not only does it appear to account for the high social desirability, but it also departs from Murray's (1938, see page 164) definition. Murray defined nAchievement in terms of accomplishment, success, task mastery, and the tendency to excel. However, the current statement appears to more

³⁰ "Being able to work toward producing or achieving something that is difficult to do".

strongly reflect the *process* involved; namely, the work required in order to excel. This indicates that the statement needs to be reworded in such a way that it weakens the association with hard work, and strengthens the association with goal attainment. On the basis of these findings, it is suggested that the phrase “work toward” should be removed in order to help realign the statement with the intended meaning, and to reduce the social desirability.

nUnderstanding. When asked about the statement measuring nUnderstanding³¹, participants attended primarily to the part of the statement that referred to learning new things. Many spoke about this as being evidence of one’s openness to new experiences, which was spoken about in a favourable light: *“I think it’s socially desirable, as you’re willing to try new things - willing to branch out from your comfort zone. I think that would be very socially desirable in a lot of people’s eyes”* (P19). Additionally, new experiences were described as holding particular personal value (e.g., *“life is full of new experiences, and it can only enrich you as a person...”* P4). This was associated with personal growth, change, and development:

Who wants to stop learning new things in life? You can be anything. You can be something that you’ve read, or something that you see, or something that you have discovered from maybe watching a documentary on T.V. So, I think people should not stop learning [and] understanding new truth. (P11).

The above comments suggest that the phrase “learn new things” strongly contributes to the statement’s high social desirability. However, a review of Murray’s (1938, see page 224) definition indicates that the phrase also interferes with the statement’s intended meaning. It is clear that participants had interpreted “learn new things” as the tendency to partake in new activities and experiences, which essentially requires some form of action. However, Murray clearly defined nUnderstanding in terms of thought and conceptualization, which he differentiated from action. Whilst it can be argued that thought always precedes action, Murray argued that action does not

³¹ “Being able to learn new things and fully understand them”.

always follow thought. In fact, some forms of thought are reinforcing in their own right and, thus, might never lead to action, or might even prevent it. In accordance with this, it is advisable to remove the phrase “learn new things” in order to realign the statement with its intended meaning, and resolve the social desirability problem.

nAbasement. Participants consistently reported that nAbasement³² was “...*about not hiding from mistakes*” (P17). From this perspective, the statement was discussed in a positive light, as the ability to admit to mistakes was considered admirable (e.g., “*I think being able to admit that you’ve made a mistake is a really good trait in a person*” P2). Further, the capacity to apologize and accept the consequences for one’s actions was associated with responsibility and maturity (e.g., “*They have reached a stage in life where they realize they do make mistakes and, if they do, then they should apologize for them and accept the consequences*” P10); failure to do so was considered evasive or dishonest (“*someone that just lies their way out of something... it just annoys me*” P5).

These comments demonstrate that participants consistently evaluated the statement’s social desirability within the context of making mistakes and making amends. This tendency is problematic as, not only does it appear to account for the elevated social desirability, but it is also inconsistent with what Murray (1938) had intended. Murray defined nAbasement as the tendency to assume a position of inferiority, and accept blame or punishment regardless of whether or not it is warranted. However, on the basis of participants’ comments, the statement currently denotes a dignified ability to accept just repercussions that follow a wrongful act. This discrepancy could be due to the term “consequences”, which is defined as the result or outcome of an earlier incident. Given that consequences are presumably fair and just by nature, it is likely that the term conveys misleading contextual information. On that

³² “Being able to admit to, apologise for, and accept the consequences of my actions”.

basis, the term should be removed from the statement in order to successfully eliminate the implied context and, in turn, reduce the social desirability.

nNurturance. When asked about the statement for nNurturance³³, participants frequently reported that the statement described generally positive human qualities. Comforting and caring for others was regarded as demonstrative of selflessness and a kind and compassionate disposition (e.g., “*it shows that they’re a caring person and not just thinking about themselves...*” P12). All of these qualities were spoken about as being highly valued and necessary in interpersonal relationships:

I felt very sure about that. I’m a very compassionate person. I’ve grown up a lot with stressors in the family home so I’ve needed to be, and so... I think it can be very much socially desirable... I suppose it’s very necessary... especially if you can comfort someone when they need you, or even if you can just be there, just if they want someone to talk to, it can be a very socially desirable trait. (P19)

On the basis of this theme, the statement’s high social desirability seems logical, as terms such as “comfort” and “care” describe desirable human characteristics. This poses a considerable challenge for revising the statement, as the meaning of nNurturance is difficult to capture without using similar language. Therefore, the problematic level of social desirability is difficult to rectify without altering the intended meaning of the statement.

However, in addition to the above, a second theme was identified that is based on comments about the statement within the context of interpersonal relationships. This might be more useful to the revision process. Participants described comforting and caring for another as part of a reciprocal exchange, whereby providing care goes hand-in-hand with being cared for (e.g., “*...it’s not black and white [as in] ‘if you do this for me, then I’ll do this for you’ but, I think it’s reciprocal... what goes around comes around...*” P22). On the basis of this, it appears that participants tended to evaluate the statement based on the assumption that it represents one side of a mutually supportive

³³ “Being able to comfort and care for another person”.

relationship (e.g., *“being able to comfort and care for other people; that’s an extension of this one, [nSuccorance], it’s about relationships...”* (P17). This could explain the elevated social desirability given that mutual support signifies a healthy and balanced exchange between individuals. Accordingly, it is possible that providing care for others is socially desirable only if it is balanced with being cared for. On that basis, it might be possible to resolve the elevation by rewording the statement in such a way that prevents it from being construed as part of a reciprocal exchange.

nCounteraction. The statement for nCounteraction³⁴ was frequently described by participants as having both positive and negative connotations. On the one hand, the statement represents a highly regarded ability to persevere (e.g., *“I think perseverance is really highly valued”* P9) and remain committed to a goal in the face of adversity. On the other hand, the statement also potentially represents a *“bull-headed”* (P4) attitude, whereby one fails to accept that persistence is sometimes futile. As one participant reported:

...There’s more than one way of looking at it to me. Is it talking about banging your head against a brick wall [and] keeping going when you really should say “well this is not working, stop”, or is it about perseverance and the need to be able to persevere with things even when it’s difficult?(P14)

On that basis, whilst perseverance is a socially desirable quality, there is a point at which it becomes undesirable. In situations where a given goal might not be feasible, the best course of action is to accept defeat rather than continue to over-invest in an unattainable goal (e.g., *“it’s better to admit defeat, and learn from that, and move on”* P2). From this perspective, it might be possible to reduce the statement’s social desirability by rewording it in such a way that emphasizes a reluctance to give in or accept defeat. Given that Murray (1938, see page 195) characterizes nCounteraction as the tendency to be spurred on by difficulty, to decline assistance, and to reject defeat, this is an acceptable change.

³⁴ “Being able to continue striving to reach a goal rather than admit defeat”.

Themes Pertaining to Statements in the Low SD Group

Statements allocated to the Low SD Group included nInfavoidance, nSex, nRejection, and nAggression. Following the findings from Phase One, the goal for analysis was to understand why participants had perceived the statements as relatively undesirable, and to extract any information that can help generate ideas on how to lower the social desirability. As shown in Table 11, seven themes were identified; two per statement with the exception of nRejection. Each is discussed in the following sections.

Table 11

Qualitative Themes Identified for Statements in the Low SD Group

Statement	Corresponding themes
nInfavoidance	Excessive reluctance to take risks Humiliation is worse than embarrassment
nSex	Sex should be treated with discretion An implied tendency toward self-gratification
nRejection	Rude and intolerant behaviour
nAggression	Aggressive and overly competitive The word “forcefully” is particularly negative

nInfavoidance. Participants reported that the statement for nInfavoidance³⁵ describes an overly reluctant attitude toward taking everyday risks; this could lead to a severely restricted lifestyle. For example, someone who continually tries to avoid risk of embarrassment is probably exceedingly self-conscious, and is likely to be aloof or reclusive in nature (e.g., “...*they probably won’t like going out or doing anything; they might be very reserved about their activities or what they talk about*” P19). This was described as having a potentially debilitating impact upon one’s daily life:

... I could get embarrassed going to the shop without my hair done, you know. Then I wouldn’t get the shopping done... if you’re constantly concerned about what someone else is thinking, or you get embarrassed easily, then it would be crippling in terms of going about your daily life. (P18)

³⁵ “Being able to avoid any risk of embarrassment or humiliation”.

Thus, the statement describes hypersensitivity to embarrassment and excessive concern with what others think.

In addition to the above, a second theme was formed, which is characterized by a differentiation between embarrassment and humiliation. On the basis of participants' comments, although embarrassment can be an uncomfortable emotion, it is a normal human experience that is unlikely to cause serious psychological harm (e.g., *...I think sometimes it's necessary to kind of be embarrassed*" P22). As such, embarrassment is something that one should be able to tolerate: *"you should be able to just take it on the chin and carry on"* (P12). In contrast, humiliation was considered more severe, with some participants directly expressing their dislike for the term (e.g., *"Embarrassment is good sometimes... I don't mind being embarrassed. Humiliation is a horrible word"* (P5). Thus, humiliation may be viewed as more threatening than embarrassment, which suggests that to avoid it might be more socially acceptable. Accordingly, removing the term "embarrassment" from the statement might successfully increase its social desirability. Murray (1938) uses "embarrassment" and "humiliation" interchangeably (see p. 192), and does not differentiate between the two. Thus, this is an acceptable change that is unlikely to interfere with the statement's intended meaning.

nSex. When discussing the statement measuring nSex³⁶, participants frequently reported confusion over where it belonged in the rank order (e.g., *"the sexual needs one was really difficult for me to place"* P3). Whilst it is accepted that sex is a basic human desire that is common to most everyone (*"it's basically a human need, like eating [and] drinking"* P4), it is still a sensitive matter that must be dealt with discretely. Accordingly, participants commented that sexual needs should be either kept private or at least downplayed as being minor or unimportant:

³⁶ "Being able to have my sexual needs fulfilled/satisfied".

Sure, everyone feels that they need sexual needs fulfilled, but not overtly, and not being presented in this sort of light. It's a bit over the top if you just suddenly come out with it. So, that's why I put it at the bottom. (P20)

It's not something that I would put high up on the list, although it is high up on my list, I wouldn't put it up high on the list because I wouldn't want people to know that it's really important. (P13)

On the basis of this, disclosing personal information about one's sexual needs potentially violates social norms, and those who do so risk being judged by others as behaving distastefully. From this perspective, participants could have been reluctant to rank the statement too high. On the basis of comments by participant 13, the rank order appears to have been viewed as directly proportionate to one's level of openness about, or level of interest in sex. If this is the case, it is probable that the statement's higher mean rank (indicating consistent rankings toward the bottom of the range) is due to the constraints of social norms rather than the way it is worded.

Given that the above theme suggests that the statement's low social desirability is primarily a reflection of social norms, further analysis was conducted in order to identify how the wording, in particular, contributes to the problem. This resulted in a second theme that is based on comments made by two participants. The first described the statement as self-centred (e.g., "*... this statement seems to me to be more of a self-centred statement*" P10), and the second described it as egotistic and predatory (e.g., "*I don't think people want to present themselves to someone new in that light because it immediately makes them, appear egotistic – a bit of a predator*" P20). Whilst these comments are brief, they each suggest that the statement represents a tendency toward self-gratification, whereby one is solely concerned with satisfying one's own sexual needs. In particular, the use of the term "predator" could suggest a tendency to seek self-gratification whilst remaining indifferent to the more socially acceptable aspects of sex (such as intimacy and love, for example). Whilst it is difficult to draw further conclusions about what these participants had meant, it is clear that terms like

“egotistic”, “selfish”, and “predator” describe a tendency to be concerned only with the self, which places the statement in a negative light.

Given the limited data available, it is difficult to pinpoint how the statement’s wording conveys the selfishness described by the above participants. However, upon reviewing the statement in comparison to the others, it is interesting to consider that the statement for nSex is the only one that explicitly states a desire to have a particular need “fulfilled/satisfied”. It could be that expressing a desire to have any need fulfilled in such direct terms is unusual and, therefore, appears selfish or inappropriate to the reader (consider as an example, “Being able to have my need for dominance fulfilled/satisfied” or “Being able to have my need for exhibition fulfilled/satisfied”). Consider this in conjunction with the previous theme, which highlights the importance of exercising discretion when dealing with sex related matters; it could be that the statement is simply too direct. On that basis, it might be possible to increase the social desirability by rewording the statement in such a way that removes the direct reference to having the need “fulfilled” or “satisfied”.

nRejection. When discussing the statement for nRejection³⁷, participants reported that the statement describes rude and intolerant behaviour (e.g., “*It says that they don’t have much tolerance for other people*” P20). Participants found this unacceptable as, regardless of how one feels towards another, one should never “avoid or ignore” someone when in their presence (e.g., “*You don’t have to be with them, but you don’t, sort of, ignore them either – you know, in their presence*” P4). From this perspective, the statement conveys unfriendliness, or the inability to get along with others, which could cause problems within social groups (e.g., “*they’re probably very antisocial or they’re having issues dealing with other people. They’d always find*

³⁷ “Being able to avoid or ignore people whom I don’t enjoy being with”.

something wrong with someone else [or] there would be a problem with other friendships” P11).

On the basis of this, the terms “ignore” and “avoid” describe rude behaviour, which clearly accounts for the low social desirability. This problem might be difficult to rectify as it is difficult to describe nRejection without using similar language. However, it is interesting to consider that the comment made by participant four places the statement within the context of how one behaves when in the presence of another. This could be due to the term “ignore”, which implies that an individual is present to “receive” the treatment of another. In contrast, avoidance does not necessarily require another individual to be present. From this perspective, ignoring a person is overtly rude and insulting, whereas avoiding a person can be covert, and could go unnoticed. Put simply, it is possible to avoid an individual without him/her knowing, whereas the same cannot necessarily be said for ignoring. On that basis, removing the term “ignore” might reduce the participants’ tendency to interpret the statement as rude, thereby, increasing the social desirability.

nAggression. Participants reported that the statement for nAggression³⁸ represents overly aggressive and competitive behaviour. Accordingly, the statement was described in a negative light (e.g., *“that’s obviously aggression, which is not socially desirable. I shouldn’t have to resort to it”* P4). Although some participants reported that aggression might be accepted within the context of competition (such as sports), it is generally not accepted within the broader community:

I guess there were some that were personal to me that I couldn’t put where I wanted, like aggression. I’m a very sports oriented person so that’s quite a strong instinct with me, but if you’re too aggressive in that way, then people may think that you’re angry or trying to be tough all the time, and it’s not a particularly good trait in a lot of circles. (P5)

³⁸ “Being able to forcefully overcome opposition or beat an opponent”.

The tendency for participants to describe nAggression in this way is not surprising given that the need itself is arguably undesirable. To construct a statement that presents nAggression in a favourable light is a challenging task. However, some participants highlighted the word “forcefully” as particularly negative (*“the word forcefully means that you’d go to any extent to get your position or opinion put forward, and beat your opponent in any way you can”* P10), which suggests that it might strongly contribute to the low social desirability. On that basis, simply removing this term from the statement might be enough to increase the social desirability levels without interfering with the statement’s meaning. Whether or not this change will be enough to increase the levels enough to become comparable with the other statements is difficult to predict.

Emergent Theme Relevant to all Statements

As previously mentioned, one theme began to emerge unexpectedly during the data collection and analysis phase that relates to all 20 statements. Although the emergent theme is not directly related to the specific questions, it revealed a notable problem with how the participants had interpreted the statements and, as such, its inclusion in the qualitative findings is essential. Specifically, it became apparent that the standard introductory phrase for all statements (“being able to”) was leading participants to interpret many of the statements as a skill or ability that can either be called upon or switched off as required. This became most evident when participants expressed a high regard for statements that were described as socially desirable, but also tension provoking. As one example, consider the comments made by a participant who, when discussing the statement for nAbasement³⁹, stated that:

You don’t want someone who is always apologizing, or making mistakes that they have to admit to, but if they’re big enough people to do that, then I think that’s a good thing (P5).

³⁹ “Being able to admit to, apologise for, and accept the consequences of my actions”.

In particular, the phrase “big enough” implies that the statement describes something that is inherently difficult to do. This suggests that apologizing for one’s actions is likely to lead to elevated psychological tension or discomfort, which one must overcome. This is fundamentally different from the concept of needs as defined by Murray (1938), who noted that behaviour is largely directed toward tension reduction rather than tension arousal. In accordance with this definition, the statement for nAbasement should communicate a tendency to gain satisfaction from apologizing for one’s actions. However, instead, it appears to communicate discomfort, whereby one must make a concerted effort to overcome the need to defend oneself or save face (which is more akin to nDefendence or nInfavoidance). On that basis, the statement does not currently capture the innate properties of needs and is, therefore, misrepresentative.

Interestingly, the potential for this problem to arise was identified by one of the reference group members who consulted on the statements’ construction (Duane, 2004). It was suggested that the phrase “being able to” should be changed to “wanting to” as the former is more likely to capture the “ability to carry out the indicated behaviour” (p. 13) as opposed to capturing motives and drives. However, this suggestion was rejected by Duane on the basis that: a). the phrase “being able to” conveys outcomes which, she reasoned, respondents are more likely to relate to; and b). it conveys the opportunity and capacity to achieve need satisfaction. Because Duane did not adequately explain these points, it difficult to fully understand what she meant; however, the reasons provided appear to be more representative of the environment (press) rather than needs (e.g., the “opportunity” for need fulfilment refers to something that exists within the environment). Either way, the above example highlights a substantial problem that was observed across a number of statements, and needed to be addressed.

On that basis, the standard introductory phrase needed to be changed in a way that reflects need satisfaction and the associated tension reduction as described by Murray (1938). The suggested phrase “wanting to” was considered but rejected as it does not adequately capture such satisfaction. Instead, the phrase “it is personally satisfying to” was considered a more appropriate alternative as it explicitly names satisfaction and, thus, conveys tension reduction. As such, the following change was made to all statements: “Being able to” was changed to “It is personally satisfying to”. The full list of revised statements is presented in Appendix H.

Given that this change potentially altered the social desirability levels across statements, it was possible that the statements selected for qualitative analysis (those in the High and Low SD Groups) were no longer problematic. On that basis, it was decided that the best course of action was to re-examine the statements before making any additional changes. As such, Study One was repeated using the new introductory phrase. No other changes were made to statements in the High and Low SD Groups, with the exception of nSex, which was changed from “Being able to have my sexual needs fulfilled/satisfied” to “It is personally satisfying to have my sexual needs fulfilled”. The word “satisfied” was removed from the end for grammatical reasons.

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Chapter Three: Study Two

Aims and Research Questions

The purpose of Study Two was to re-examine the statements following the changes to the standard introductory phrase. Using the same sequential explanatory design outlined in Study One, the same research questions were addressed; however, in light of the changes made following the findings from Study One (whereby the aim was to realign the statements with needs rather than skills or abilities), a fifth research question was also addressed in Phase Two:

5: Do the statements adequately convey the properties of psychogenic needs as defined by Murray (1938)?

Phase One

Quantitative Method

Participant Sample

A new convenience sample of 40 participants was recruited using the same recruitment strategies outlined in Study One. Participants ranged in age from 18 to 65 years ($M = 32.52$, $SD = 14.47$), and the majority were women (82.5%). Most participants identified their cultural affiliation as Anglo-Australian (80%), 5% identified as Asian, and 15% as “other”. It is acknowledged that volunteer bias means that the sample is not representative of the broader Australian population.

Measure, Materials, and Data Collection

Participants were asked to complete the same ranking task (outlined in Study One) using the revised test statements. These were presented to participants in the same format (20 separate 16 x 4 cm cards, as shown in Appendix G). The written instructions and data recording methods were also the same as those outlined in Study One. Some alterations were made to the written definition of social desirability. Specifically, an illustrative example of an interview situation was removed in order to avoid providing

contextual information that could influence the participants' responses. This was replaced by more general, health related scenarios (see Appendix H) in hope of helping participants to think about the task more broadly. This decision was based upon the exploratory nature of the research. Although it has been shown that general instructions to fake good do not adequately represent faking in particular contexts (Birkeland, Manson, Kisamore, Brannick, & Smith, 2006; Pauls & Crost, 2005), it seemed logical to first determine whether or not equating social desirability levels among the statements is achievable under general, context-free conditions before considering the issue of context and how it might influence testing conditions.

Results

Kendall's coefficient of concordance (Kendall's W) was calculated as a means of examining the degree of agreement across participant rank orders. Inter-rater agreement was significant, $W(19, N = 40) = 0.42, p < .05$, indicating that participants showed some agreement on the overall rank order of statements. The descriptive data (shown in Table 12, and Figures 4 and 5) reveal a similar picture to Study One, as the same statements appear to have been consistently ranked at the top and bottom locations.

Table 12

Mean Ranks for Statements in Descending Order (Study Two)

Revised statements representing each need	Mean Rank	SD
It is personally satisfying to work toward producing or achieving something that is difficult to do. (<i>nAchievement</i>)	4.93	3.12
It is personally satisfying to learn new things and fully understand them. (<i>nUnderstanding</i>)	5.03	3.11
It is personally satisfying to comfort and care for another person. (<i>nNurturance</i>)	5.33	4.61
It is personally satisfying to admit to, apologise for, and accept the consequences of my actions. (<i>nAbasement</i>)	6.03	4.90
It is personally satisfying to continue striving to reach a goal rather than admit defeat. (<i>nCounteraction</i>)	7.58	5.47
It is personally satisfying to have fun (<i>nPlay</i>)	7.80	4.61
It is personally satisfying to keep myself and my belongings neat, tidy and in order. (<i>nOrder</i>)	8.70	3.64
It is personally satisfying to experience a variety of sensory stimulation (different smells, interesting sounds and sights, textures to touch, etc.) (<i>nSentience</i>)	9.95	5.07
It is personally satisfying to experience the company of other people, regardless of the type or quality of relationship. (<i>nAffiliation</i>)	10.13	4.90
It is personally satisfying to follow the directions of a respected leader. (<i>nDeference</i>)	10.18	5.45
It is personally satisfying to do things in my own way, without others directing me. (<i>nAutonomy</i>)	10.95	4.60
It is personally satisfying to avoid pain, injury, or a risk of any harm. (<i>nHarmavoidance</i>)	11.00	5.03
It is personally satisfying to obtain comfort and support and to be cared for by another person. (<i>nSuccorance</i>)	11.38	4.84
It is personally satisfying to attract and hold the attention of other people. (<i>nExhibition</i>)	11.45	4.58
It is personally satisfying to defend myself against blame and justify my opinions or actions. (<i>nDefendence</i>)	12.75	4.78
It is personally satisfying to direct or influence others. (<i>nDominance</i>)	13.15	4.71
It is personally satisfying to avoid any risk of embarrassment or humiliation. (<i>nInfavoidance</i>)	13.23	4.60
It is personally satisfying to have my sexual needs fulfilled. (<i>nSex</i>)	15.03	4.68
It is personally satisfying to avoid or ignore people whom I don't enjoy being with. (<i>nRejection</i>)	17.60	2.89
It is personally satisfying to forcefully overcome opposition or beat an opponent. (<i>nAggression</i>)	17.98	3.85

After partitioning the statements according to the rule of equal thirds, all statements, with the exception of nCounteraction and nInfavoidance, were allocated to the same groups as in Study One. Therefore, the High SD group was comprised of nAchievement, nUnderstanding, nNurturance, and nAbasement, and the Low SD Group was comprised of nSex, nRejection, and nAggression. Because nCounteraction and nInfavoidance currently fall within the middle range of 7.33-13.67 (6.33 around the median), they were allocated to the Random Group along with the remaining statements (the graphed data for statements in the Random Group are presented in Appendix I).

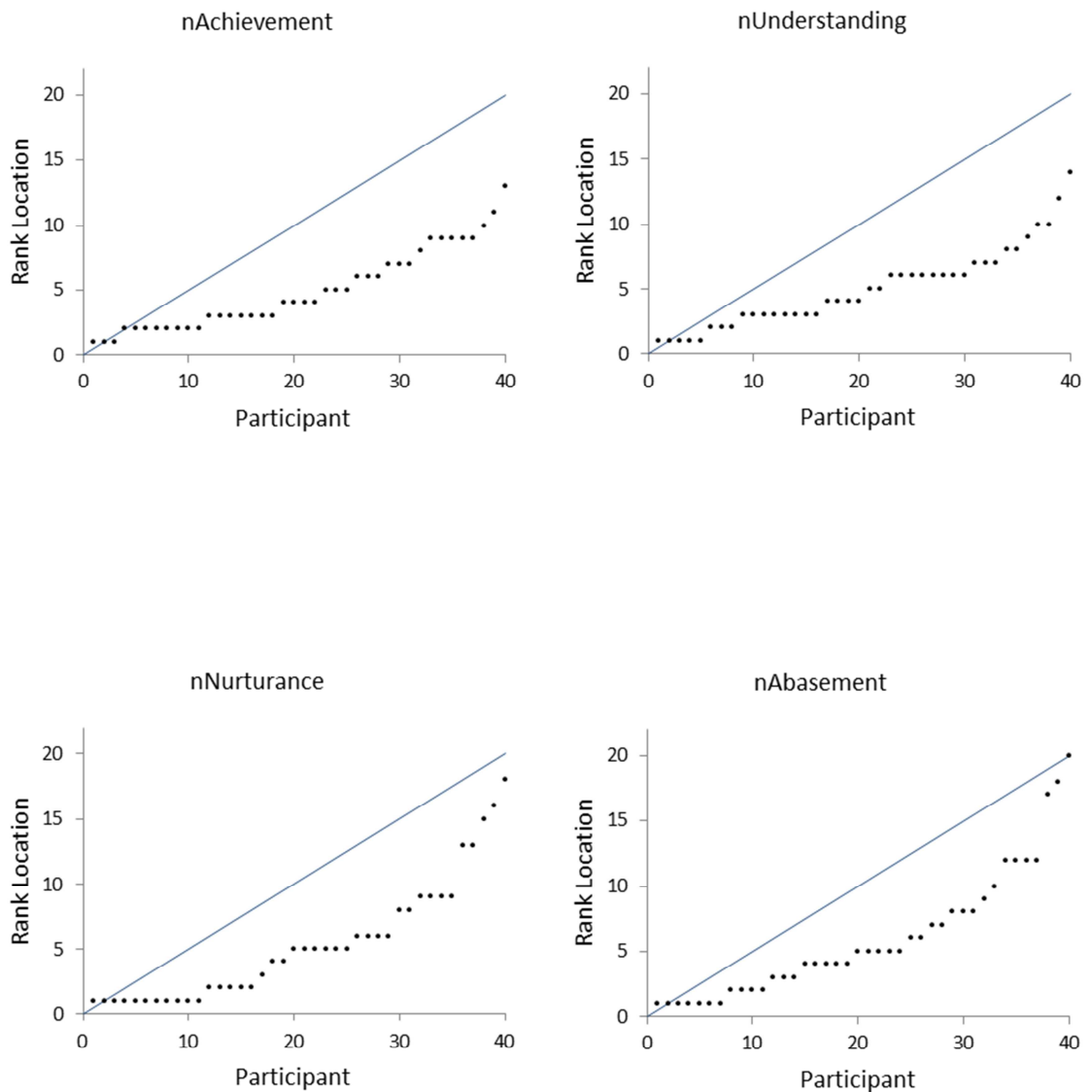


Figure 4. Statements allocated to the High SD Group.

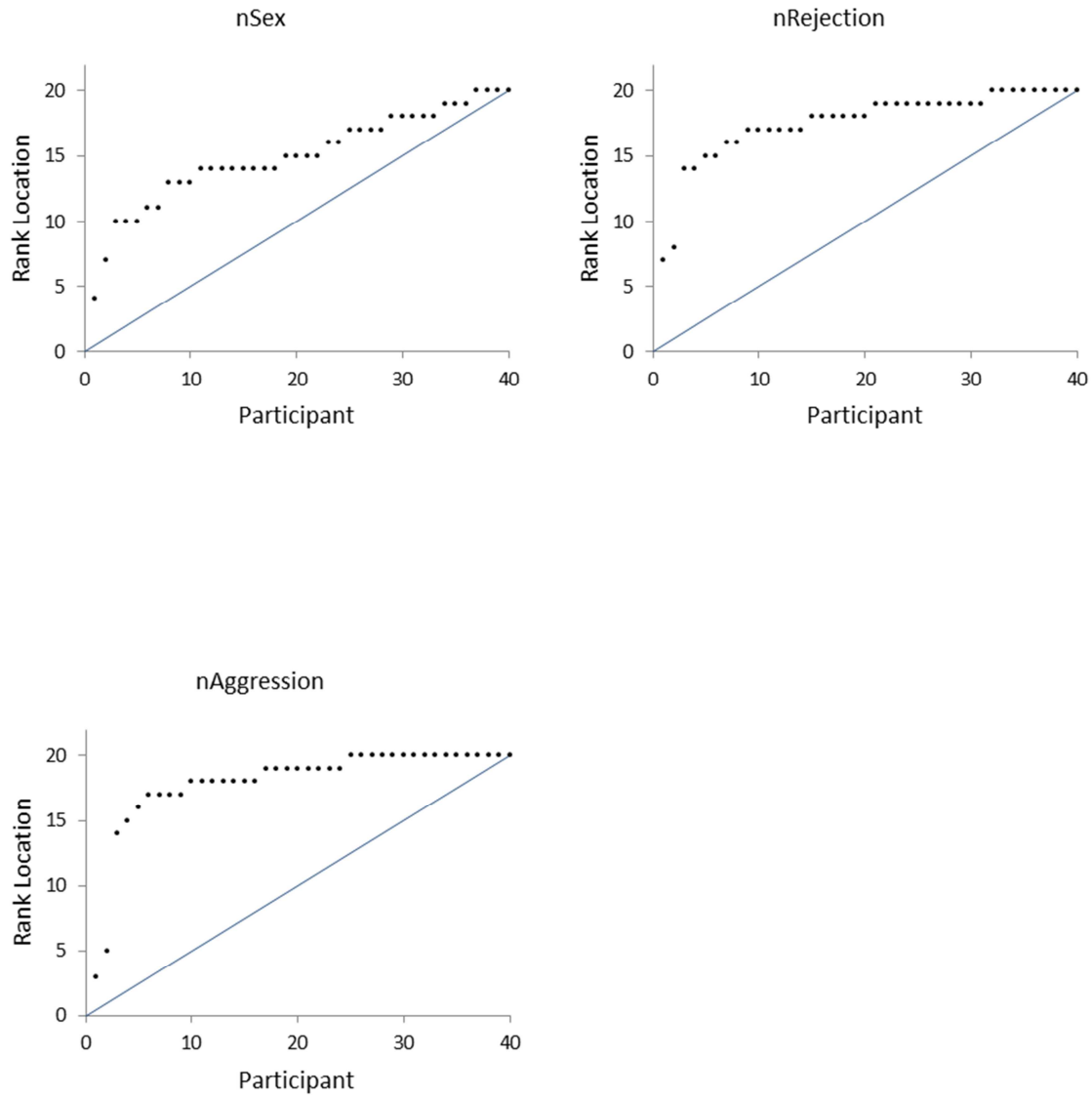


Figure 5. Statements allocated to the Low SD Group.

Summary

The results outlined above show that the 20 statements that comprise the PNS do not share approximately equal social desirability. Significant inter-rater agreement indicates that participants agreed upon the rank location for at least a proportion of statements. The mean ranks in Table 13 reveal a similar picture to Study One as, with the exception of nCounteraction and nInfavoidance, the same statements fall within the same groups. Using the structure imposed upon the descriptive data (the rule of equal thirds), statements for nAchievement, nUnderstanding, nNurturance, and nAbasement still fall within the High SD Group, and statements for nSex, nRejection, and nAggression still fall within the Low SD Group. On that basis, changing the standard introductory phrase has had minimal impact upon how participants perceived the relative social desirability levels.

Although the statements for nCounteraction and nInfavoidance now fall within the Random Group cut-offs, whether or not this is a meaningful change is questionable. A comparison of the Study One and Study Two means shows that the differences between the two values are negligible (a difference of 0.56 for nCounteraction and 0.77 for nInfavoidance), and Table 13 shows that both statements still hold the same position within the overall rank order. On that basis, it seems that there are persistent patterns with how these statements were ranked in relation to the others. From this perspective, given that group membership is established on the basis of arbitrary cut-offs rather than statistical significance, one cannot necessarily conclude that such a minor shift amounts to corrected social desirability.

Accordingly, it is likely that nCounteraction and nInfavoidance still pose a potential problem for test validity. Thus, it was decided that it is better to be over-inclusive when selecting statements for further investigation. As such, despite

nCounteraction and nInfavoidance belonging to the Random Group, it was decided that both should be included for further analysis and revision in the next phase.

This decision also raised questions about nPlay, which also holds the same position within the rank order in studies One and Two. However, because nPlay was assigned to the Random Group on both occasions (unlike nCounteraction and nInfavoidance), it was excluded from further investigation at this stage.

Table 13

Mean Ranks from Study One and Study Two

Study One		Study Two	
Need statement	Mean rank	Need statement	Mean rank
nAchievement	5.41	nAchievement	4.93
nUnderstanding	5.85	nUnderstanding	5.03
nAbasement	6.36	nNurturance	5.33
nNurturance	6.61	nAbasement	6.03
nCounteraction	7.02	nCounteraction	7.58
nPlay	7.34	nPlay	7.80
nAffiliation	8.69	nOrder	8.68
nDeference	9.03	nSentience	9.93
nExhibition	9.92	nAffiliation	10.13
nAutonomy	10.92	nDeference	10.16
nDominance	10.97	nAutonomy	10.95
nSentience	11.31	nHarmavoidance	10.98
nSuccorance	11.54	nSuccorance	11.38
nOrder	11.91	nExhibition	11.43
nHarmavoidance	12.31	nDefendence	12.75
nDefendence	12.61	nDominance	13.14
nInfavoidance	14.00	nInfavoidance	13.23
nSex	15.44	nSex	15.03
nRejection	16.39	nRejection	17.60
nAggression	16.40	nAggression	17.98

Following these decisions, the same nine statements were selected for further analysis and revision in Phase Two (nAchievement, nUnderstanding, nNurturance, nAbasement, nCounteraction, nInfavoidance, nSex, nRejection, and nAggression). The aim was to understand why these statements were perceived as most and least socially desirable, and to make changes in order to correct the problem. This is discussed in the next section.

Phase Two

Qualitative Method

Participant Sample

As in Study One, a smaller subset of participants took part in qualitative interviews upon completing the ranking task. The final convenience sample comprised of 14 participants (2 men and 12 women) ranging from 18 to 54 years of age ($M = 29.43$, $SD = 12.09$). Nine participants identified themselves as Anglo-Australian, one as Asian, and the remaining three identified as “other”.

Data Collection and Analysis

The procedures for data collection and analysis were the same as those outlined in Study One. The findings from Phase One (Study Two) revealed that the same nine statements still showed problematic levels of social desirability⁴⁰ (as noted in Phase One, nInfavoidance and nCounteraction were included for qualitative analysis despite their mean values falling inside the range of 7.33 and 13.67). Accordingly, nine corresponding data sets were compiled and analysed. Analysis was conducted using thematic analysis procedures outlined in Study One (Braun & Clarke, 2006).

⁴⁰ Namely, statements for nAchievement, nUnderstanding, nAbasement, nNurturance, nCounteraction, nInfavoidance, nSex, nRejection, and nAggression.

Statement Revision

The procedures for statement revision were the same as those outlined in Study One. Recall that this involved reviewing the qualitative findings within the context of the research questions, and making iterative comparisons between the data and the relevant aspects of Murray's (1938) theory. Following these procedures, additional versions of each statement were generated, which were added to the lists compiled in Study One. Each list was then presented to the supervising researchers for further comment. By the end of this process, the lists were comprised of up to 30 versions of each statement, including those formulated in Study One.

Next, I met with the above researchers on three separate occasions in order to carefully examine the lists and deliberate over the suggested changes. This was an exhaustive process that lasted up to four hours per meeting, as each of the proposed versions was carefully evaluated against Murray's definitions and the qualitative findings. Taking special care to protect the integrity of the respective need construct, some versions were modified, some discarded, and additional ones generated. Copies of all suggestions were recorded and are presented in Appendix N. By the conclusion of each meeting, we had reached a consensus on a final revised version of some statements, but not others. Where a consensus could not be reached, we had at least reduced the options to an agreed set of up to four refined alternatives. These alternatives were then presented to colleagues and community members for further comment on the respective levels of social desirability, and any other relevant interpretations. Those consulted included a professor at the School of Psychology, ECU; a certified practicing accountant; an office administrator; and three fellow PhD candidates. Information from these consultations was then added to the deliberation process, which continued via email and face-to-face meetings until we reached a consensus on a revised version for each statement.

Findings and Interpretations

The thematic analysis resulted in 18 themes (up to four themes per statement) that correspond to the nine statements selected for further investigation. Whilst some themes offer new insights about the statements, others simply replicate the findings outlined in Study One. In order to minimize unnecessary repetition, replicating themes that have been illustrated previously are not covered in full detail in the following sections; instead, they are covered briefly and noted as persisting. Conversely, themes that offer additional or alternative insights are fully illustrated.

As in Study One, participants' quotes are included in order to demonstrate the themes and to show that the findings are logically derived from the data. In order to avoid confusion, participant numbers are continued from Phase Two of Study One. That is, where participants in the first study were assigned numbers 1-22, participants in the current study were assigned numbers 23-36.

The thematic analysis was intended not only to further investigate the statements' social desirability levels, but also to investigate whether or not the new standard introductory phrase has refined the statements as a measure of psychogenic needs (rather than skills and abilities). In the following sections, the findings presented for nAchievement and nAbasement address both areas, as the quotes used to illustrate themes relevant to the social desirability problem also demonstrate that the statements now appropriately capture the properties of underlying needs. As such, the findings for each of these statements are discussed in relation to both areas, meaning that all three of the Phase Two research questions were addressed in the same section. To address research question five in a separate section would have required unnecessary repetition of the presented data.

At the end of each section, conclusions about how to correct the social desirability are presented, along with the revised version that was eventually selected to

replace the original. Some examples of potential alternatives that were considered during the revision process are also presented and discussed, which provides some insight into how the statements were selected and why certain terms and phrases were used or changed. However, because the revision process was so extensive (in some instances, as many as 30 alternatives were generated), the examples provided are limited to those that remained potential alternatives in the final stages of deliberation. A comprehensive list of all generated alternatives (other than those shown in-text) is presented in Appendix N.

Themes Pertaining to Statements in the High SD Group

Statements allocated to the High SD Group included nAchievement, nUnderstanding, nAbasement, nNurturance, and nCounteraction. Following the findings from Phase One, the goal for analysis was to understand why participants had perceived the statements as highly desirable in comparison to the remaining statements. Analysis resulted in ten themes (see Table 14), which are discussed in the following sections.

Table 14

Qualitative Themes Identified for Statements in the High SD Group

Statements	Corresponding themes
nAchievement	The statement represents determination To intentionally seek out difficult tasks is unappealing
nUnderstanding	Open mindedness and openness to learning The benefits and usefulness of knowledge and being knowledgeable
nNurturance	Nurturing others shows compassion The statement represents one side of a mutually supportive relationship Self-neglect is undesirable
nAbasement	Abasement is desirable within the context of making mistakes To be over-apologetic is undesirable
nCounteraction	Perseverance has both positive and negative connotations

nAchievement. The findings for nAchievement⁴¹ bare both similarities and differences to those produced in Study One. Although, participants continued to discuss the statement in terms of determination and inner strength, there was less emphasis on the process of working hard, and more emphasis on success (e.g., “*it just shows internal strength, and intellectual strength. They’ll be successful in whatever they do*” P33). Given that this contrasts with previous findings, the changes suggested in Study One might no longer be adequate. Recall that the Study One findings simply suggest removing the phrase “work towards” in order to strengthen the statement’s association with outcomes rather than processes.

However, a new additional theme was formed, which could be of greater assistance to revising the statement’s wording. The above participant also noted the difficulty conveyed by the statement, and described this as potentially undesirable:

...I think I prefer the first comment, [nCounteraction], over that one because... [nAchievement] implies that the being difficult is the point, whereas in the first one the goal is the point, if that makes sense... To overcome your challenges is great but to deliberately find something that’s extra hard might be making things hard for yourself... It gets to a point where you’re sort of wondering if they’re setting themselves up to fail a bit... I think the goal should be more important... It seems a bit more like a personal need than a productive thing in itself; it’s sort of almost competitive with the self rather than productive for the greater good. (P33)

This comment suggests that to intentionally seek out difficult tasks is unappealing, as it suggests that one is driven by inner needs rather than practical purpose. This interpretation is good news for statement revision for two reasons. Firstly, the participant’s reference to personal needs is precisely in line with the properties of psychogenic needs as opposed to skills and abilities. Whilst it is difficult to determine whether or not this interpretation is influenced by the new introductory phrase, it is, nevertheless, an encouraging finding. Secondly, the comments offer clear guidance on how to correct the social desirability which, moreover, is compatible with Murray’s

⁴¹ “It is personally satisfying to work toward producing or achieving something that is difficult to do”

(1938) definition of nAchievement. Given that intentionally finding difficult tasks was described unfavourably, increasing the focus on task difficulty is most likely to achieve the desired reduction in social desirability without disrupting the need construct.

Drawing on the above, a total of 20 revised versions were formulated (see Appendix N), which were eventually reduced to the following three final options:

1. It is personally satisfying to challenge myself with difficult tasks until I master them.
2. It is personally satisfying to seek out and master difficult tasks.
3. It is personally satisfying to set myself difficult tasks, just so I can feel like I'm achieving something.

The first option was discarded because the term “challenge” is likely to be associated with hard work and determination which, according to the Study One and Study Two findings, are characteristics that are held in positive regard. Thus, it was less likely to achieve the desired reduction in social desirability. This left versions two and three as the preferred options. Both versions retain the reference to task difficulty, which is necessary given that it was identified by participants as potentially negative, and is also a key aspect of nAchievement (see Murray, 1938, p. 164). However, version three also emphasises the potentially negative tendency to be driven by an inner need (with the phrase “just so I can feel like I'm achieving something”) which, on the basis of the point raised in the above quote, is most likely to adequately reduce the social desirability (it is also consistent with the properties of psychogenic needs). As such, version three was finally selected to replace the original.

nUnderstanding. The findings for nUnderstanding⁴² bare some similarities to those presented in Study One as, once again, the statement was described in terms of being open-minded and willing to learn (e.g., “*they're wanting to learn new things,*

⁴² “It is personally satisfying to learn new things and fully understand them”.

they're open minded; to me it means that they're not being ignorant" P23). However, further to the Study One findings, the current participants also linked the statement to being knowledgeable:

Some people might think "wow this person is really knowledgeable and I can go to them on this subject" or others might think "they're really interesting, I really want to talk to them about it". (P29)

From this perspective, the statement was viewed in a favourable light, as participants discussed knowledge in terms of its benefits. Their reports suggest that knowledge is useful for facilitating adaptation and change (*"... on a personal level and on an intellectual and professional level, they're always going to be able to adapt to their surroundings"* P33); it is also conducive to teaching and helping others (*"...They've got the ability to teach others, and to help others, and to pass it on whether as a teacher or just in conversation or sharing of knowledge"* P29).

In thinking about how this applies to statement revision, the above comments are of particular interest. Given that knowledge was described in terms of its benefits, then perhaps it is assumed that "knowledge" refers to subject matter that is both useful and relevant in today's society. From this perspective, it is interesting to consider the how social desirability might be affected if these assumptions are thwarted. For example, if the statement conveyed: a) a commitment to learning subject matter that might be considered less *credible* (like an artificial language); or b) a disinclination to do anything *useful* with that subject matter, then perhaps it might be seen as time-wasting or self-indulgent in some way.

Drawing on these ideas, 14 revised versions of the statement were generated as potential replacements. The final three options are presented below (the remainder are presented in Appendix N):

1. It is personally satisfying to reflect on, and develop a deep understanding of, ideas and concepts.

2. It is personally satisfying to develop a deep understanding of ideas and concepts.
3. It is personally satisfying to reflect on and understand things, solely as an intellectual exercise.

Version three was eventually chosen to replace the original because the Study One findings suggest that the statement should convey thought rather than action. Given that this concept is most clearly conveyed by the phrase “solely as an intellectual exercise”, version three was the most appropriate option.

nNurturance. Analysis of the nNurturance⁴³ data set resulted in the same two themes compiled in Study One. Once again, the statement represents warmth and compassion, but was seemingly evaluated within the context of a mutually supportive relationship:

...that you're a warm person, that you're a helpful person; that you care about others... that's important to me, so I would want to surround myself with people like that... You know, if you need help then they'll help you and, likewise, if they need help you'll help them. (P30)

In addition to the above, a new theme was formed that is unique to the current study. Comments by a single participant indicate that, whilst the statement is generally positive, there is potential for it to be viewed negatively. Although caring for others is socially desirable, it should not come at the expense of one's own wellbeing:

I suppose it depends on the people who are making the assumptions...if someone said to me... that it's satisfying for them to comfort and care for another person, I'd think obviously they're there to help; they're caring, they're not all about themselves, [and] not so egocentric. But then again, to other people... depending on the way you read it, it could come across as [if] they don't care for themselves enough. It could just be about others... they need to also think about their personal needs, as well, to get the balance between the two. But to me if someone said that to me I'd think that they're caring and just helpful. (P23)

On the basis of this, it could be possible to reduce the social desirability by incorporating the tendency to neglect one's self into the statement's wording. This change could also eliminate the tendency for the statement to convey mutual support (as

⁴³ “It is personally satisfying to comfort and care for another person”.

noted in the previous themes). Taking this into consideration, fourteen statements were formulated as potential alternatives, which were reduced the final two options presented below.

1. It is personally satisfying to care for others and attend to their needs over and above my own.
2. It is personally satisfying to attend to the needs of others without regard for my own needs.

Version two was eventually chosen as the replacement as it best captures the tendency to neglect one's self in favour of attending to the needs of another.

nAbasement. The findings for nAbasement⁴⁴ are consistent with those presented in Study One. Participants generally described the statement in a positive light; however, this appeared to be strongly linked to the tendency to place it within the context of making mistakes:

...just prepared to take the consequences, which I think are important; not to shirk the responsibilities in some way by trying to hide behind excuses or whatever. Sometimes you've got to be prepared to say "Okay, I did it wrong". (P31)

Interestingly, participants who viewed the statement less favourably reported that the word "mistakes" was notably absent from the statement's phrasing. This further supports the link between the context of wrong doing and the high social desirability. When considered outside of this context, the statement was described as over-apologetic, whereby one tends to apologise and accept blame irrespective of whether or not it is warranted:

...I think the "personally satisfying" sort of implies that it's a craving, that someone craves that forgiveness... and it just says "my actions"... it doesn't say "my mistakes", it just says "my actions". So I guess if I'm apologising for my actions then it sort of implies [that] I'm apologising for fairly neutral things...yeah, if it said "my mistakes" I might put it a bit higher. (P33)

⁴⁴ "It is personally satisfying to admit to, apologise for, and accept the consequences of my actions".

These findings support the changes proposed in Study One; the contextual information (responding to mistakes) needs to be removed from the statement in order to reduce the social desirability. Accordingly, six new versions were formulated as potential alternatives. These were eventually reduced to the two options shown below:

1. It is personally satisfying to accept criticism without complaint, and to readily admit fault.
2. It is personally satisfying to accept criticism without complaint.

Version two was chosen as the replacement because the phrase “readily admit fault” in version one could still imply that one is at fault in some way, or has made a mistake that calls for an apology.

In addition to explaining the high social desirability, the above quote (P33) also demonstrates how the statement is now more representative of psychogenic needs. In particular, to suggest that the statement implies a “craving” is more in keeping with Murray’s (1938) need descriptions. Fulfilling a craving can be likened to satisfying needs, whereby one derives satisfaction or experiences tension reduction from engaging in a particular act – in this case, apologising or accepting blame. This contrasts with the Study One findings, which portrayed the act of apologising as difficult and tension provoking. On that basis, it appears that changing the standard introductory phrase has successfully altered the statement’s meaning so that it now adequately captures the properties of psychogenic needs.

nCounteraction. The themes compiled for nCounteraction⁴⁵ replicate those identified in Study One. The statement conveys determination and the ability to persevere, which is viewed positively. However, failure to recognise one’s own limitations is potentially problematic, as one must accept that, in some circumstances, persistence is futile:

⁴⁵ “It is personally satisfying to continue striving to reach a goal rather than admit defeat”.

I think that it shows determination, and a willingness to keep at something... Sometimes it's best to admit your limitations as well... if you set a task for somebody who is incapable of actually reaching that goal, then the best thing for that person is to admit defeat; I mean... some goals are just unattainable.
(P27)

On the basis of the above, the changes proposed in Study One are still appropriate. In order to reduce the social desirability, the statement needs to be reworded in such a way that emphasises reluctance to give in or accept defeat. On that basis, eight potential alternatives were generated that were eventually reduced to the two versions presented below.

1. It is personally satisfying to reach any goal I set for myself, and never to accept failure.
2. It is personally satisfying to continue striving to reach a goal and never admit defeat.

Version two was selected to replace the original, as version one could reduce the social desirability too much.

Themes Pertaining to Statements in the Low SD Group

Statements allocated to the Low SD Group included nInfavoidance, nSex, nRejection, and nAggression. Following the findings from Phase One, the goal for analysis was to understand why participants had perceived the statements as most undesirable. Eight themes were identified (as shown in Table 15) and are discussed in the following sections.

Table 15

Qualitative Themes Identified for Statements in the Low SD Group

Statements	Corresponding themes
nInfavoidance	Humiliation is worse than embarrassment
nSex	Sex is a private matter Sex should not be a priority
nRejection	The statement describes rude behaviour The statement describes an elitist attitude
nAggression	The word “forcefully” is particularly negative The statement conveys underhandedness The phrase “overcome opposition” is a more desirable alternative

nInfavoidance. Analysis of the nInfavoidance⁴⁶ data set resulted in similar themes to those compiled in Study One. Embarrassment is a normal human experience, and to actively avoid it suggests that one might be overly sensitive, insecure, or lacking in confidence. However, humiliation was considered much more severe; thus, to avoid humiliation is normal and acceptable. As one participant explained:

Embarrassment can be, you do something silly or like you can have a bit of a moment where your brain's not working and, you know, your friends will call you an idiot or whatever... but humiliation is more cruel; it's where you just want to crawl into a small hole and die. (P26)

Given that the above replicates the Study One findings, the changes proposed previously are still a suitable option. Revising the statement so that it refers only to avoiding the risk of humiliation, and removing the word “embarrassment” will hopefully increase the social desirability. On that basis, six alternatives were formulated which, by the final stages of revision, were reduced to the two options shown below.

1. It is personally satisfying to avoid risk of humiliation.
2. It is personally satisfying to avoid situations that are potentially humiliating.

⁴⁶ “It is personally satisfying to avoid risk of embarrassment or humiliation”.

Version two was finally selected to replace the original as the term “risk” in version one is vague and could be interpreted broadly. Thus, it could still convey excessive reluctance over taking minor risks, which could be further interpreted as impacting upon one’s ability or willingness to go about daily activities.

nSex. The themes compiled for the statement measuring nSex⁴⁷ are similar to those identified in Study One. Once again, sex was described as a private matter that should not be spoken about publically: “... *it’s not socially accepted to say ‘Hello, it’s important for me to have my sexual needs met’ ...*” P29). As previously discussed, this theme is primarily a reflection of social norms, and offers limited assistance to the revision process. The only way to address this issue would be to remove any reference to sex, which would threaten the underlying construct.

Also observed in Study One, the statement’s position in the rank order appears to have been treated as a reflection of one’s priorities. To rank the statement too highly is to suggest that one prioritizes sex over other, more important, needs. As one participant reported, “...*you don’t want to put it too far down because... it’s still a normal physical thing that people do, but it’s not supposed to be a priority, I guess*” (P24). Whilst this indicates that participants had mistaken the task (ranking the statement on the basis of importance rather than social desirability), it is interesting to consider how the statement’s wording might have led to the confusion. According to social norms, sex is acceptable within the context of a loving, monogamous, and intimate relationship; thus, it is one part of a meaningful bond. However, the current statement makes no mention of these aspects and deals only with the physical act of sex. Participants might have compensated for the omission by ranking the statement on the basis of its importance in relation to other needs. In that sense, by ranking the statement in its *rightful* place, perhaps this in itself makes it more socially desirable.

⁴⁷ “It is personally satisfying to have my sexual needs fulfilled”.

Valuing the relationship over the physical act of sex was expressed clearly by one participant who volunteered advice on how the statement's social desirability might be increased:

...it'll be viewed negatively, very negatively, if they admit to that. They might be viewed as focusing on things that are physical as opposed to more mental... I think people view relationships [and] love in this society quite high, and respecting that is quite positively viewed. So I might change the sexual part to commitment, love,[or] relationships; kind of contributing to the desire to be affiliated with others or be emotionally intimate with someone. (P24)

The above comments offer logical advice, as including terms such as “love” and “commitment” will probably increase the statement's social desirability. However, these terms are more closely associated with nAffiliation, nSuccorance, or nNurturance; thus, their inclusion will likely interfere with the statement's intended meaning. In the interest of maintaining the meaning of nSex, the preferred option is to draw on the findings and ideas presented in Study One. Recall that, in Study One, it was noted that the statement is worded in an unusually direct fashion, which could convey selfishness or the tendency to be preoccupied with self-gratification. Drawing on this idea, nine alternatives were formulated, which were reduced to the three options shown below.

1. It is personally satisfying to flirt and be sexually expressive.
2. It is personally satisfying to form an intimate, physical relationship with another
3. It is personally satisfying to experience and express my sexuality.

Option one was eliminated because the term “flirt” is likely to have negative connotations such as sexual teasing or attention seeking and, thus, is unlikely to resolve the social desirability problem. Option two was also eliminated because it refers to a single relationship, which is not entirely consistent with how Murray (1938) described nSex (see pages 167-168). Further, this could also be more closely associated with nSuccorance or nNurturance. As such, option three was selected as the replacement.

nRejection. The first theme for nRejection⁴⁸ replicates the findings presented in Study One; participants reported that the statement describes rude behaviour. Irrespective of any ill feeling that might exist between individuals, everyone is expected to show respect and, at least, acknowledge (rather than avoid or ignore) those around them. As one participant reported:

I think there's a middle way between completely avoiding and ignoring someone and speaking to them. You can just give them acknowledgement and leave it at that; and you don't have to have anything more to do with them after that but, yeah, it's just the purposefulness of it. (P23)

As explained in Study One, the tendency for participants to interpret the statement as rude might be partially addressed by removing the term “ignore”. Whilst the differences between the terms “ignore” and “avoid” are subtle, the former is more likely to imply the presence of another and, therefore, is more likely to convey purposefully rude behaviour. On that basis, removing the term “ignore” from the statement is still advisable; however, it is unlikely that this change alone will be enough to equalise the social desirability.

The second theme for nRejection is unique to the current study, and was more useful in terms of informing the revision process. Based on participants' reports, the statement describes an elitist attitude (“... *they're sort of a snob, or they think that they're better than other people*” P25), and conveys an air of superiority (“...*it also assumes the worth of the other people are less worthy [sic]*” P33). This was further described as the tendency to judge others unfairly and perhaps prematurely (“...*they don't really accept people for who they are; sometimes they'd probably judge a book by its cover and stuff*” P33). What is most interesting about these comments is that they all discuss the statement solely in terms of a general attitude or an overall propensity to reject others. Notably, there was never any discussion about whether or not the statement describes reactive behaviour, or whether or not one might be justified in

⁴⁸ “It is personally satisfying to avoid or ignore people whom I don't enjoy being with”.

avoiding or ignoring another individual. On that basis, it seems that the statement simply represents a rejecting or judgemental attitude that stems from nothing more than personal prejudice. Thus, the possibility that rejection might be sometimes warranted was overlooked.

In thinking about how this applies to statement revision, surely there are some circumstances whereby one will have a *valid* reason for ignoring or, at least, avoiding, another person. In some instances, this might even be the preferred and appropriate option. If this idea can be incorporated into the statement's wording, then perhaps the social desirability can be increased. Drawing on these ideas, a total of 22 revised versions were formulated, which were reduced to the final three options shown below:

1. It is personally satisfying to separate myself from people I dislike/resent.
2. It is personally satisfying to avoid people I don't enjoy being with.
3. It is personally satisfying to avoid people I have reason to dislike.

Option three was selected as the replacement, as it is the only option that conveys justification for rejecting others. Options one and two could still solely reflect a poor attitude toward others.

nAggression. The themes compiled for nAggression⁴⁹ are similar to those presented in Study One. Participants commented that the statement describes aggressive behaviour, and pointed out the word “forcefully” as particularly negative:

Forcefully is quite a loaded word, and it can mean a lot of different things. It's very, well yeah, it's a very loaded word. To me, it represents quite a negative way, like almost a threatening kind of way. (P30)

The replication of this theme confirms that the word “forcefully” needs to be removed from the statement in order to increase the social desirability. However, as noted in Study One, whether or not this change will be enough to equalise the social desirability with the remaining statements is questionable.

⁴⁹ “It is personally satisfying to overcome opposition or beat an opponent”.

A second theme compiled from the data extends on the competitiveness noted in Study One. Although competitive behaviour is accepted in particular settings (such as business or sports), participants' comments suggest that there is a right way and a wrong way to go about it. Even in competition, one is still expected to adhere to fair and rightful conduct, and *play by the rules*. However, the nAggression statement contrasts with these ideals and, instead, conveys underhandedness:

...in a work situation where, like for myself, our shop is struggling to stay open [and] as opposed to... being the weak link... maybe it is good to beat people. But it's just the [word] "forcefully" I didn't like because, I like competition and I like to win, but... I like to do it on fair ground, and that didn't sound very fair to me... it's just the word [forcefully] that probably gave me the impression that it was being a little unfair; a bit like the footy field, where they play dirty to get ahead. (P31)

On the basis of this, it appears that it is acceptable to compete and persist with one's agenda, but only if certain guidelines are observed. In thinking about how this can be applied to statement revision, it is interesting to consider that there are multiple circumstances whereby aggression and competition are governed by a set of ethical principles. Consider competition in business and sports (as referred to in the above quote), or even circumstances of war, for example. In all situations, there are rules that allow certain modes of conduct and prohibit others. Thus, even acts of aggression can be governed by a set of principles.

Extending on these ideas, given that there are principles that govern acts of aggression, then perhaps there are also principles that govern the circumstances under which aggression is acceptable. That is, perhaps aggression is more acceptable when used for *valid* reasons, such as to protect the vulnerable or to uphold one's morals and values, for example. If these ideas can be incorporated into the statement's wording (perhaps by referring to rights or values), then it could be possible to sufficiently increase the social desirability. That said, it is important that any such changes do not

disrupt the statement's meaning, and particular care must be taken not to draw on nDefence or nNurturance.

The final theme compiled for nAggression is unique to the current study, and was formed on the basis of comments made by two participants. One participant reported that the word "...*forcefully is not needed; you can just overcome opposition*" (P32), and the other commented that "...*if it was just 'satisfying to overcome opposition', I probably would have ranked it higher*" (P27). The common theme to both of these comments is that they each refer to the phrase "overcome opposition" as a more desirable alternative, and make no reference to the phrase "beat an opponent". Specifically, the comments by participant 27 suggest that, in addition to omitting the word "forcefully" from the statement, removing the phrase "beat an opponent" could also raise the social desirability.

In considering how the above three themes apply to statement revision, the following conclusions were drawn. The word "forcefully" needs to be removed from the statement, as does the phrase "beat an opponent". Additionally, a reference to rights or morals needs to be incorporated into the statement, whilst taking care not to disrupt the statement's meaning. On the basis of these conclusions, nine alternative versions were generated as potential replacements. These were later reduced to the two main options shown below:

1. It is personally satisfying to face up to and overcome opposition.
2. It is personally satisfying to fight for what I believe and to overcome opposition.

Version two was finally selected as the phrase "face up to" in version one might convey nDefence, whereby one defends his or herself against an aggressive other. By contrast, the term "fight" in version two is more representative of nAggression and is, therefore, more likely to uphold the underlying construct.

Discussion

The qualitative findings were a valuable resource that provided a basis for making informed and relevant changes to each of the identified statements (those in the High and Low SD Groups); however, whether or not the social desirability confounds were successfully eliminated was difficult to predict. The process of revising the statements was a challenging task, as it was often difficult to make corrections to the social desirability whilst protecting the integrity of the respective need construct. It was also difficult to maintain each statement as *pure* measure of a single need, taking care not to incorporate aspects of other needs. Because these objectives were often competing, the most effective means of correcting the social desirability (in accordance with the qualitative findings) were often compromised.

Accordingly, the changes implemented do not always reflect the major themes within the data. For example, although the findings for nSex clearly suggest the inclusion of terms like “love” and “relationships” to increase the statement’s social desirability, this suggestion was not workable on the basis that the terms are more closely related to nAffiliation and nNurturance. In such instances, the changes implemented were, in a sense, secondary options as, although they are more likely to uphold the respective need construct, they are also less likely to achieve the desired impact upon the social desirability. As such, whilst the revised statements are expected to have adjusted the social desirability in the intended direction, whether or not the adjustments are enough to successfully eliminate problematic differences remained unknown.

One of the most common obstacles to address during the revision phase was the tendency for participants to assign contextual and other information when evaluating the statements. This often appeared to be one of the main factors influencing how participants perceived the social desirability. Whilst there were some cases whereby

contextual information was implied by improperly used terms and misleading phrases (as was the case for nAbasement), more often, this phenomenon was probably due to the nature of the ranking task. Specifically, it is likely that, to effectively evaluate a given statement, participants had accessed associated social norms, schemata, and stereotypes that might be positive or negative. This formed part of the basis for how the social desirability was appraised. For example, consider the statement for nUnderstanding, which was associated with knowledgeableness; when evaluating this statement, it is likely that participants had referenced what they *know* about people who are knowledgeable. Given that this is probably mostly positive⁵⁰, the statement was viewed favourably. Thus, the high social desirability was primarily a reflection of the associated schema rather than anything specific about the statement's wording.

Instances like the above were difficult to address due to the indirect relationship between the social desirability and the statement's wording. In most cases, the best approach was to reword the statement in a way that strategically obstructs the participants' access to the problematic schema. However, whilst this was expected to have resolved the problem for nUnderstanding, a similar strategy, when applied to statements that measure inherently desirable or undesirable needs, was expected to have produced varied results. For these statements, the primary influential factor was the need itself; thus, the influence of any given schema was secondary to the core construct. However, because the core construct cannot be disrupted, these schemata became the best available tool for adjusting the social desirability. In these instances, the aim was to alter and use the associated schemata to achieve a counterbalancing effect, thereby, reducing or increasing the social desirability as needed. For example, consider that nNurturance is an inherently desirable need, which means that it cannot be accurately portrayed in an unfavourable (or sufficiently less favourable) light. This left only the

⁵⁰ It is fair to assume that university students probably consider those who are knowledgeable as generally respected individuals who share and use information ethically.

supporting schema that could be changed which, in this case, was reciprocity and mutual support⁵¹. Thus, when revising this statement, the aim was to obstruct the supporting schema and replace it with something more *negative*; the result being an aspect of the statement that could off-set the core construct, and reduce the overall social desirability.

Variants of the above strategy were applied across a number of statements but, as previously mentioned, the consequential effects were difficult to predict. It is important to remember that altered social desirability in absolute terms does not necessarily equal altered social desirability in relative terms. This means that, although the levels for the revised statements were expected to have increased or decreased in an absolute sense, it was possible that, when compared with the other statements, the same problematic differences remained. Further, even if the relative social desirability did change for the revised statements, this inevitably meant that relative changes had occurred across all statements. As such, it was possible that any changes resulted in new problems, as statements that previously belonged to the Random Group might have been *pushed* outside of the acceptable range. Given these possibilities, it was clear that all 20 statements (including the revised versions) needed to be re-examined in order to determine whether or not the confounding differences had been successfully resolved. Accordingly, the current study was repeated with the new revised statements, and a new sample of participants.

⁵¹ This schema also contributed to the high social desirability, but is not necessarily an integral part of nNurturance.

Chapter Four: Study Three

Aims and Research Questions

The aim for Study Three was to re-examine the statements following the changes to the individual statements revised in Study Two. Using the same sequential explanatory design outlined in Study One, the statements were examined in an exploratory quantitative phase (Phase One) in order to identify statements with relatively high or low levels of social desirability. These results were then followed up with a qualitative phase (Phase Two), whereby the aim was to ascertain why certain statements were readily identified by participants as more or less socially desirable than the others. The research questions were the same as those addressed in Study One.

Phase One

Quantitative Method

Participant Sample

A convenience sample of 50 participants was recruited using the same recruitment strategies outlined in studies One and Two. Participants ranged in age from 18 to 63 years ($M = 32.40$), $SD = 12.60$), and the majority were women (64%). Most participants identified their cultural affiliation as Anglo-Australian (80%), 8% identified as Asian, and 12% as “other”.

Measure, Materials, and Data Collection

Participants were asked to complete the ranking task with the revised test statements. The statements were presented to participants on 20 separate 16 x 4 cm cards (one statement per card as shown in Appendix J). All instructions to participants were the same as those outlined in Study Two, and the same data recording methods were used.

Results

Kendall's coefficient of concordance (Kendall's W) was calculated as a means of examining the degree of agreement across participant rank orders. Inter-rater agreement was significant, $W(19, N = 50) = 0.23, p < .05$, indicating that participants showed some agreement on the overall rank order of statements. As outlined in previous studies, statements repeatedly ranked in the top and bottom locations were identified on the basis of the descriptive data. The mean ranks in Table 16 (along with Figures 6, 7, and 8) reveal some differences from studies One and Two. After partitioning the statements according to the rule of equal thirds, statements identified as belonging to the High SD Group included nNurturance, nAggression, and Play (with mean ranks of 6.60, 6.72, and 6.78, respectively). Statements belonging to the Low SD Group included nSex and nRejection (with mean ranks of 15.52, and 16.59, respectively).

Table 16

Mean Ranks for Statements in Descending Order (Study Three)

Revised statements representing each need	Mean rank	SD
It is personally satisfying to attend to the needs of others without regard for my own needs. (<i>nNurturance</i>)	6.60	5.81
It is personally satisfying to fight for what I believe and overcome opposition. (<i>nAggression</i>)	6.72	4.88
It is personally satisfying to have fun (<i>nPlay</i>)	6.78	4.55
It is personally satisfying to continue striving to reach a goal and never admit defeat. (<i>nCounteraction</i>)	7.84	5.21
It is personally satisfying to keep myself and my belongings neat, tidy and in order. (<i>nOrder</i>)	8.10	5.37
It is personally satisfying to follow the directions of a respected leader. (<i>nDeference</i>)	9.00	5.18
It is personally satisfying to experience the company of other people, regardless of the type or quality of relationship. (<i>nAffiliation</i>)	9.14	6.23
It is personally satisfying to set myself difficult tasks, just so I can feel like I'm achieving something. (<i>nAchievement</i>)	9.30	4.97
It is personally satisfying to accept criticism without complaint. (<i>nAbasement</i>)	9.30	5.24
It is personally satisfying to reflect on and understand things, solely as an intellectual exercise. (<i>nUnderstanding</i>)	9.34	5.07
It is personally satisfying to experience a variety of sensory stimulation (different smells, interesting sounds and sights, textures to touch, etc.) (<i>nSentience</i>)	10.64	4.86
It is personally satisfying to obtain comfort and support and to be cared for by another person. (<i>nSuccorance</i>)	10.70	5.58
It is personally satisfying to do things in my own way, without others directing me. (<i>nAutonomy</i>)	11.54	5.33
It is personally satisfying to avoid pain, injury, or a risk of any harm. (<i>nHarmavoidance</i>)	11.68	5.40
It is personally satisfying to direct or influence others. (<i>nDominance</i>)	12.60	5.32
It is personally satisfying to attract and hold the attention of other people. (<i>nExhibition</i>)	12.76	4.97
It is personally satisfying to defend myself against blame and justify my opinions or actions. (<i>nDefence</i>)	12.84	4.93
It is personally satisfying to avoid situations that are potentially humiliating. (<i>nInfavoidance</i>)	12.92	4.93
It is personally satisfying to experience and express my sexuality. (<i>nSex</i>)	15.52	4.62
It is personally satisfying to avoid people I have reason to dislike. (<i>nRejection</i>)	16.58	3.49

The statements for nAchievement, nAbasement, and nUnderstanding (which were formerly part of the High SD group) showed evenly disbursed data and mean values that fall within the middle range (7.33-13.67). Therefore, they were allocated to the Random Group. Whilst the data distribution for nCounteraction is less clear, the mean value falls inside the middle range. Thus, it was also retained as part of the Random Group along with the remaining statements (the graphed data for statements in the Random Group are presented in Appendix K).

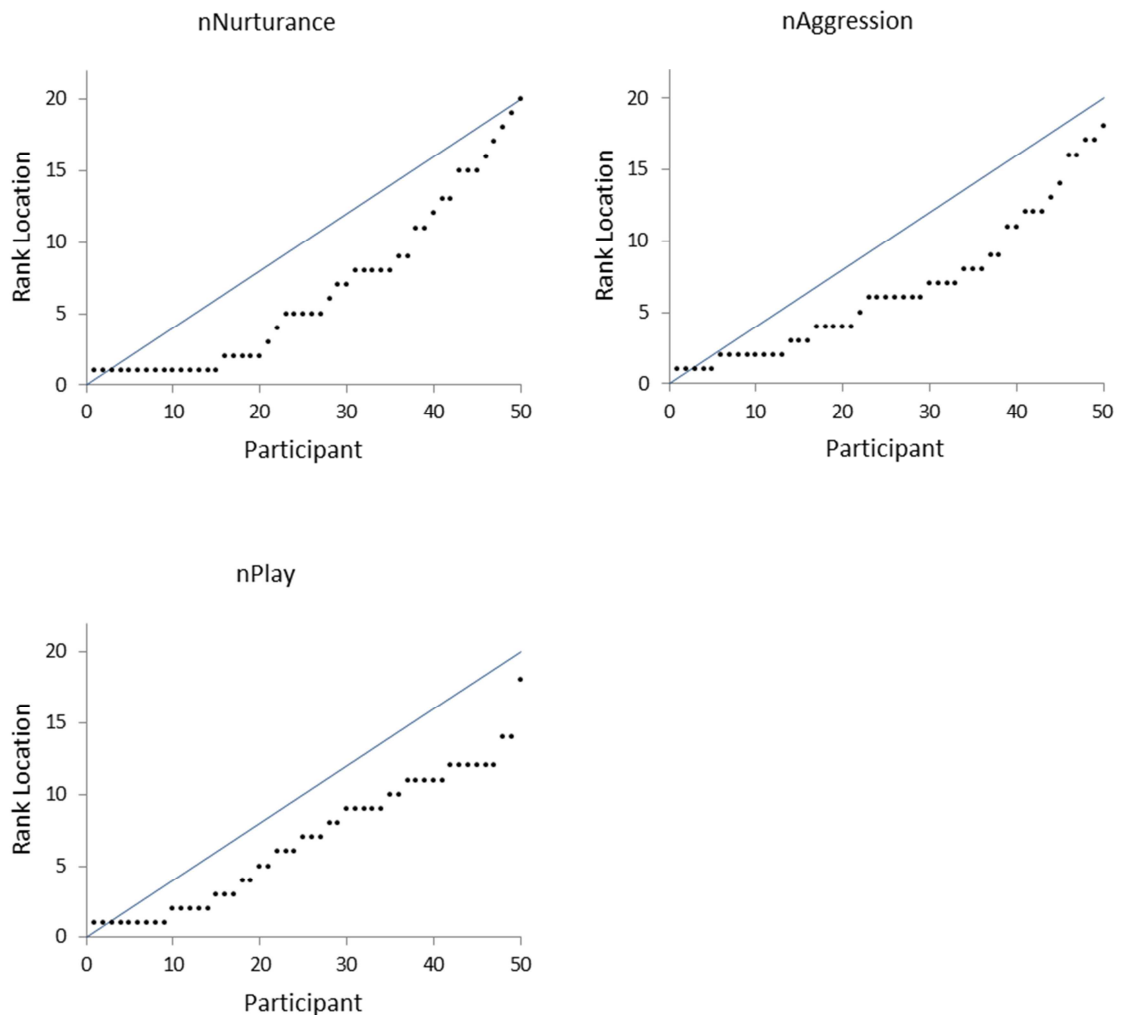


Figure 6. Statements allocated to the High SD Group.

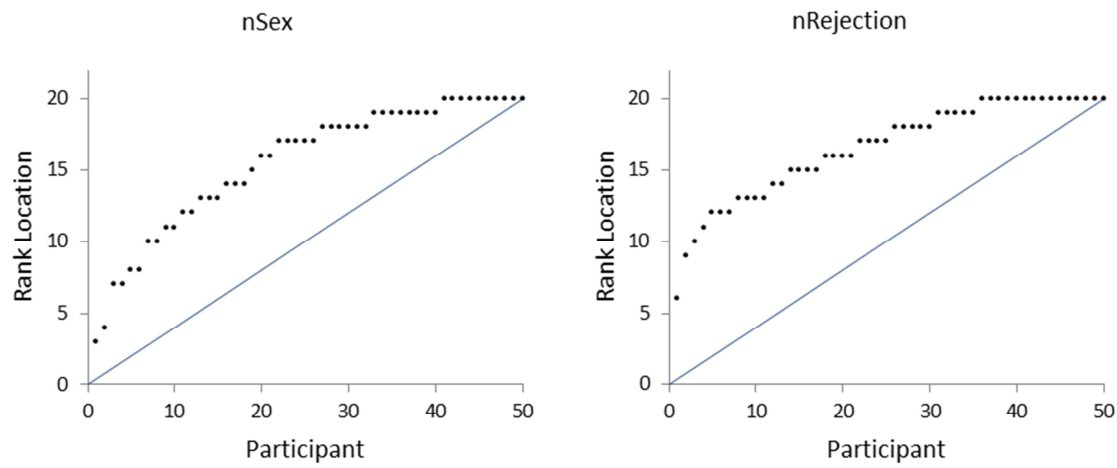


Figure 7. Statements allocated to the Low SD Group.

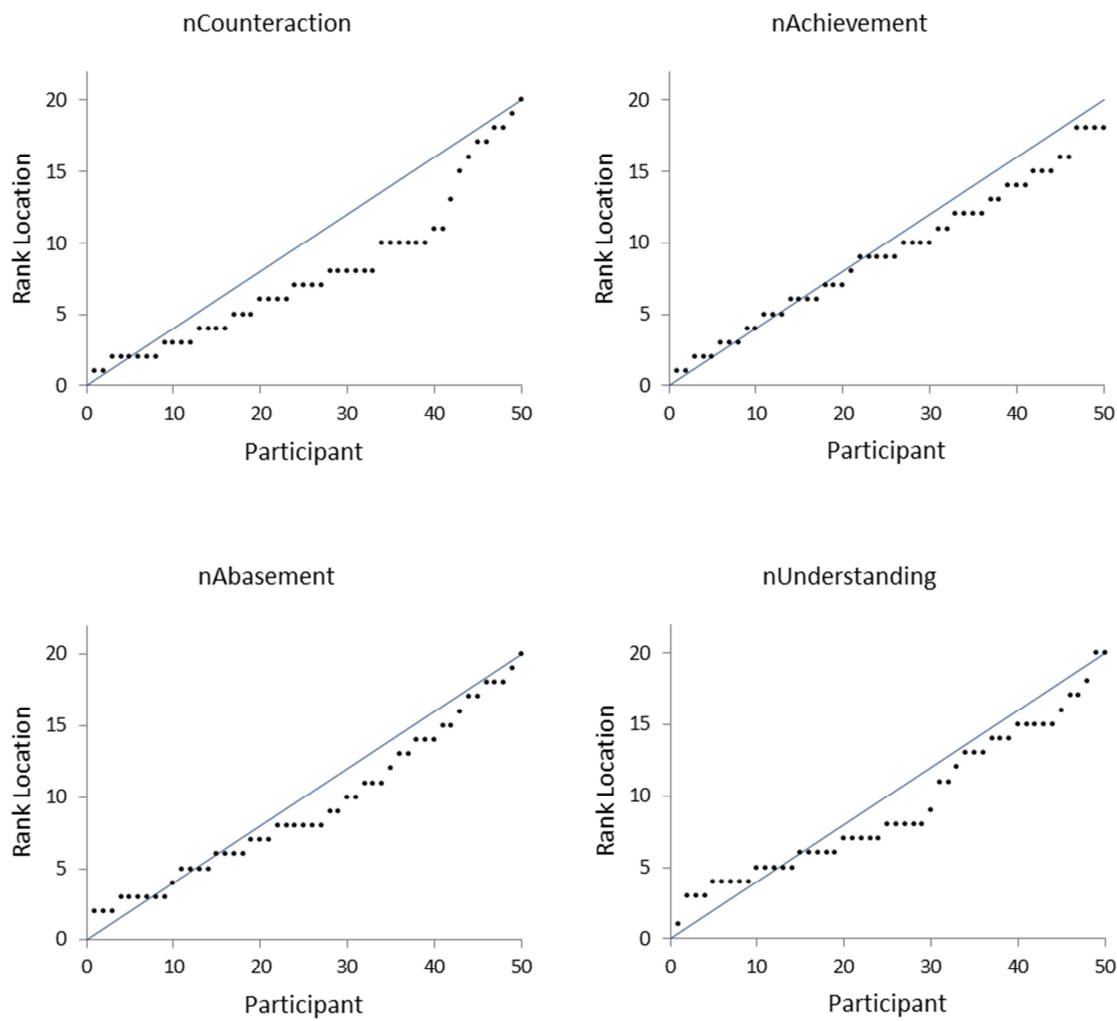


Figure 8. Statements formerly part of the High SD Group that are now part of the Random Group.

Summary

The results outlined above demonstrate that the 20 statements that comprise the PNS still do not share approximately equal social desirability. Whilst the value for W is smaller than previous studies (showing weak agreement), a significant result still indicates that participants had agreed on the approximate rank location for at least a proportion of statements. The mean values in Table 16 demonstrate that a minority of statements were systematically ranked in the top and bottom locations. Specifically, the statements for nNurturance, nAggression, and nPlay were most consistently ranked near the top of the range, and the statements for nSex and nRejection were most consistently ranked near the bottom. This indicates that these statements were repeatedly identified by participants as most and least desirable, respectively. This in turn suggests that there are clear differences in social desirability that compromise test validity.

Despite the persisting problem with social desirability, the current study reveals some promising results. Whilst nNurturance, nSex, and nRejection still show the same problematic levels of social desirability, overall, there are fewer statements that fall outside of the Random group. In particular, the ranking patterns for nAchievement, nAbasement, and nUnderstanding, which were formerly part of the High SD group, now show evenly distributed data (as shown in Figure 8). This suggests that participants had ranked these statements randomly in the current study, meaning that they were no longer clearly identified as highly desirable in comparison to the others. On that basis, the revisions made in Study Two have successfully equalised the social desirability for these statements.

The ranking pattern for nAggression differs markedly from previous studies. This statement was formerly part of the Low SD Group, with a clustered distribution toward the bottom of the range; however, the current results show clustering toward the top of the range (between ranks 1-10). This demonstrates that participants had no longer

identified the statement as undesirable but, instead, had consistently identified the statement as highly desirable in comparison to the others. Although this contrast means that the statement now falls within the High SD Group (which is still problematic), this is a promising result. Given that nAggression is arguably an undesirable need, there was considerable doubt over whether or not the social desirability could be appropriately adjusted. Whilst the current ranking pattern indicates that the statement has been over-corrected, it at least shows that raising the social desirability is achievable.

Although the higher number of statements within the Random Group is a positive result, the changes seem to have had an adverse effect on nPlay. This statement was part of the Random Group in previous studies, but currently falls within the High SD Group. Given that the statement was not altered, it is likely that this result is an artefact of ranking. As statements formerly identified as most desirable were corrected, their high positions in the rank order were replaced with other statements. Given that the mean values for nPlay fell right near the cut-off of 7.33⁵² in studies One and Two (at 7.34 and 7.80, respectively), this was the most likely candidate.

Overall, the results show some progress toward establishing equal social desirability among the 20 statements; however, there were still five statements that fell outside of the Random Group. Whilst nAchievement, nAbasement, and nUnderstanding were successfully corrected (with mean values that fall comfortably within the middle range), nNurturance, and nSex and nRejection still fall within the High, and Low SD Groups, respectively. New additions to the High SD Group include nPlay, and nAggression. Although nCounteraction falls within the Random Group, it still falls very close to the cut-off at 7.84 and still falls within the top four statements in the overall rank order. On that basis, it is possible that the statement was still ranked with some consistency and that there are, therefore, still problems with the social desirability. On

⁵² Recall that mean values between 7.33 and 13.67 meet the criteria for Random Group allocation.

that basis, it was included for revision in the next phase in hope of further decreasing the social desirability.

This decision also raised questions about nInfavoidance, which falls nearest the Random group cut-offs at the bottom of the rank order. However, because nInfavoidance falls further inside the cut-offs, and its mean value is clearly different from nSex (the next statement in the rank order), it was not included for further revision at this time. As such, the six statements that were identified for further qualitative investigation in the next phase were nNurturance, nAggression, and nCounteraction, nSex, nRejection, and nPlay.

Phase Two

Qualitative Method

Participant Sample

As in Studies One and Two, a smaller subset of participants took part in qualitative interviews upon completing the ranking task. Using the same recruitment procedures, the final convenience sample comprised of 14 participants (4 men and 10 women) ranging from 18 to 63 years of age ($M = 35.36$, $SD = 14.83$). Eleven participants identified themselves as Anglo-Australian, one as Asian, and the remaining two identified as “other”.

Data Collection and Analysis

The procedures for data collection and analysis were the same as those outlined in previous studies. The findings from Phase One (Study Three) reveal persistent problems with low social desirability for nSex and nRejection, and high social desirability for nNurturance and nCounteraction. Problems were also observed for nAggression and nPlay (which were formerly part of the Low SD and Random Groups, respectively); both statements now fall within the High SD Group. With these five

statements identified as needing further investigation, five corresponding data sets were compiled and analysed using thematic analysis (see Braun & Clarke, 2006).

Statement Revision

The procedure for revising the statements to correct the social desirability was the same as that outlined in Study Two. Drawing on the qualitative findings in conjunction with Murray's (1938) theory, alternative versions for each statement were generated and added to the lists compiled in Studies One and Two. As part of this process, the findings from Studies One and Two were also consulted in order to avoid repeating problems with previous versions. The final replacements were then selected via a series of email consultations and face-to-face meetings between myself and the supervising researchers. Once again, colleagues and community members (covered in Study Two) were invited to comment on the relative levels of social desirability where appropriate, as well as any other relevant interpretations.

Findings and Interpretations

The thematic analysis resulted in nine themes that correspond to the six statements selected for further investigation. As noted in Study Two, replicating themes are covered briefly to note their persistence, and those that offer additional or alternative insights are illustrated in full detail. Participant quotes (presented in italics) are used to demonstrate that the themes are logically derived from the data. Participant numbers are continued from Phase Two of Study Two (37-51). At the end of each section, conclusions about how to correct the social desirability are presented, along with the revised version that was eventually selected as the replacement.

Themes Relevant to Statements in the High SD Group

Following the results from Phase One, the High SD Group was comprised of statements for nNurturance, nAggression, and nPlay. The statement for nCounteraction was also included for revision. The goal for analysis was to understand why these

statements were perceived as highly desirable by participants, and to determine how the social desirability might be lowered. Four themes were identified (two for nNurturance, one for nAggression, and one for nPlay) and are discussed in the following sections.

Table 17

Qualitative Themes Identified for Statements in the High SD Group

Statements	Corresponding themes
nNurturance	The statement represents selflessness and compassion Altruism and self-sacrifice can have both positive and negative aspects
nAggression	The statement shows strong will
nPlay	Balancing fun and responsibility
nCounteraction	Knowing one's limitations is important

nNurturance. The findings for nNurturance⁵³ bare both similarities and differences to previous studies. Once again, the statement was described as representing compassion, but was no longer regarded as part of a mutually supportive relationship. Instead, the statement was described as altruistic and self-sacrificing, which received mixed reviews by participants. Some expressed admiration for altruism (“...*think about people we admire in society, its people who do that... give their life to save someone else; people like Mother Theresa...*” P41); others viewed it as potentially negative (“*It might be like you’re a pushover...*” P45). However, on the basis of participants’ reports, even though altruism can have an unfavourable side, this was still overshadowed by more favourable aspects of the statement. In particular, the phrase “attend to the needs of others” seemed to secure the statement’s position high in the rank order. As one participant reported:

...Maybe “without regard for my own needs”, I suppose that sort of puts a negative slant on it. You could be, sort of, door-mattish [sic] in that, but I think the “attending to the needs of others” outweighs the “regard for my own needs”. (P50)

⁵³ “It is personally satisfying to attend to the needs of others without regard for my own needs”.

These comments demonstrate how the first part of the statement seems to account for the high social desirability.

As pointed out in previous studies, this is a difficult problem to resolve. Keeping in mind that any changes must not disrupt the meaning of nNurturance (which in, itself, is a socially desirable need), any suitable alternatives to the phrase “attend to the needs of others” are likely to be just as socially desirable. As such, it was decided that the best strategy was to leave the first part of the statement as it is, and attempt to offset the high social desirability by changing the second part. Because the phrase “without regard for my own needs” was regarded as potentially negative, intensifying this part of the statement could be enough to reduce the overall social desirability. Accordingly, the second half of the statement was reworded in an attempt to include self-neglect in favour of nurturing others. After reviewing the other alternatives generated in previous studies, only one other option was generated as the replacement (see below):

1. It is personally satisfying to attend to the needs of others, even when it means neglecting myself.

nAggression. Participants reported that the statement for nAggression⁵⁴ describes someone who is strong willed, which can be both positive and negative. On the one hand, being willing to fight for one’s beliefs is highly regarded (“...it’s *important to fight for what you believe in, and it’s important to have a voice and to stand up for who you are and what you believe*” P44). From this perspective, it is better to stand up for oneself and take action rather than submit to others or passively accept unsatisfactory circumstances (“*it means you are a strong person; they’re not a pushover I think. The idea of just sitting back and letting everything happen isn’t desirable today.*” P42). On the other hand, those who are strong willed can be

⁵⁴ “It is personally satisfying to fight for what I believe and overcome opposition”.

outspoken, overbearing, and confrontational. This could offend or upset those around them:

...this one again I had to distance myself because... I'm very outspoken, but I don't necessarily see that as always being socially desirable because it can upset people and can tread on people's toes... I don't necessarily see it as being 100% socially desirable because people can be confronted by people that fight for what they believe in and overcome opposition, maybe. People that do that can be a bit overbearing, a bit dominant, sort of personality types, that don't get along with everyone. (P37)

Although the above describes both positive and negative sides to the statement, the high mean rank suggests that participants primarily attended to the positive side when completing the ranking task. In particular, the phrase “fight for what I believe” was highly regarded, and probably explains the over-corrected social desirability. Given the considerable difficulty associated with phrasing nAggression (an undesirable need) in socially desirable language, this is a promising result. However, further corrections are clearly needed in order to equalise the statement with the Random Group. The challenge is to moderately reduce the social desirability and avoid another over-correction.

After careful consideration, it was decided that removing the phrase “fight for what I believe” from the statement is inadvisable as this is likely to reduce the social desirability too much. A preferable approach is to retain the most desirable aspects of the current version, and incorporate the undesirable aspects of the previous version. Recall from Study Two that the undesirable aspects of the previous version were the word “forcefully” and the phrase “beat an opponent”. Incorporating these aspects back into the statement will hopefully result in an appropriate reduction in social desirability. In accordance with this suggestion, the below alternative was formulated as the replacement:

1. It is personally satisfying to forcefully fight for what I believe, and defeat an opponent”.

nPlay. Participants reported that the statement for nPlay⁵⁵ describes someone who is happy and is able to have fun. However, whilst having fun is important, there must be a balance between fun and responsibility:

...we can all admit to having fun and yes it's great to have fun, but then there's the other side of the coin; is that person having too much fun? So I think... if you were filling in a survey or something, you'd be thinking "okay now I want to admit to having fun but are they going to think that I'm just a frivolous person that's having too much fun." ...Being a fun person is a socially desirable attribute to a point because, when things are serious, you want people to take things seriously. That's what I was sort of thinking about with that one.

These comments suggest that, whilst the statement was viewed in a favourable light, participants were also aware of the risk of appearing irresponsible in a test situation. On the basis of this, it is clear that the social desirability can be decreased by incorporating a lack of responsibility or an imbalance between work and play into the statement's phrasing. Four alternative statements were formulated as potential replacements, which were reduced to the two options shown below. Version two was eventually selected as the phrase "forget my responsibilities" in version one was expected to reduce the social desirability too much:

1. It is personally satisfying to have fun and forget my responsibilities.
2. It is personally satisfying to have fun rather than attend to responsibilities.

nCounteraction. The themes compiled for nCounteraction⁵⁶ replicate those of previous studies. Once again, whilst the ability to persevere is favourable, it is also important to be able to admit one's limitations ("*... with the admit defeat part, I thought that had the connotation of being a bit dogged maybe, which might be viewed negatively; like you can't let things go.* P42 "). Thus, it seems that, whilst the changes made in Study Two were on the right track, they were too subtle to obtain the required change in social desirability. As such, it was decided to further emphasise reluctance to admit defeat with the below change.

⁵⁵ "It is personally satisfying to have fun".

⁵⁶ "It is personally satisfying to continue striving to reach a goal and never admit defeat".

1. It is personally satisfying to continue striving to reach a goal and never admit defeat no matter what it costs me.

Themes Relevant to Statements in the Low SD Group

Following the results from Phase One, the Low SD Group was comprised of statements for nSex and nRejection. The goal for analysis was to determine why these statements were perceived as undesirable by participants, and how the social desirability might be lowered. Four themes were identified (two per statement) and are discussed in the following sections.

Table 18

Qualitative Themes Identified for Statements in the Low SD Group

Statements	Corresponding themes
nSex	Sex is a private matter Breaking with conservative values around sex
nRejection	Tolerance for others is expected Taking pleasure in avoiding others is undesirable

nSex. The findings for nSex⁵⁷ bare some similarities to previous studies, as the theme of keeping sexual matters private remains persistent. Participants again reported reluctance over disclosing such personal information because it breaks with social conventions (“...it breaks that social rule... you don’t discuss the taboo topic of *sexuality*.” P40).

However, further to these findings, it seems that the current statement might challenge social convention even more so than previous versions. This conclusion was drawn on the basis of two subthemes. The first subtheme depicts the statement as sexually promiscuous, which was viewed negatively by participants (“... *I think that it would be linked directly to sex and having sex with lots of people; [that’s] a negative thing*” P40). The second subtheme links the statement to sexual orientation, which was

⁵⁷ “It is personally satisfying to experience and express my sexuality”.

regarded as a controversial issue. Homosexuality is not always accepted, and can elicit discomfort in others (“...*people are still uncomfortable with anything that’s not heterosexual*” P45). Whilst each of these themes relates to separate issues, the common thread is that both relate to sexual attitudes or behaviours that could be considered liberal or progressive. On that basis (and on the basis of the Phase One results), it appears that the recent changes have done little to resolve the social desirability problem. In fact, the revised version seems to have taken an already sensitive topic and added a potentially controversial dimension.

In light of this, it was clear that the statement for nSex needed a drastic transformation. With no clear guidelines emerging from the qualitative data about what needed to change, I returned to Murray’s (1938) definitions, as well as the findings from studies One and Two. After critically reviewing both sources, the distinction between viscerogenic and psychogenic properties of nSex became of particular interest⁵⁸. Murray placed nSex into both categories without clearly separating the physical and emotional components. His definitions incorporated aspects of both, as he referred to sex and eroticism, but also to flirting, love, romance, love stories, and enjoying the company of the opposite sex, for example⁵⁹ (see pages 167-168). With this in mind, recall that the findings from studies One and Two depict the original statement in terms of sexual gratification to the exclusion of other parts of a sexual relationship. When compared with Murray’s definitions, it seems that the original statement had captured the viscerogenic aspects of sex whilst excluding the psychogenic aspects. This resulted in low social desirability.

In applying the above to statement revision, it was decided that the best approach to increasing the social desirability was to construct a statement that captures

⁵⁸ Recall that “viscerogenic needs have to do with physical satisfactions and psychogenic needs with mental or emotional satisfactions” (Murray, 1938, p. 77).

⁵⁹ One could argue that sex and eroticism are viscerogenic, and the rest psychogenic.

only the psychogenic aspects of nSex. To this end, the statement was reconstructed on the basis of terms such as flirting, love, and romance (as provided by Murray, 1938), which are more likely to be associated with the excitement and romance of sexual attraction rather than the physical act of sex. Although this ignores some aspects of Murray's definition, it allows for the exclusion of the term "sex", and is the only conceivable way to raise the statement's social desirability. In accordance with this, ten additional versions for nSex were generated, which were reduced to the three final options below:

1. It is personally satisfying to feel attractive to, and be intimate with another.
2. It is personally satisfying when others find me attractive or desirable.
3. It is personally satisfying to feel attractive or desirable to others.

Version three was eventually selected for two main reasons. Firstly, it refers to one's own personal feelings and experience (unlike version two) and, secondly, using the term "others" means that the statement is less likely to be confused as part of a monogamous relationship (compared with version one, which refers to "another").

nRejection. The major theme for nRejection⁶⁰ replicates that of previous studies. Once again, participants reported that tolerance for others is expected regardless of whether or not any ill feeling exists. Avoiding others simply causes too much friction within peer groups, and anyone who endorses the statement is likely to be seen as difficult and unable to get along with others:

...because it's not socially desirable to be like that, and you wouldn't want to tell somebody, "well, I'm going to avoid that person because I don't like them" because that's not socially desirable. Socially desirable means that you're going to fit in with everybody and you're going to mix well and you're going to like people and, even if you don't like them, you're going to fit in and you won't avoid them. So most people, I felt, would pull back from that and [would] not want to admit that. (P46)

⁶⁰ "It is personally satisfying to avoid people I have reason to dislike".

The second theme compiled from the data suggests that part of the problem with social desirability might be due to the statement's introductory phrase. One participant commented that to find it "personally satisfying to avoid" others is particularly negative, as this suggests that one takes pleasure in such behaviour:

If you're saying... I get a lot of satisfaction [or] I really enjoy avoiding people I dislike, I'd think oh well you're a bit of a negative Nellie. I don't know that I'd want to have much to do with that person... it doesn't seem like a positive attribute if somebody has this attitude. (P37)

On that basis, it seems that the recent revision has had little impact upon the statement's social desirability, as it still reflects poorly upon an individual's attitude. This is a difficult problem to resolve without disrupting the meaning of nRejection. Additionally, with the introductory phrase identified as contributing to the problem, this further complicates the task of increasing the social desirability.

With few options available, it was decided to capitalise further on the suggestions outlined in Study Two and attempt to intensify the message of reactive behaviour (behaviour that is elicited by environmental events). This will hopefully result in a statement that reflects an understandable response to others rather than a behavioural manifestation of one's poor attitude. In addition, the word "avoid" was also removed and replaced with a less direct reference to avoiding others (i.e., "keep my distance from"). Eight new versions were formulated, which were reduced to the two options shown below. Version two was eventually selected as the phrase "people who are difficult" is more likely to externalise the undesirable behaviour or characteristics.

1. It is personally satisfying to keep my distance from difficult people who are always causing problems.
2. It is personally satisfying to keep my distance from people who are difficult to get along with

Discussion

The qualitative findings were a useful resource for developing a thorough understanding of the social desirability problems for each of the statements; however, whether or not the suggested changes have successfully resolved the problems was difficult to predict. As mentioned in Study Two, revising the statements is a challenging task, as it is difficult to manage the competing demands of adjusting the social desirability whilst preserving the underlying need construct. However, in the current study, the process was even more difficult as most of the statements in the high and Low SD Groups (all but nPlay) had already undergone revision in previous studies. For these statements, an extensive list of possible alternatives had already been created and scrutinised. Thus, adding to this list with new and quality ideas was considerably difficult.

In some cases, it was possible to extract new ideas from the qualitative data. For example, the findings for nNurturance and nAggression produced novel information that was both relevant and useful to the revision process. However, in other instances, the findings largely replicated those of previous studies (as was the case for nRejection), or reflected social rules surrounding the underlying construct rather than revealing anything useful about the statement's wording (as was the case for nSex). For these statements, there was no new information emerging from the qualitative data that could help inform the revision process. This added to the level of difficulty associated with generating new ideas on how to adjust the social desirability.

This highlights one of the major challenges to the current research whereby, with each iteration, the revision process becomes increasingly difficult. This is because, as statements are repeatedly revised, the options for correcting the social desirability become more limited. In some instances, only one new alternative version was generated (as was the case for nNurturance and nAggression). This is less satisfactory

than in previous studies whereby, for each statement, we (the supervisors and I) were able to generate multiple alternatives to choose from.

Additionally, as the research progresses, one might argue that those left in the High and Low SD Groups are those that are inherently resistant to change; most likely because they represent inherently desirable or undesirable needs. This means that, as long as they are accurate representations of those needs, they are likely to be problematic in terms of relative social desirability. On that basis, whether or not the changes implemented in the current study have effectively addressed the social desirability problems was difficult to determine. As such, the statements needed to be re-examined in order to determine whether or not problematic differences have been resolved. Accordingly, the study was repeated with the new revised statements, and a new sample of participants.

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Chapter Five: Study Four

Aims and Research Questions

The aim for Study Four was to, once again, re-examine the statements following the changes to the individual statements revised in Study Three. Using the same sequential explanatory design outlined previously, the study was planned for in two phases. The initial quantitative phase (Phase One) was conducted in order to compare statement social desirability levels and determine whether or not problematic differences still existed. As in previous studies, qualitative data were also collected in preparation for a second phase; however, upon review of the Phase One outcomes, several factors came to light to suggest that continued advancement toward equalising the statements is unlikely (this is discussed in later sections). For these reasons, the second phase was not implemented. As such, only the first two research questions were addressed:

- 1: Do all 20 statements that comprise the PNS share approximately equal social desirability?
- 2: If social desirability is not equal, which statements are consistently identified by participants as more or less socially desirable than the others?

Phase One

Quantitative Method

Participant Sample

A convenience sample of 50 participants was recruited using the same recruitment strategies outlined in previous studies. Participants ranged in age from 18 to 57 years ($M = 29.38$, $SD = 10.83$), and the majority were women (66%). Most participants identified their cultural affiliation as Anglo-Australian (86%), and 14% identified their cultural affiliation as “other”.

Measure, Materials, and Data Collection

Participants were asked to complete the ranking task with the revised test statements. The statements were presented to participants on 20 separate 16 x 4 cm cards (one statement per card as shown in Appendix L). All instructions to participants were the same as those outlined in Study Two, and the same data recording methods were used.

Results

Kendall's coefficient of concordance (Kendall's W) was calculated as a means of examining the degree of agreement across participant rank orders. Inter-rater agreement was significant, $W(19, N = 50) = 0.20, p < .05$, indicating that participants showed some agreement on the overall rank order of statements. Consistent with previous studies, statements repeatedly ranked in the top and bottom locations were identified on the basis of the descriptive data (see Table 19 and Figures 9 and 10). After partitioning the statements according to the rule of equal thirds, statements identified as belonging to the High SD Group included nOrder and nAchievement (with mean ranks of 6.68, 6.70, respectively), and statements belonging to the Low SD Group included nInfavoidance and nPlay (with mean ranks of 14.01, and 16.72, respectively). All four statements were formerly part of the Random Group in in Study Three.

Table 19

Mean Ranks for Statements in Descending Order (Study Four)

Revised statements representing each need	Mean rank	SD
It is personally satisfying to keep myself and my belongings neat, tidy and in order. (<i>nOrder</i>)	6.68	4.42
It is personally satisfying to set myself difficult tasks, just so I can feel like I'm achieving something. (<i>nAchievement</i>)	6.70	4.64
It is personally satisfying to follow the directions of a respected leader. (<i>nDeference</i>)	7.40	4.82
It is personally satisfying to reflect on and understand things, solely as an intellectual exercise. (<i>nUnderstanding</i>)	7.80	4.52
It is personally satisfying to continue striving to reach a goal, and never admit defeat no matter what it costs me. (<i>nCounteraction</i>)	8.12	6.12
It is personally satisfying to do things in my own way, without others directing me. (<i>nAutonomy</i>)	8.16	5.18
It is personally satisfying to attend to the needs of others even when it means neglecting myself. (<i>nNurturance</i>)	9.06	6.42
It is personally satisfying to experience a variety of sensory stimulation (different smells, interesting sounds and sights, textures to touch, etc.) (<i>nSentience</i>)	9.58	4.94
It is personally satisfying to avoid pain, injury, or a risk of any harm. (<i>nHarmavoidance</i>)	10.34	6.21
It is personally satisfying to direct or influence others. (<i>nDominance</i>)	10.65	5.57
It is personally satisfying to obtain comfort and support and to be cared for by another person. (<i>nSuccorance</i>)	10.67	5.72
It is personally satisfying to accept criticism without complaint. (<i>nAbasement</i>)	10.78	5.35
It is personally satisfying to experience the company of other people, regardless of the type or quality of relationship. (<i>nAffiliation</i>)	10.99	5.77
It is personally satisfying to defend myself against blame and justify my opinions or actions. (<i>nDefence</i>)	11.54	4.78
It is personally satisfying to attract and hold the attention of other people. (<i>nExhibition</i>)	12.00	4.87
It is personally satisfying to feel attractive or desirable to others. (<i>nSex</i>)	12.24	5.20
It is personally satisfying to forcefully fight for what I believe and defeat an opponent. (<i>nAggression</i>)	13.20	5.56
It is personally satisfying to keep my distance from people who are difficult to get along with. (<i>nRejection</i>)	13.36	4.28
It is personally satisfying to avoid situations that are potentially humiliating. (<i>nInfavoidance</i>)	14.01	4.67
It is personally satisfying to have fun rather than attend to responsibilities (<i>nPlay</i>)	16.72	4.45

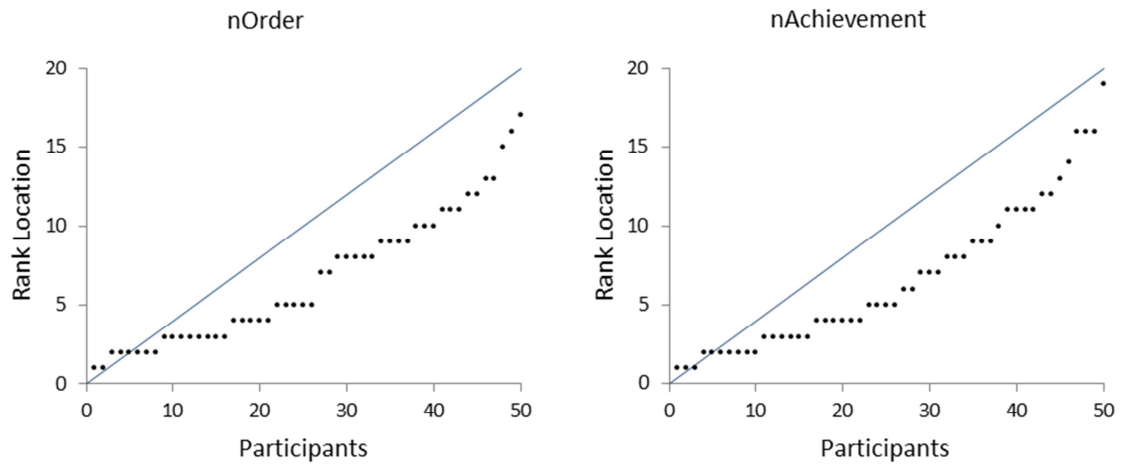


Figure 9. Statements allocated to the High SD Group

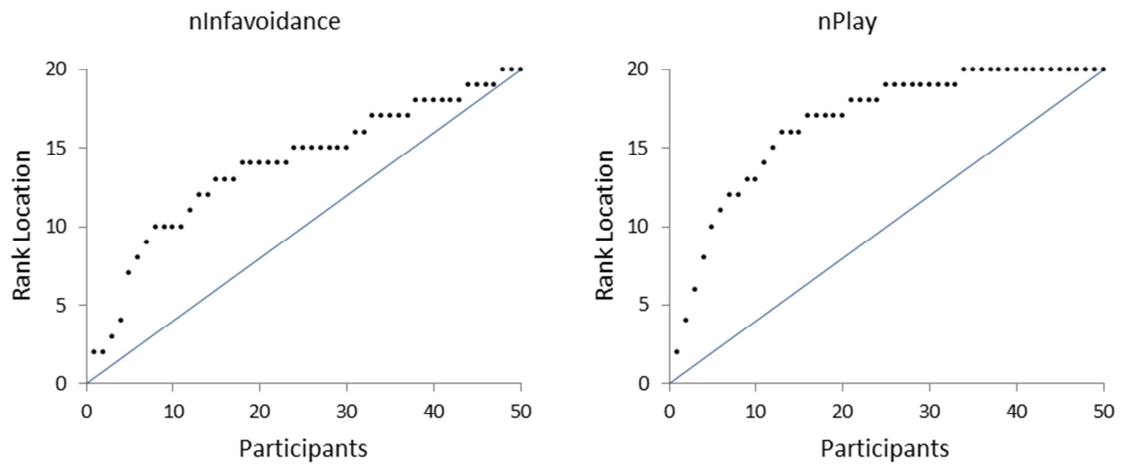


Figure 10. Statements allocated to the Low SD Group

The statements for nNurturance and nAggression, which were formerly part of the High SD group, now fall within the Random Group with mean values of 9.06 and 13.20, respectively. Statements for nSex and nRejection (which were formerly part of the Low SD Group across all three previous studies) also now fall within the Random Group with mean values at 12.24 and 13.36, respectively (just inside the cut-offs⁶¹). The graphed data for all remaining statements are presented in Appendix M.

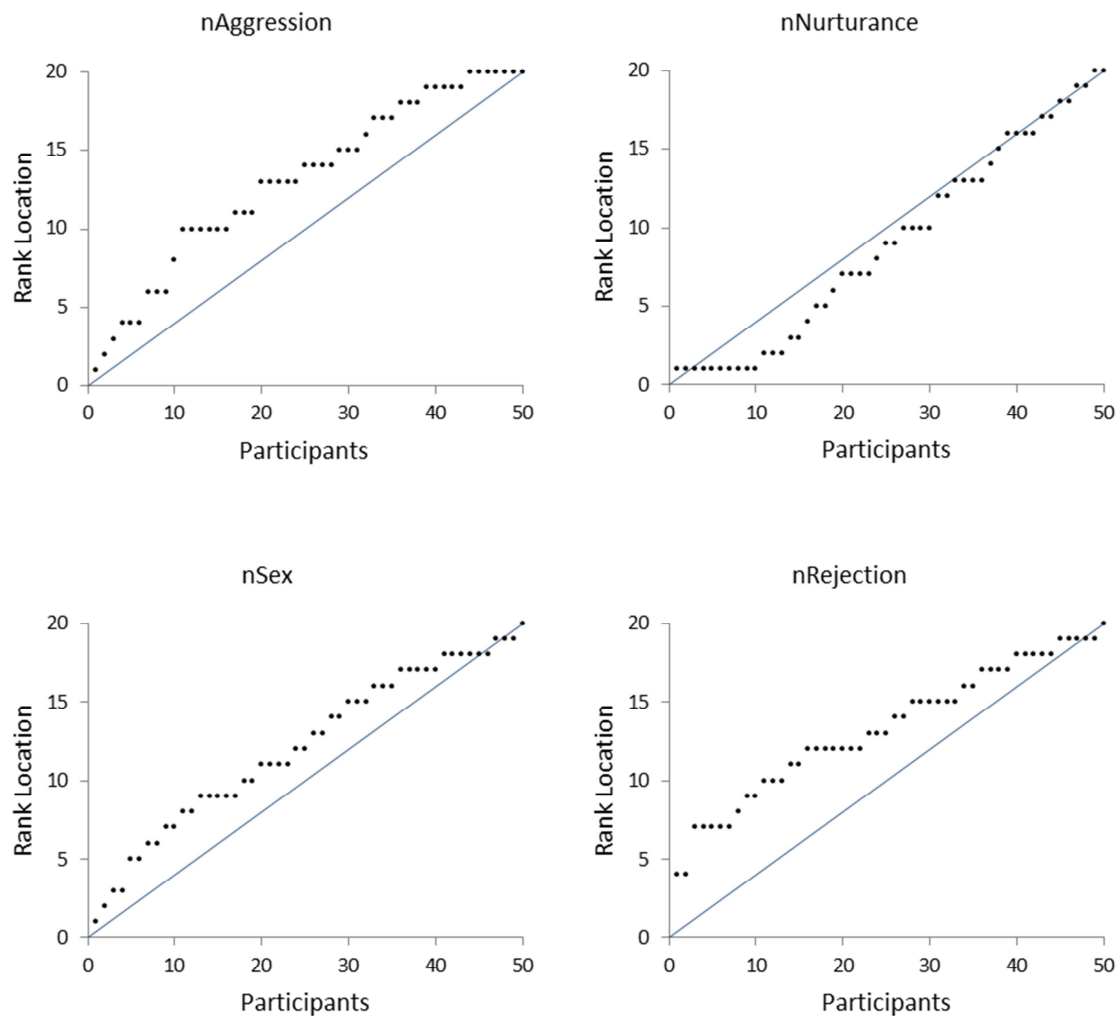


Figure 11. Statements formerly part of the High and Low SD Groups that now belong to the Random Group.

⁶¹ Recall that the Random Group cut-offs are 7.33 – 13.67

Summary

The results outlined above demonstrate that the 20 statements that comprise the PNS still do not share approximately equal social desirability. Whilst the value for W is small, significant inter-rater agreement indicates that the participants had agreed on the approximate rank location for at least a proportion of statements. The mean values in Table 19 reveal that the statements for nOrder and nAchievement were consistently ranked at the top locations, whereas nInfavoidance and nPlay were consistently ranked at the bottom. This indicates that these statements were repeatedly identified by participants as most and least socially desirable, respectively. This, in turn, demonstrates that there are clear differences between the statements' social desirability levels, and that test validity is therefore compromised.

The current results show that some of the statements that were previously allocated to the High and Low SD groups were successfully moved inside the Random Group for the first time. Specifically, the statement for nNurturance was successfully moved out of the High SD Group, and the statements for nSex, nAggression, and nRejection were moved out of the Low SD Group. However, despite these results, the overall picture suggests that there has been little progress toward equalising the statements. The mean ranks in Table 19 show that the latter three statements still make up the bottom five in the overall rank order. This is consistent with the results of the previous studies, with the exception of nAggression (which fell in the High SD Group in Study Three). On that basis, it appears that there is still some consistency with respect to how participants had ranked these statements in relation to the others. Indeed, the data for nRejection, in particular, shows that there is still some clustering toward the bottom of the range. On that basis, it is likely that there are still problems with social desirability for these statements.

In addition, as the above statements have moved out of the High and Low SD Groups, it appears that others have simply taken their place⁶². Specifically, nOrder has fallen outside of the Random Group cut-offs for the first time, and the statements for nAchievement and nInfavoidance have fallen back into the High and Low SD Groups, respectively. Recall that both of these statements had already been moved inside the Random Groups cut-offs in previous studies. In the case of nOrder and nInfavoidance, this is likely due to an artefact of ranking, whereby as one statement changes position within the rank order, the rest are inevitably affected. Because nOrder and nInfavoidance were among the closest to the Random Group Cut-offs, these were among the most likely candidates to be pushed into the outer groups. However, the case for nAchievement is more difficult to explain. The Study Three descriptive data shows that the statement previously fell well inside the Random Group cut-offs (at 9.30), and the data distribution was clearly even. Thus, its positioning within the High SD Group in the current study is puzzling.

The findings for nPlay show that the Study Three revisions led to an over-correction. The statement was allocated to the High SD Group in the previous study; however, it now falls in the Low SD Group (with a mean of 16.72; see Table 19). This demonstrates that participants had no longer identified the statement as highly desirable but, instead, had consistently identified the statement as undesirable in comparison to the others. Whilst this at least shows that it was possible to lower the social desirability of a statement that represents an arguably desirable need, it is clear that further changes are needed if the statement is to be equalised with the others.

However, on the basis of the current results, it was decided that further iterations of the current study are not warranted at this time. Overall, there has been

⁶² It is acknowledged that, with a ranking task, there must always be statements in the top and bottom locations; however, in the current research, the point of interest is the distance between the statements' average rankings and the overall median of 10.5 as this is used to make inferences about the relative levels of social desirability.

limited advancement toward equalising the statements and, further, it appears that, as statements are moved from the High and Low SD Groups, others are likely to take their place. On that basis, no further changes were made to the statements at this time; thus, Phase Two of the current study was not implemented. A preferable option might be to adopt alternative methods for equalising the statements. This is discussed in the next section.

Chapter Six: General Discussion

In the current research, I sought to address the problem of social desirability in the PNS with two main objectives. The first was to systematically examine the test statements in order to determine whether or not they shared sufficiently equal social desirability. The second was to remove any differences in social desirability (should they be detected) by rewording problematic statements so that they are equalised with the others. The results from Study One showed that there were indeed differences among the statements. Thus, several attempts were made to equalise the relative social desirability levels. However, after a series of four studies, whereby problematic statements (those showing relatively high or low levels of social desirability) were examined and reworded, the results demonstrate that problematic differences in social desirability remain.

The results demonstrate that initial progress toward equalising the statements seemed promising. A comparison of the results from Studies One, Two, and Three shows that, of the nine statements that were initially allocated to the High and Low SD Groups, five were successfully moved inside the Random Group with the first revision⁶³ (the overall rank orders from each of the studies are presented in Table 20). Specifically, the statements for nAchievement, nUnderstanding, nAbasement, nCounteraction, and nInfavoidance were all moved inside the Random Group cut-offs. Whilst this left five statements that still needed further revision (with the addition of nPlay, which was allocated to the high SD Group in Study Three), the results at least showed that it was indeed possible to adjust the social desirability of some statements.

⁶³ Recall that the first revision addressing social desirability was conducted in Study Two. The revision process in Study One sought to realign the statements with underlying needs rather than skills and abilities.

Table 20

The Rank Order of Statements and Their Respective Mean Ranks From Each Study

Study One		Study Two		Study Three		Study Four	
Need	Mean	Need	Mean	Need	Mean	Need	Mean
nAchievement	5.41	nAchievement	4.93	nNurturance	6.6	nOrder	6.68
nUnderstanding	5.85	nUnderstanding	5.03	nAggression	6.72	nAchievement	6.70
nAbasement	6.36	nNurturance	5.33	nPlay	6.78	nDeference	7.40
nNurturance	6.61	nAbasement	6.03	nCounteraction	7.84*	nUnderstanding	7.80
nCounteraction	7.02	nCounteraction	7.58*	nOrder	8.1	nCounteraction	8.12
nPlay	7.34	nPlay	7.80	nDeference	9.01	nAutonomy	8.16
nAffiliation	8.69	nOrder	8.68	nAffiliation	9.14	nNurturance	9.06
nDeference	9.03	nSentience	9.93	nAchievement	9.3	nSentience	9.58
nExhibition	9.92	nAffiliation	10.13	nAbasement	9.3	nHarmavoidance	10.34
nAutonomy	10.92	nDeference	10.16	nUnderstanding	9.34	nDominance	10.65
nDominance	10.97	nAutonomy	10.95	nSentience	10.65	nSuccorance	10.67
nSentience	11.31	nHarmavoidance	10.98	nSuccorance	10.72	nAbasement	10.78
nSuccorance	11.54	nSuccorance	11.38	nAutonomy	11.55	nAffiliation	10.99
nOrder	11.91	nExhibition	11.43	nHarmavoidance	11.69	nDefendence	11.54
nHarmavoidance	12.31	nDefendence	12.75	nDominance	12.6	nExhibition	12.00
nDefendence	12.61	nDominance	13.14	nExhibition	12.78	nSex	12.24
nInfavoidance	14.00	nInfavoidance	13.23*	nDefendence	12.85	nAggression	13.20
nSex	15.44	nSex	15.03	nInfavoidance	12.92	nRejection	13.36
nRejection	16.39	nRejection	17.60	nSex	15.52	nInfavoidance	14.01
nAggression	16.40	nAggression	17.98	nRejection	16.59	nPlay	16.72

Note: Bold shows those in the High and Low SD Groups. Asterisks show statements that were selected for revision despite falling outside the Random Group cut-offs.

However, with the next iteration, several factors came to light to suggest that further progress toward equalising the statements using the current methodology is unlikely. The results from Study Four revealed that that, although further statements were moved out of the High and Low SD Groups, others began to take their place. Specifically, whilst the statements for nNurturance, nAggression, nSex, and nRejection were moved from the outer groups, they were simultaneously replaced by the introduction of nOrder and the reintroduction of nAchievement and nInfavoidance. Thus, the overall reduction in the number of statements falling within the outer groups was minimal – with a difference of only one less statement from Study Three to Study Four. Not only is this substantially less than the previous study (whereby the number of statements falling within the outer groups was reduced by more than half), but it also highlights the perpetual nature of the research. That is, as problematic statements are corrected, new ones will inevitably emerge.

Further to the above, a review of each of the rank orders in Table 20 shows that, whilst there was a continual decline in the number of statements falling within the outer groups, the overall spread of means remains approximately the same. In Study One, the highest and lowest mean ranks were 5.41 and 16.40, respectively, which left a distance of 10.99 between the top and bottom statements. With subsequent studies, one might have expected the statements in the outer groups to fall closer to the Random Group cut-offs (recall that the cut-offs were fixed at 7.33 and 13.67), which would have at least shown progress towards having all of the statements inside the established markers. However, by Study Four, there was little change, as the highest and lowest means were 6.68 and 16.72, respectively; this left a distance of 10.04 between the top and bottom statements. On that basis, it seems that, as statements are moved inside the Random Group, those that replace them continue to fall the same approximate distance from the

median (10.5). Thus, there was no overall progression toward having all statements fall inside the Random Group cut-offs.

In addition, the rank orders in Table 20 also show that, although most statements were successfully moved inside the Random group cut-offs by Study Four, several had retained consistent positions within the overall rank order. On that basis, irrespective of whether or not these statements fall within the relevant markers, it is likely that participants had still ranked them systematically. For example, Table 20 shows that nCounteraction moved inside the Random Group cut-offs (of 7.33) with the first revision; however, it consistently falls within the top five statements in the overall rank order across studies. On that basis, it is likely that there are still problems with this statement's relative social desirability.

A similar pattern was also observed for nSex, nAggression, nRejection, and nInfavoidance whereby, although each of these statements falls within the Random Group cut-offs at some point, all four commonly make up the bottom four to five statements in the overall rank order. On that basis, it is unlikely that these statements have been successfully equalised with the others. Indeed, the former three statements were among the most difficult to adjust, as the underlying needs are difficult to capture in socially desirable terms. As such, achieving only marginal elevations required the use of strategies that are risky as they may have disrupted the meaning of the underlying need constructs. That is, it is possible that the statements no longer accurately reflect a pure measure of the relevant need. For example, in the case of nRejection, there was very little about the statement's wording that could be changed, as there is no conceivable way to capture the underlying need without retaining the reference to avoiding others (a list of all versions is presented in Appendix O). However, because of this, the statement kept falling within the bottom of the range, and the same themes kept emerging from the qualitative data (whereby the statement was consistently described as

rude and intolerant of others). The only way to move the statement inside the random group cut-offs was to include information that places the statement within the context of dealing with difficult others; however, there is a risk that this incorporates aspects of other needs, such as nHarmavoidance and nDefence.

In the case of nSex, it became clear that any use of the term “sex” caused the statement to tap into social norms about *appropriate* conduct in relation to sex. Participants seemed to be aware of the need to appear conservative when dealing with the topic and, consequently, seemed to use the ranking task as a means of conveying this information. That is, it is likely that ranking the statement low was used as a means of communicating discretion and conventional values with regard to sex and sexual conduct. On that basis, as long as the statement included the term “sex”, it was likely to continue to fall within the bottom of the range. The only conceivable way to elevate the social desirability was to exclude the viscerogenic components and, thereby, omit the term “sex” from the statement altogether. However, once again, there is a risk that this strategy weakens the statement as a measure of nSex. There is also a risk that it incorporates aspects of other needs, such as nNurturance, nSuccorance or nExhibition, for example.

Unlike the former two statements, nAggression was moved into the High SD Group at one point (in Study Three); however, it soon returned to the bottom of the range with the next revision. Upon reflection, it is possible that the Study Three version more closely reflected nDefence rather than nAggression, as language such as “fight for what I believe” and “opposition” used together might be more readily associated with fighting against some form of oppression. Considering that the former phrase remains in the current version, it is possible that aspects of nDefence are still included in the statement; thus, it might not be a *pure* measure of nAggression. However, one cannot necessarily draw conclusions on this without further investigation.

As previously mentioned, whilst the strategies outlined above might have increased the social desirability for these statements, the gains are not enough to infer equalisation with the others and, further, might have disrupted the underlying constructs. However, after exhausting all feasible ideas on how to capture the respective needs in socially desirable terms, it seems impossible to elevate the desirability levels enough to equalise them with the remaining statements. It might be that, as long as the statements effectively capture the respective underlying need constructs, they will be inherently confounded with low social desirability. This seems logical given that the constructs bare similarities to those that typically appear in the social desirability scales for normative instruments (e.g., unfriendliness, selfishness, sex, and aggression; Jackson, 1989b; Millon et al., 2009; Paulhus, 1998).

On the basis of the above, it appears that establishing equal social desirability among the statements that comprise the PNS is not achievable. Not only does it appear that some statements are inherently resistant to change but, also, the nature of the current methodology is such that, as problematic statements are corrected, new ones will inevitably emerge. Even if further iterations were to successfully move some of the remaining statements out of the High and Low SD Groups, this will likely result in other statements taking their place. Given the results of Study Four, the most likely candidates include nRejection, nAggression, and nSex. On that basis, I do not recommend continuing with further revisions using the current methodology. Although this may seem to contrast with the work of Bäckström et al., (2009), who were able to demonstrate reductions in social desirability for items on the IPIP-100, it is important to note that achieving absolute reductions is quite different to equating levels across a series of items.

Limitations and Methodological Challenges

One of the major challenges to the current research is the lack of statistical procedures available to assist with this methodology. In order to identify statements with relatively high and low social desirability levels, it is important to be able to effectively separate statements that were ranked systematically from those that were ranked randomly. However, with no generally accepted statistical techniques available to make this distinction, the only feasible option was to make inferences based on the distance between the statements' mean ranks and the overall median. However, again, there are no statistical procedures to help determine the point at which an average rank may be considered significantly different from the median of average ranks.

Due to the above, the best approach was to divide the entire possible range (1-20) into equal thirds and regard mean values that fall within the top and bottom ranges as having relatively high and low social desirability, respectively. However, as the results show, partitioning the means on the basis of these cut-offs could have obscured the number of statements that were ranked systematically. As previously discussed, there were several statements that were moved inside the Random Group cut-offs, yet still maintained similar positions within the rank orders across studies (namely, nCounteraction, nSex, nAggression, nRejection, and nInfavoidance, as discussed earlier). On that basis, although these statements fell inside the relevant markers, and are, therefore, not significantly different from other statements inside those markers, it is still possible that they were ranked systematically.

In addition, it is possible that some statements that did not fall outside of the Random Group at any stage were also ranked with some degree of consistency across studies. Table 20 also shows that the statements for nDeference, nSuccorance, and nDefence consistently fell within one half of the range across studies. Where nDeference fell in the top half of the range (ranks 1 to 10), the latter two fell within the

bottom half of the range (ranks 10 to 20). This could indicate a degree of agreement among participants' rankings as, if the statements were truly ranked randomly, then one would expect them to fall either side of the median (10.5) on an equal number of occasions. Thus, whilst the above statements were not identified as having problematic levels of social desirability on the basis of the set cut-offs, it is possible that participants had ranked them with some degree of consistency.

Whilst there were several shortcomings in the current research, the chosen methodology was the most appropriate option for addressing the research problem. Comparing the relative social desirability levels among the statements gave the best chance at detecting the relative differences between them. An alternative approach might have been to obtain self-ratings on each statement (whereby participants rate to what degree the statements are true of them on a likert-scale), and correlate these ratings with scores on a social desirability scale (such as the Paulhus Deception Scale; Paulhus, 1998). However, because this procedure relies on absolute rather than relative ratings, it is unlikely to be sensitive enough to detect differences among the statements.

This was part of the problem with Edwards' (1954) approach to matching the social desirability of items on the EPPS. Because matches were based solely on students' social desirability ratings for individual statements, his approach did not account for how the ratings change once the statements are compared with each other. Because of this, as Corah et al. (1958) later demonstrated, differences among the statements were overlooked. Thus, whilst there are problems with the current methodology, obtaining relative measures of the statements' social desirability levels was the best choice.

Overall, the current research raises questions about whether or not an ipsative measure of Murray's psychogenic needs is workable. It appears that some of the statements (and, therefore, some of the needs) are inherently confounded with social

desirability. Even if additional iterations were to successfully establish equal social desirability among all 20 test statements, this does not necessarily mean that they will share sufficiently equal social desirability once they are paired (as they would be once the test is in its intended format). Should future research reach this stage, the next step would be to present the paired statements to a sample of participants and asked them to select the most socially desirable statement in the pair (similar to the study by Corah et al., 1958). If the paired statements share equal social desirability, then each statement would be chosen on an equal number of occasions. A z-test for the difference between two proportions (Newsom, 2013) would determine whether or not one of the statements in the pair was perceived as significantly more socially desirable than the other.

Although the current research was not successful in equalising the social desirability of the statements that comprise the PNS, it has at least laid some exploratory ground work for building this kind of instrument. Indeed, this type of research is difficult to do, but constitutes only one approach to trying to equalise the statements. The focus of this research was to modify statements with high or low social desirability and try to advance them toward moderate levels of approximately equal social desirability. However, given that the crucial factor in ipsative instruments is *equal* rather than *moderate* (or *neutral*) social desirability, it is interesting to consider whether or not one might have more success with advancing the statements toward low social desirability. As the results have shown, there are certain statements in the PNS (i.e., nRejection, nSex, nAggression) that are inherently undesirable and, thus, cannot be sufficiently elevated. However, it might be possible to sufficiently lower the highly desirable statements (such as nNurturance and nAchievement, for example) so that they are comparable with the undesirable statements. In this instance, the first step might be to change the introductory phrase to “I need” or “I must”, as these phrases convey compulsion, and are likely to be viewed unfavourably. Whilst this alone is likely to

reduce the social desirability of all statements (including those that are already undesirable), if it is used in combination with other changes to highly desirable statements, it might achieve similarly low levels of social desirability among all of the statements.

In addition to the above, the current research does not account for how different situational demands might influence the perceived levels of social desirability. Research shows that general instructions to fake good will not necessarily represent faking as it occurs in specific contexts (Birkeland et al., 2006; Pauls & Crost, 2005); thus, what is considered socially desirable can differ depending on the testing situation or setting. However, given that the current research was exploratory in nature, it seemed logical to first determine whether or not it was possible to sufficiently equalise the social desirability levels in general before addressing the problem of context. If indeed it was possible to achieve this outcome, then it would be advisable to later investigate how the levels might be altered by different situational demands. Indeed, it is possible that certain statements (e.g., nAggression) might be viewed favourably in certain settings (e.g., sports or politics) but not in others.

Finally, it might also be considered that Murray's need taxonomy, with such a large number of constructs, is especially difficult to manage with this type of instrument. Whilst his taxonomy might have seemed like a good starting point due to its comprehensiveness and lasting influence within the personality paradigm, it includes a number of constructs that, at face value, appear to be inherently undesirable (namely, nSex, nRejection, and nAggression). It might be preferable to draw upon taxonomies that are more simplified, such as those proposed by Rotter (1954) or Jackson (1989b), for example. Each of these taxonomies reduces Murray's needs to a smaller number of higher-order constructs, and both exclude needs such as nRejection and nSex, for instance (Rotter's also excludes nAggression). Given that these needs proved most

difficult to represent in socially desirable terms, it might be easier to work with a taxonomy that excludes them.

Conclusion

In light of the shortcomings of existing measures, an ipsative instrument that provides a direct measure of the relative strength of psychological motives would be highly beneficial. In response to this, a new ipsative instrument is currently being developed; a 190-item forced-choice measure of Murray's psychogenic needs (the Psychogenic Need Scale). For the development of a reliable and valid ipsative instrument, it is crucial to minimise the confounding effects of social desirability. This is done by ensuring that the statements in each item pair share approximately equal social desirability. However, because the scale is in the early stages of development, this aspect had not yet been investigated.

Accordingly, I sought to assist in the preliminary stages of constructing the PNS by ensuring that the 20 statements that comprise the scale share approximately equal social desirability. Upon initial investigation, it was confirmed that there were indeed differences among the statements. Thus, several attempts were made to equalise the social desirability levels. However, after a series of studies, whereby the statements were repeatedly examined and reworded, the results demonstrated that differences still exist. It was eventually concluded that equalising the statements using the current methodology is unlikely; thus, the research was discontinued prior to reaching the intended research outcomes.

References

- Adler, A. (1930). Individual psychology. In C. A. Murchison (Ed.), *Psychologies of 1930* (pp. 395-405). Worcester, MA: Clark University Press.
- Allport, F. H. (1937). Telenomic description in the study of personality. *Journal of personality*, 5(3), 202-214.
- Anastasi, A., & Urbina, S. (1997). *Psychological Testing* (7th ed.). Upper Saddle River, NJ: Prentice Hall, Inc.
- Bäckström, M., Björklund, F., & Larsson, M. R. (2009). Five-factor inventories have a major general factor related to social desirability which can be reduced by framing items neutrally. *Journal of Research in Personality*, 43(3), 335-344.
- Barenbaum, N. B., & Winter, D. G. (2003). Personality. In D. K. Freedheim & I. B. Weiner (Eds.), *Handbook of Psychology: History of Psychology* (Vol. 1, pp. 177-203): John Wiley & Sons.
- Baron, H. (1996). Strengths and limitations of ipsative measurement. *Journal of Occupational and Organizational Psychology*, 69(1), 49-56.
- Ben-Nun, P. (2008). *Respondent fatigue. Encyclopedia of survey research methods. Sage Publications, Inc.* Thousand Oaks: SAGE Publications, Inc.
- Birkeland, S. A., Manson, T. M., Kisamore, J. L., Brannick, M. T., & Smith, M. A. (2006). A Meta-Analytic Investigation of Job Applicant Faking on Personality Measures. *International Journal of Selection and Assessment*, 14(4), 317-335.
- Bowlby, J. (1969). Attachment: Vol. 1 of Attachment and loss. *Pimlico, London. Reprint of Hogarth, New York.*
- Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development.* London: Basic Books, Inc.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.

- Breakwell, G. M. (1995). Interviewing. In G. M. Breakwell, S. Hammond & C. Fife-Shaw (Eds.), *Research methods in psychology* (pp. 230-242). London: Sage.
- Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, 28(5), 759.
- Burger, J. M. (2004). *Personality*. London: Wadsworth.
- Burgess-Limerick, T., & Burgess-Limerick, R. (1998). Conversational interviews and multiple-case research in psychology. *Australian Journal of Psychology*, 50, 63-70.
- Camara, W. J., Nathan, J. S., & Puente, A. E. (2000). Psychological test usage: Implications in professional psychology. *Professional Psychology: Research and Practice*, 31(2), 141.
- Cantwell, Z. M. (1991). Manifest needs of prospective counselors: a comparative study. *The Journal of psychology*, 125(1), 101-108.
- Caputo, D. V., Plapp, J. M., Hanf, C., & Anzel, A. S. (1965). The validity of the Edwards Personal Preference Schedule (EPPS) employing projective and behavioral criteria. *Educational and Psychological Measurement*.
- Caputo, D. V., Psathas, G., & Plapp, J. M. (1966). Test-retest reliability of the EPPS. *Educational and Psychological Measurement*, 26(4), 883-886.
- Cohen, R. J., & Swerdlik, M. (2005). Psychological testing and measurement: An introduction to tests and measurement. *McGraw-Hill, Boston, MA*.
- Cohen, R. J., Swerdlik, M. E., & Phillips, S. M. (1996). *Psychological testing and assessment: An introduction to tests and measurement*. California: Mayfield Publishing Co.
- Corah, N. L., Feldman, M. J., Cohen, I. S., Gruen, W., Meadow, A., & Ringwall, E. A. (1958). Social desirability as a variable in the Edwards Personal Preference Schedule. *Journal of consulting Psychology*, 22(1), 70.

- Creswell, J., W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). California: Sage Publications, Inc.
- Duane, S. (2004). Development of an ipsative measure of psychogenic needs. Unpublished thesis.
- Edwards, A. L. (1954). *Edwards personal preference schedule*. Oxford, England: Psychological Corporation.
- Edwards, A. L., & Abbott, R. D. (1973). Relationships among the Edwards Personality Inventory Scales, the Edwards Personality Preference Schedule, and the Personality Research Form Scales. *Journal of Consulting and Clinical Psychology*, 40(1), 27.
- Emmons, R. A., & McAdams, D. P. (1991). Personal strivings and motive dispositions: Exploring the links. *Personality and Social Psychology Bulletin*, 17(6), 648-654.
- Fowler, P. C. (1986). Confirmatory maximum likelihood factor analysis of the Personality Research Form-E. *Journal of Clinical Psychology*, 42(2), 302-306.
- French, E. G. (1958). A note on the Edwards Personal Preference Schedule for use with basic airmen. *Educational and Psychological Measurement*, 28(1), 109-115.
- Freud, S. (1922). *Beyond the pleasure principle*. London, England: The International Psycho-Analytical Press.
- Gebhart, G. G., & Hoyt, D. P. (1958). Personality needs of under-and overachieving freshmen. *Journal of Applied Psychology*, 42(2), 125.
- Groth-Marnat, G. (2003). *Handbook of Psychological Assessment* (4th ed.). New Jersey: John Wiley & Sons, Inc.
- Groth-Marnat, G. (2009). *Handbook of psychological assessment*: John Wiley & Sons.
- Guba, E. G. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29, 75-92.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate Data Analysis* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

- Hall, C. S., & Lindzey, G. (1957). Murray's personology. *Theories of personality*. (pp. 157-205): John Wiley & Sons Inc.
- Hall, C. S., Lindzey, G., & Campbell, J. B. (1997). *Theories of personality* (4th ed.). New York: J. Wiley & Sons, 1997.
- Hammond, S., & Barrett, P. (1996, January). *The psychometric and practical implications of the use of ipsative, forced-choice format, questionnaires*. Paper presented at the The British Psychological Society: Occupational Psychology Conference
- Heilbrun, A. B. (1972). Edwards Personal Preference Schedule. In O. K. Buros (Ed.), *The seventh Mental measurements yearbook* (Vol. II). Highland Park, N.J: Gryphon Press.
- Helms, E., Holden, R. R., & Ziegler, M. (2015). Response bias, malingering, and impression management. In G. J. Boyle, D. H. Saklofske & G. Matthews (Eds.), *Measures of Personality and Social Psychological Constructs*. London: Elsevier.
- Hicks, L. E. (1970). Some properties of ipsative, normative, and forced-choice normative measures. *Psychological Bulletin*, 74, 167-184.
- Hjelle, L. A., & Ziegler, D. J. (1992). *Personality Theories: Basic assumptions, research and applications*. New York McGraw-Hill.
- Ho, R. (2006). *Handbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS*. Boca Rafton, FL: Chapman and Hall.
- Hogan, R. (1989). Review of the Personality Research Form, 3rd Edition. In J. C. E. Conoley & J. J. Kramer (Eds.), *The tenth mental measurements yearbook* (10th ed., pp. 282). Lincoln, Nebraska: Buros Institute of Mental Measurements.
- Horney, K. (1937). *The neurotic personality of our time*. New York: W. W. Norton & company, inc.
- Horney, K. (1945). *Our inner conflicts: A constructive theory of neurosis*. New York.

- Horton, R. L. (1974). The Edwards personal preference schedule and consumer personality research. *Journal of Marketing Research*, 335-337.
- Huberman, A., & Miles, M. (2002). *The qualitative researcher's companion*. CA: Thousand Oaks.
- Ivankova, N., Creswell, J., & Stick, S. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, 18, 3-20.
- Jackson, D. (1989a). *Personality Research Form E*. Port Huron, Michigan: Sigma Assessment Systems, Inc.
- Jackson, D. (1989b). *Personality Research Form Manual*. Port Huron, Michigan: Sigma Assessment Systems, Inc.
- Liebert, R. M., & Spiegler, M. D. (1998). *Personality: Strategies and Issues*. New York: Cole Publishers.
- Lilienfeld, S. O., Wood, J. M., & Garb, H. N. (2000). The scientific status of projective techniques. *Psychological science in the public interest*, 1(2), 27-66.
- Lundy, A. (1985). Instructional set and thematic apperception test validity. *Journal of Personality Assessment*, 52(2), 309-320.
- MacCann, C., Ziegler, M., & Roberts, R. D. (2011). Faking in personality assessment: Reflections and recommendations. In M. Ziegler, C. MacCann & R. Roberts (Eds.), *New Perspectives on Faking in Personality Assessment* (pp. 309-329). New York: Oxford University Press.
- Maddi, S. R. (2001). *Personality theories: A comparative analysis* (6th ed.). Long Grove: Waveland Press, Inc.
- Maddi, S. R., & Costa, P. T. (2007). *Humanism in Personology: Allport, Maslow, and Murray*. New Brunswick/London: Aldine Transaction.
- Mann, J. H. (1958). Self-ratings and the EPPS. *Journal of Applied Psychology*, 42(4), 267.

- Mayer, J. D., Faber, M. A., & Xu, X. (2007). Seventy-five years of motivation measures (1930–2005): A descriptive analysis. *Motivation and Emotion*, 31(2), 83-103.
- McAdams, D. P. (1994). A psychology of the stranger. *Psychological Inquiry*, 5(2), 145-148.
- McAdams, D. P. (1995). What do we know when we know a person? *Journal of personality*, 63(3), 365-396.
- McAdams, D. P. (Ed.) (2000) Encyclopedia of psychology (Vols. 6). Washington, DC, US: American Psychological Association.
- McAdams, D. P. (2001). Personality Psychology. In J. S. Editors-in-Chief: Neil & B. B. Paul (Eds.), *International Encyclopedia of the Social & Behavioral Sciences* (pp. 11308-11313). Oxford: Pergamon.
- McAdams, D. P. (2008). Foreward. In H. Murray (Ed.), *Explorations in Personality*. Originally published in 1938, reprinted in 2008. New York: Oxford University Press.
- McClelland, D. C. (1985). How motives, skills, and values determine what people do. *American Psychologist*, 40(7), 812.
- McClelland, D. C. (1987). *Human motivation*: Cambridge University Press.
- McClelland, D. C., Koestner, R., & Weinberger, J. (1989). How do self-attributed and implicit motives differ? *Psychological Review*, 96(4), 690.
- McKee, M. G. (1972). Review of EPPS. In O. K. Buros (Ed.), *The seventh mental measurements yearbook* (Vol. II). Highland Park, N.J: Gryphon Press.
- Meade, A. W. (2004). Psychometric problems and issues involved with creating and using ipsative measures for selection. *Journal of Occupational and Organizational Psychology*, 77(4), 531-551.
- Miles, M. B., & Huberman, A. M. (1994). *An expanded source book: Qualitative data analysis* (2nd ed.). CA: Thousand Oaks.

- Millon, T., Millon, C., Davis, R. D., & Grossman, S. (2009). *Millon clinical multi-axial inventory-III (MCMI-III): manual*. Bloomington, MN: Pearson/PsychCorp.
- Mischel, W., & Shoda, Y. (1998). Reconciling processing dynamics and personality dispositions. *Annual Review of Psychology*, 49(1), 229-258.
- Morse, J. (1994). Designing funded qualitative research. *Handbook of qualitative research* (pp. 220-235). CA: Thousand Oaks.
- Moutsakas, C. (1990). *Heuristic research: Design, methodology, and applications*. Newbury Park, CA: Sage.
- Murray, H. A. (1936). Basic concepts for a psychology of personality. *Journal of General Psychology*, 15, 241-268.
- Murray, H. A. (1938). *Explorations in Personality*. New York: Oxford.
- Murray, H. A. (1963). Studies of stressful interpersonal disputations. *American Psychologist*, 18, 28-36.
- Nagy, S., & Viney, L. (1994). *The rigorous application of qualitative methods to constructivist research*. Paper presented at the Australian Psychological Society conference.
- Newsom, J. (Spring 2013). Single-Group Statistical Tests with a Binary Dependent Variable. Retrieved May 28, 2015, from http://www.upa.pdx.edu/IOA/newsom/da1/ho_z-test.pdf
- Patton, M. Q. (1990). *Qualitative evaluation and research methods* (2nd ed.). Newbury Park, California, USA: Sage.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Paulhus, D. L. (1998). *Paulhus deception scales (PDS): the balanced inventory of desirable responding-7: user's manual*. North Tonawanda, NY: Multi-Health Systems, Inc.

- Pauls, C. A., & Crost, N. W. (2005). Effects of different instructional sets on the construct validity of the NEO-PI-R. *Personality and Individual Differences*, 39(2), 297-308.
- Pervin, L. A. (1994). A critical analysis of current trait theory. *Psychological Inquiry*, 5(2), 103-113.
- Reeve, J. (2001). *Understanding motivation and emotion*. New York: Wiley.
- Reiss, S. (2004). Multifaceted nature of intrinsic motivation: The theory of 16 basic desires. *Review of General Psychology*, 8(3), 179.
- Reiss, S. (2008). *The normal personality*. New York: Cambridge University Press.
- Rogers, C. (1961). *On becoming a person: A therapist's view of psychotherapy*. London: Constable.
- Rotter, J. B. (1954). *Social learning and clinical psychology*. US: Prentice-Hall, Inc.
- Ryckman, R. M. (2004). *Theories of personality* (8th ed.). Belmont, CA: Thomson/Wadsworth.
- Saville, P., & Willson, E. (1991). The reliability and validity of normative and ipsative approaches in the measurement of personality. *Journal of Occupational Psychology*, 64(3), 219-238.
- Shaver, P. R., & Mikulincer, M. (2005). Attachment theory and research: Resurrection of the psychodynamic approach to personality. *Journal of Research in Personality*, 39(1), 22-45.
- Sheldon, K. M., Elliot, A. J., Kim, Y., & Kasser, T. (2001). What is satisfying about satisfying events? Testing 10 candidate psychological needs. *Journal of Personality and Social Psychology*, 80(2), 325-339.
- Shultz, D. P. (1976). *Theories of Personality*. Monterey, Calif: Brooks Cole Publishing Company.

- Smith, J. A. (1995). Semi-structured interviewing and qualitative analysis. In J. Smith, R. Herre & L. V. Langenhove (Eds.). London, UK: Sage.
- Spangler, W. (1992). Validity of questionnaire and TAT measures of need for achievement: Two meta-analyses. *Psychological Bulletin*, 112, 140-154.
- Streiner, D. L., & Norman, G. N. (2003). *Health Measurement Scales* (3rd ed.). Oxford: Oxford University Press.
- Teglasi, H. (2001). *Essentials of TAT and Other Storytelling Techniques Assessment. Essentials of Psychological Assessment Series*. New Jersey: John Wiley & Sons, Inc.
- Thorne, A. (1989). Conditional patterns, transference, and the coherence of personality across time. In D. M. Buss & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions* (pp. 149-159). New York: Springer.
- Triplet, R. G. (1992). Henry A Murray: The making of a psychologist. *American Psychologist*, 47, 299-307.
- Tuerlinckx, F., DeBoeck, P., & Lens, W. (2002). Measuring needs with the thematic apperception test: A psychometric study. *Journal of Personality and Social Psychology*, 3, 448-461.
- Weiner, B. (1992). *Human motivation: Metaphors, theories, and research*: SAGE Publications, Inc.
- Winter, D. G., John, O. P., Stewart, A. J., Kohnen, E. C., & Duncan, L. E. (1998). Traits and motives: Toward an integration of two traditions in personality research. *Psychological Review*, 105(2), 230.
- Wohl, J., & Palmer, A. B. (1970). Correlations between adjective check list and Edwards personal preference schedule measures of Murray's needs. *Psychological Reports*, 27, 525-526.

Appendices

Appendix A: Test Statements (Study One)

One statement per card (italics and numbers did not appear on the cards)

1. Being able to direct or influence others. (*nDominance*)
2. Being able to follow the directions of a respected leader. (*nDeference*)
3. Being able to do things in my own way, without others directing me. (*nAutonomy*)
4. Being able to forcefully overcome opposition or beat an opponent. (*nAggression*)
5. Being able to work toward producing or achieving something that is difficult to do. (*nAchievement*)
6. Being able to admit to, apologise for, and accept the consequences of my actions. (*nAbasement*)
7. Being able to experience a variety of sensory stimulation (different smells, interesting sounds and sights, textures to touch, etc.) (*nSentience*)
8. Being able to attract and hold the attention of other people. (*nExhibition*)
9. Being able to have fun (*nPlay*)
10. Being able to experience the company of other people, regardless of the type or quality of relationship. (*nAffiliation*)
11. Being able to avoid or ignore people whom I don't enjoy being with. (*nRejection*)
12. Being able to comfort and care for another person. (*nNurturance*)
13. Being able to avoid any risk of embarrassment or humiliation. (*nInfavoidance*)
14. Being able to defend myself against blame and justify my opinions or actions. (*nDefence*)
15. Being able to continue striving to reach a goal rather than admit defeat. (*nCounteraction*)
16. Being able to avoid pain, injury, or a risk of any harm. (*nHarmavoidance*)
17. Being able to keep myself and my belongings neat, tidy and in order. (*nOrder*)
18. Being able to learn new things and fully understand things. (*nUnderstanding*)
19. Being able to have my sexual needs fulfilled/satisfied. (*nSex*)
20. Being able to obtain comfort and support and to be cared for by another person. (*nSuccorance*)

Appendix B: Instructions for Participants

Thank you for participating in this study. The purpose of this activity is to evaluate each of the statements on a newly developed test, and determine whether the statements are affected by social desirability.

What you will be asked to do today, is examine the list of statements that are written on the cards provided, and rank them in order from 1-20 from the most socially desirable, to the least socially desirable (that is, the most socially desirable should be ranked number 1, and the least socially desirable should be ranked number 20). Before you begin, please take some time to carefully read the provided paragraph that explains what social desirability is. Should you have any questions, please do not hesitate to ask me.

Once you have read and understood the explanation provided, please rank the statements by simply placing them in descending order from most socially desirable to least socially desirable. Please ensure that you rank all statements individually, and remember that each position in the ranking (1-20) may only be assigned once.

Please feel free to ask me any questions now before you begin.

Thank you.

Lisa Harris

Appendix C: Social Desirability Explained (Study One)

Social desirability can be described as the tendency to report or describe oneself in the most favourable light. For example, a heavy drinker may under report their daily alcohol intake, or a dieter may under-estimate the number of times they ‘cheat’ during an average week.

Social desirability bias can be particularly problematic on self-report measures as most items or statements have one answer that is recognisable as more socially desirable or socially acceptable than others.

When completing today’s task, it may be useful to think about which items (if any) you might consider to be the most socially desirable if you were, for example, applying for a job and hoping to project the most favourable impression of yourself.

Appendix D: Participant Consent Form

I (the participant) have read and understood the information letter outlining the research project and have been given the opportunity to ask questions, any of which, have been answered to my satisfaction.

I understand that my participation in this research is completely voluntary, and I may refuse to answer any questions or withdraw from the study at any time without consequence.

I agree that research data gathered for the study may be published, provided I am not identifiable.

Age _____

Gender _____

Country of Birth _____

Cultural Affiliation (Please mark with a cross)

Anglo-Australian ☐ Asian ☐ Indigenous ☐ Other ☐

Participant Signature

Date

Researcher Signature

Date

Appendix E: Participant Information Letter

(On Edith Cowan University letter head)

Dear Participant

My name is Lisa Harris and I am a student at Edith Cowan University. The research in which you may choose to participate is being conducted as part of the requirements of a Doctor of Philosophy. The project has been approved by the Human Research Ethics Committee.

As a participant in this study, you will be asked read a short written explanation of social desirability. Once you have done this, you will then be asked to read the accompanying list of 20 statements, and rank them in order of social desirability. On completion of this task, you will be asked take part in short interview pertaining to the order you have chosen to rank the items. The interview will be recorded, however, all data remains confidential, and at no time will your name be reported along with your responses. Your participation in this research will be required for only one session and will take approximately 30 minutes.

Please be assured that any information you provide will be held in strict confidence by the researcher. As you are not required to provide any personal details on the materials supplied, no-one will be able to identify you from your test. Further, all data will be reported in group form only. At the conclusion of the study, a report of the results will be available upon request.

Please understand that your participation in this study is voluntary, and you are free to withdraw at any time without consequence. Should you have any questions or concerns regarding this research please do not hesitate to contact myself, or my supervisors on the contact details listed below. Should you prefer to speak with someone who is independent from the project, please contact the *Research Ethics Officer on 6304 2170*.

If you wish to participate, please complete the attached consent form and return it to me. Your assistance is greatly appreciated.

Thank you

Lisa Harris

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Appendix F: Semi-structured Interview Questions

1. How did you find the task?
 - a. How difficult was it for you to rank the statements?
2. Which statements were easier for you to place in order?
 - a. What is it about those statements that made them easy to rank?
 - b. What is it about those statements that made them un/desirable?
 - c. How might you change the wording in order to make the statement more/less socially desirable?
3. What does this statement say about a person?
 - a. What assumptions might people make about someone who describes themselves in this way?
 - b. What is it about the statement that creates that impression?
4. Tell me about the statements you found more difficult to rank?
 - a. What is it about those statements that made it difficult?
5. How confident are you with the order you have chosen?

Appendix G: Test Statements (Study Two)

One statement per card (italics and numbers did not appear on the cards)

1. It is personally satisfying to work toward producing or achieving something that is difficult to do. (*nAchievement*)
2. It is personally satisfying to learn new things and fully understand them. (*nUnderstanding*)
3. It is personally satisfying to admit to, apologise for, and accept the consequences of my actions. (*nAbasement*)
4. It is personally satisfying to comfort and care for another person. (*nNurturance*)
5. It is personally satisfying to continue striving to reach a goal rather than admit defeat. (*nCounteraction*)
6. It is personally satisfying to have fun (*nPlay*)
7. It is personally satisfying to experience the company of other people, regardless of the type or quality of relationship. (*nAffiliation*)
8. It is personally satisfying to follow the directions of a respected leader. (*nDeference*)
9. It is personally satisfying to attract and hold the attention of other people. (*nExhibition*)
10. It is personally satisfying to do things in my own way, without others directing me. (*nAutonomy*)
11. It is personally satisfying to direct or influence others. (*nDominance*)
12. It is personally satisfying to experience a variety of sensory stimulation (different smells, interesting sounds and sights, textures to touch, etc.) (*nSentience*)
13. It is personally satisfying to obtain comfort and support and to be cared for by another person. (*nSuccorance*)
14. It is personally satisfying to keep myself and my belongings neat, tidy and in order. (*nOrder*)
15. It is personally satisfying to avoid pain, injury, or a risk of any harm. (*nHarmavoidance*)
16. It is personally satisfying to defend myself against blame and justify my opinions or actions. (*nDefence*)
17. It is personally satisfying to avoid any risk of embarrassment or humiliation. (*nInfavoidance*)

18. It is personally satisfying to have my sexual needs fulfilled/satisfied. (*nSex*)
19. It is personally satisfying to avoid or ignore people whom I don't enjoy being with. (*nRejection*)
20. It is personally satisfying to forcefully overcome opposition or beat an opponent. (*nAggression*)

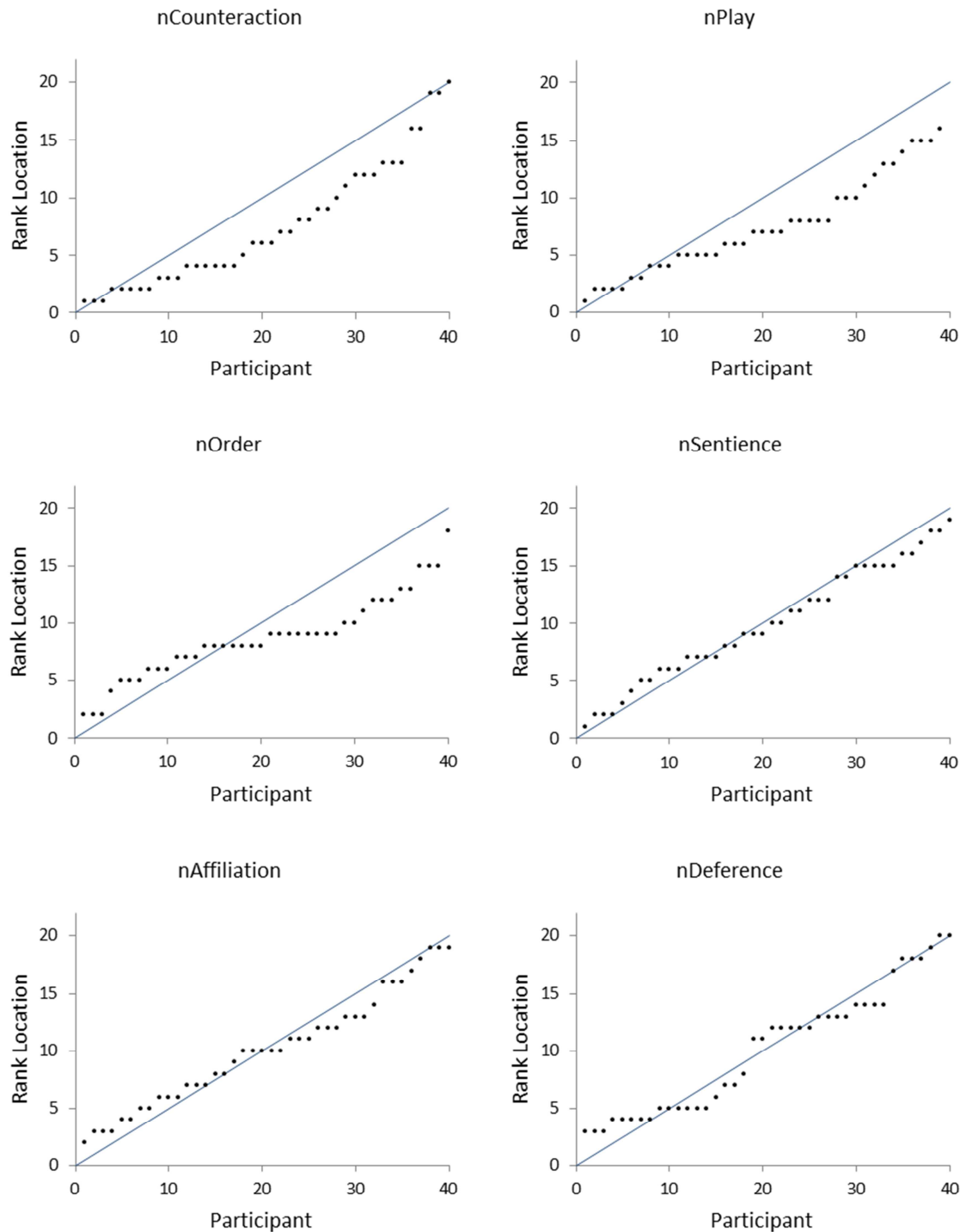
Appendix H: Social Desirability Explained (Studies Two-Four)

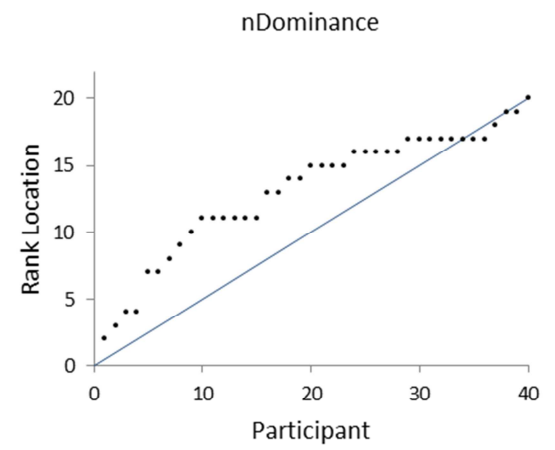
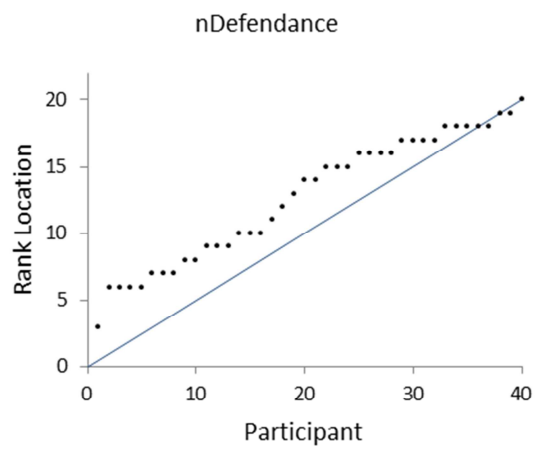
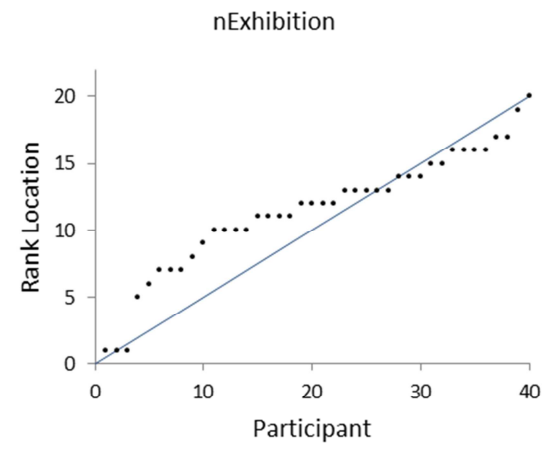
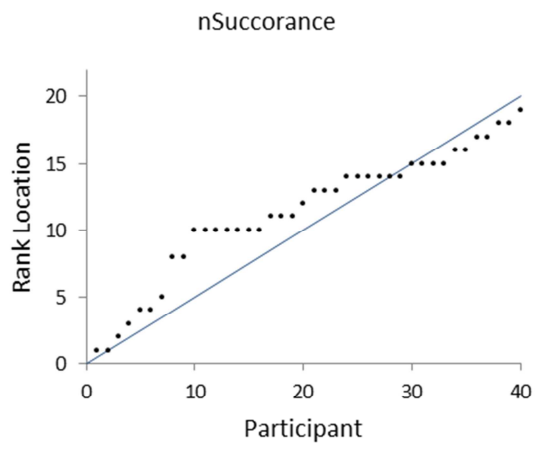
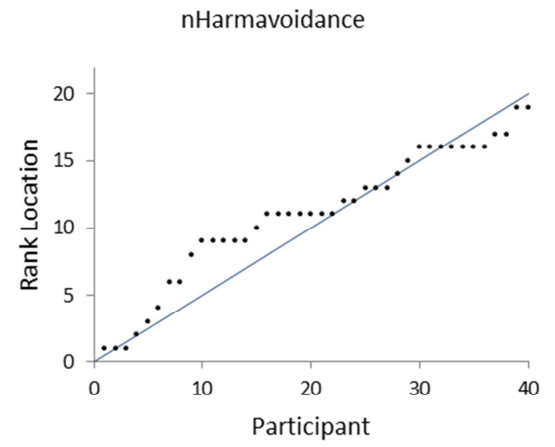
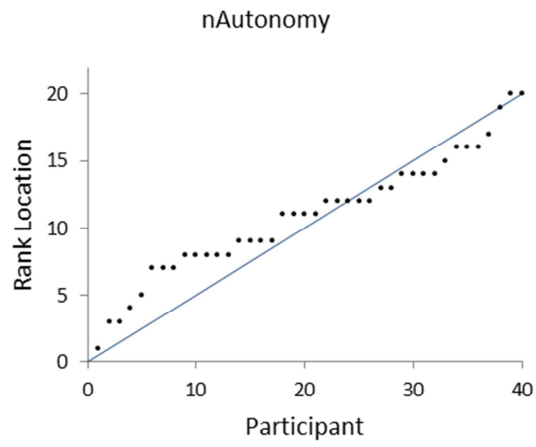
Social desirability is a term used to describe the tendency to respond to tests/questionnaires in a way that will be viewed positively by others. This typically takes the form of over reporting good behaviour, or under reporting bad behaviour.

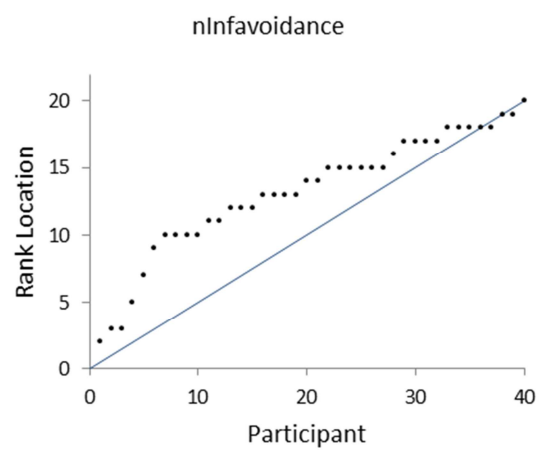
As an example, on a health related questionnaire, when confronted with the question, “Do you use illicit drugs?” a person might think that taking illicit drugs could be viewed negatively. This might lead the person to falsely report that they don’t use illicit drugs at all, or they might under report how frequently they use illicit drugs. Conversely, when asked “What is your daily fruit and vegetable intake?” a person may become aware that a diet high in healthy foods is more desirable than a diet high in fried and fatty foods. As a result, that person may over-estimate the amount of fruit and veg (and under-estimate the fatty foods) consumed in his or her daily diet.

For today’s task, it may help to think about the different people you associate with in different areas of your life (e.g., family member, friend, work colleague, or member of a common interest/community group) and consider which of the statements on the cards provided might be viewed as favourable (socially desirable) and unfavourable (socially undesirable).

Appendix I: Graphed Data for Statements Allocated to the Random Group (Study Two)





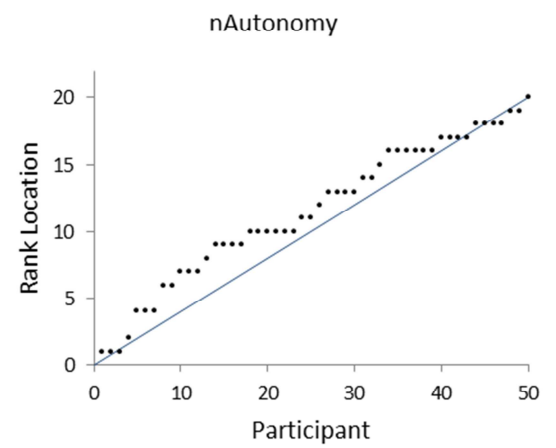
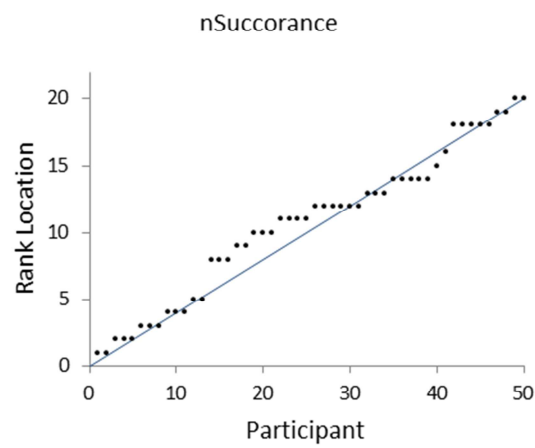
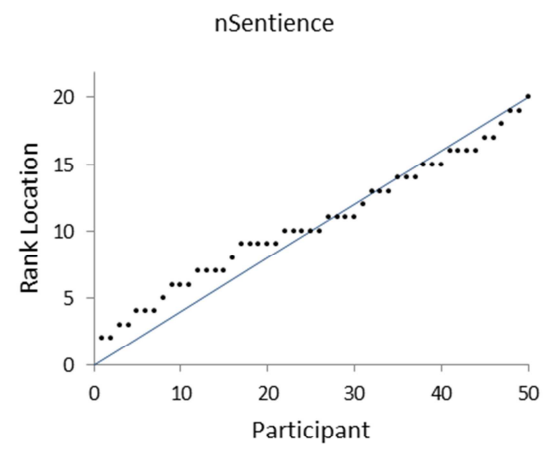
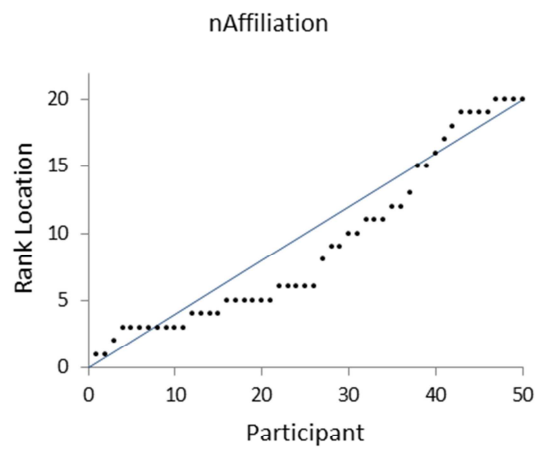
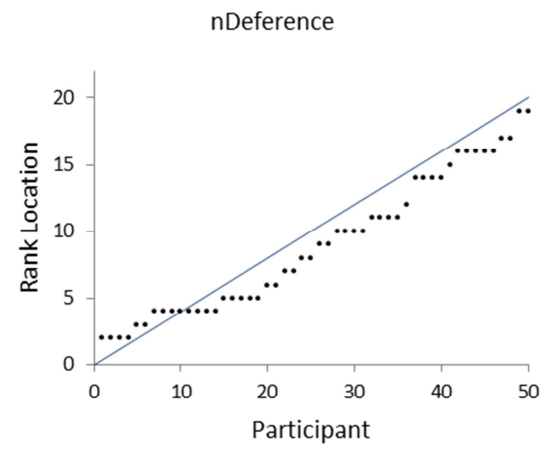
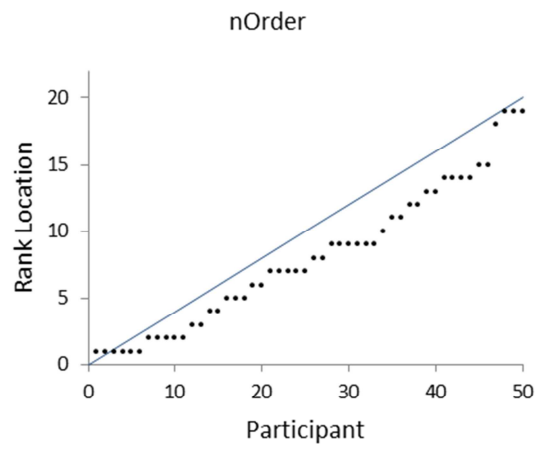


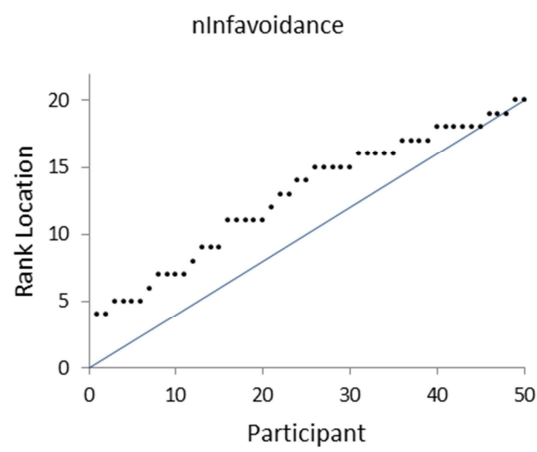
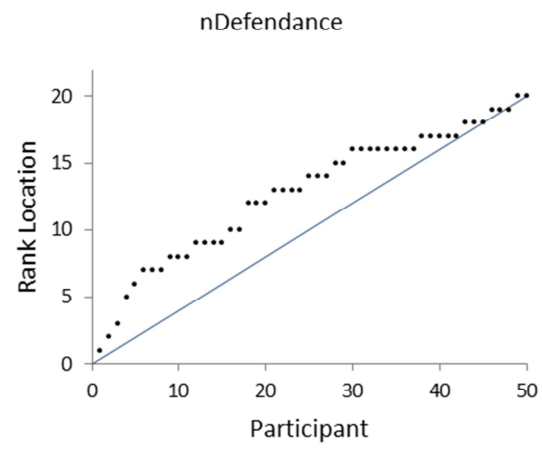
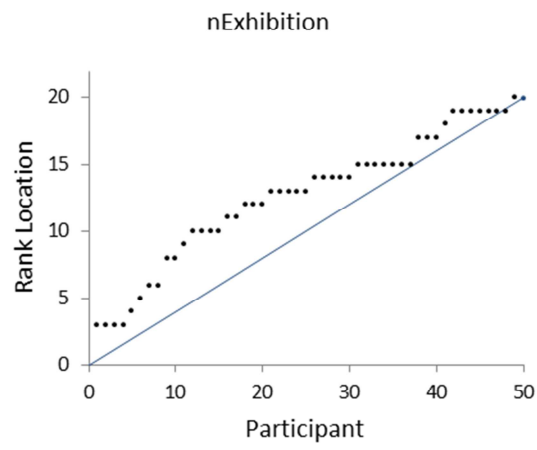
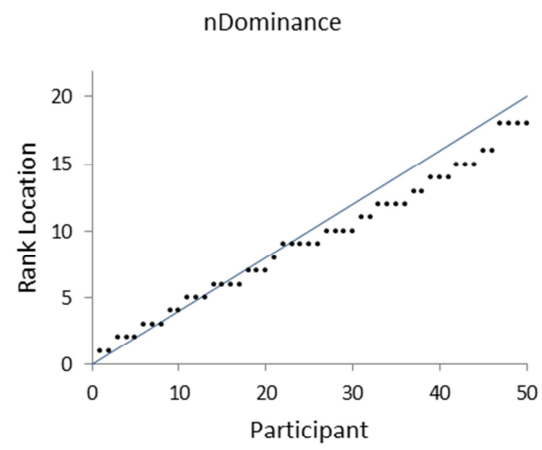
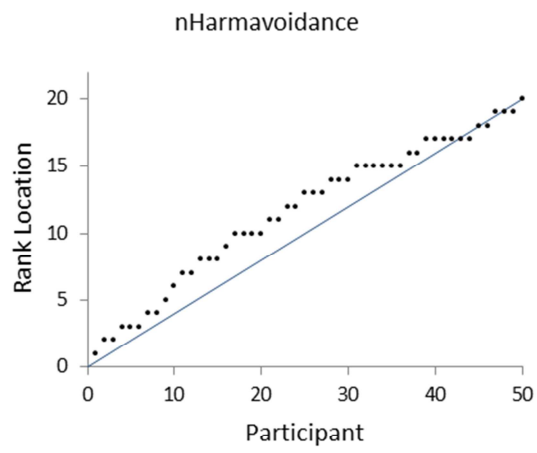
Appendix J: Test Statements (Study Three)

One statement per card (italics and numbers did not appear on the cards)

1. It is personally satisfying to set myself difficult tasks, just so I can feel like I'm achieving something. (*nAchievement*)
2. It is personally satisfying to reflect on and understand things, solely as an intellectual exercise. (*nUnderstanding*)
3. It is personally satisfying to accept criticism without complaint. (*nAbasement*)
4. It is personally satisfying to attend to the needs of others without regard for my own needs. (*nNurturance*)
5. It is personally satisfying to continue striving to reach a goal and never admit defeat. (*nCounteraction*)
6. It is personally satisfying to have fun (*nPlay*)
7. It is personally satisfying to experience the company of other people, regardless of the type or quality of relationship. (*nAffiliation*)
8. It is personally satisfying to follow the directions of a respected leader. (*nDeference*)
9. It is personally satisfying to attract and hold the attention of other people. (*nExhibition*)
10. It is personally satisfying to do things in my own way, without others directing me. (*nAutonomy*)
11. It is personally satisfying to direct or influence others. (*nDominance*)
12. It is personally satisfying to experience a variety of sensory stimulation (different smells, interesting sounds and sights, textures to touch, etc.) (*nSentience*)
13. It is personally satisfying to obtain comfort and support and to be cared for by another person. (*nSuccorance*)
14. It is personally satisfying to keep myself and my belongings neat, tidy and in order. (*nOrder*)
15. It is personally satisfying to avoid pain, injury, or a risk of any harm. (*nHarmavoidance*)
16. It is personally satisfying to defend myself against blame and justify my opinions or actions. (*nDefence*)
17. It is personally satisfying to avoid situations that are potentially humiliating. (*nInfavoidance*)

18. It is personally satisfying to experience and express my sexuality. (*nSex*)
19. It is personally satisfying to avoid people I have reason to dislike. (*nRejection*)
20. It is personally satisfying to fight for what I believe and overcome opposition.
(*nAggression*)

Appendix K: Statements Allocated to the Random Group (Study Three)

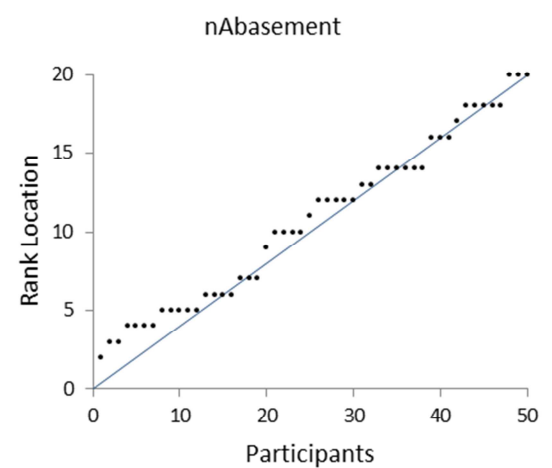
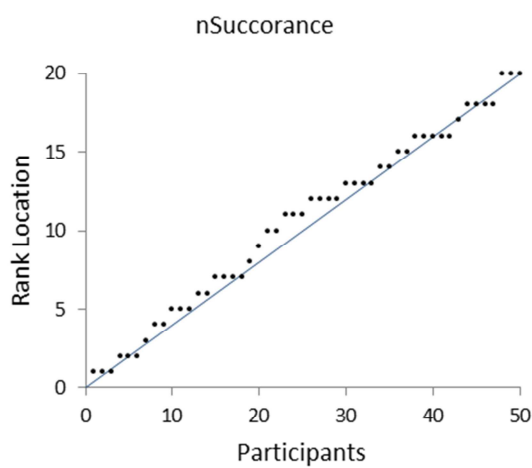
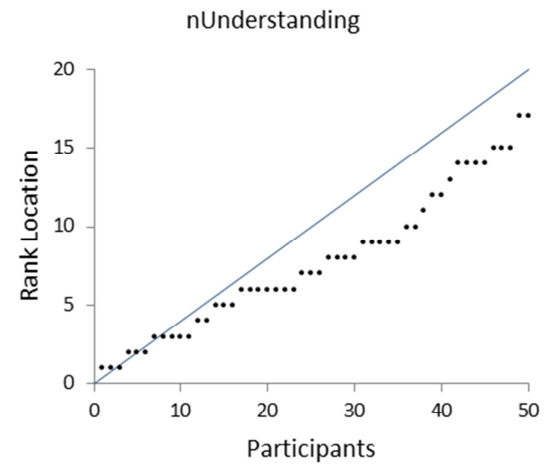
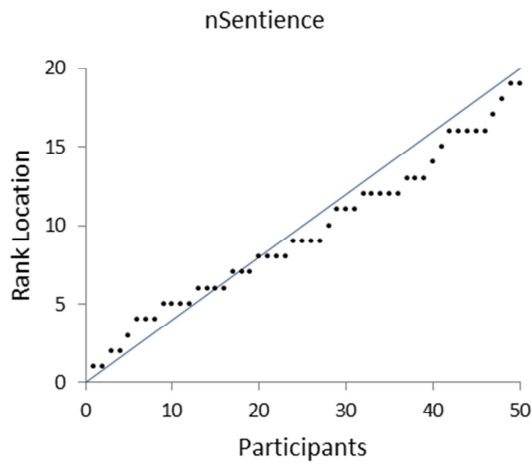
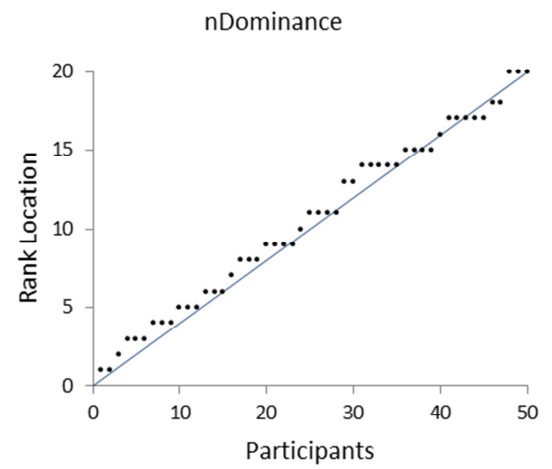
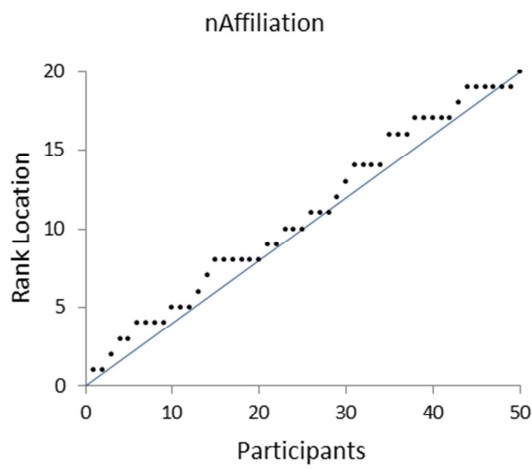


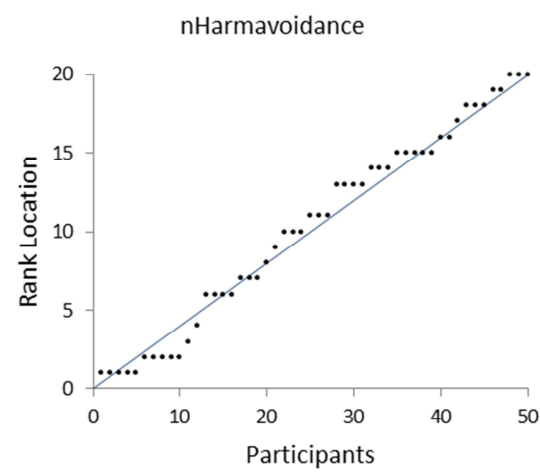
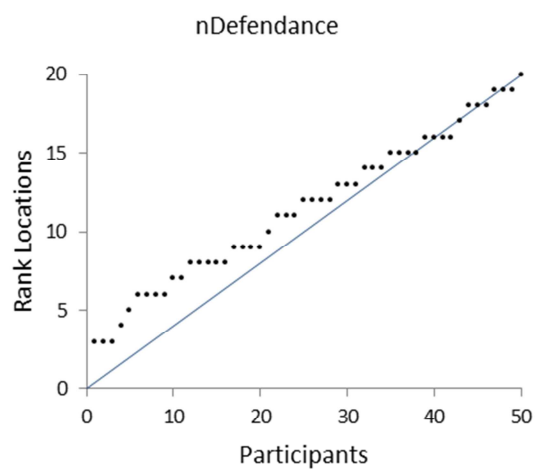
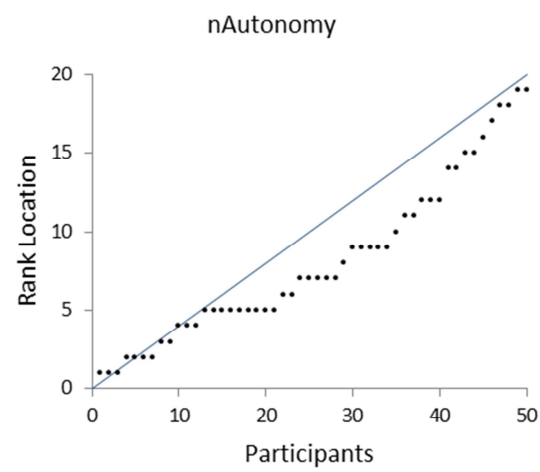
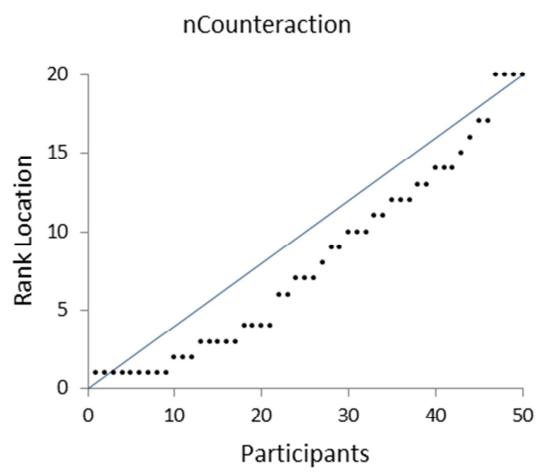
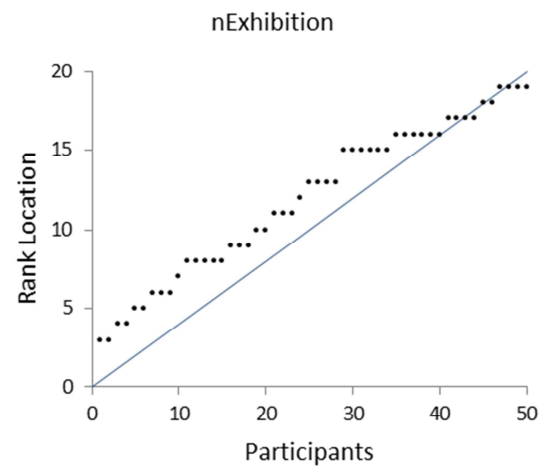
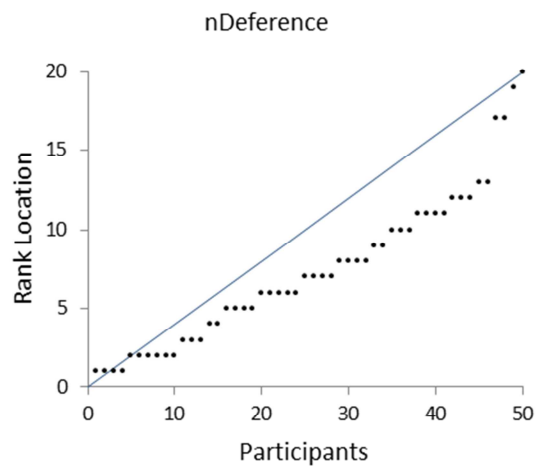
Appendix L: Test Statements (Study Four)

One statement per card (italics and numbers did not appear on the cards)

1. It is personally satisfying to set myself difficult tasks, just so I can feel like I'm achieving something. (*nAchievement*)
2. It is personally satisfying to reflect on and understand things, solely as an intellectual exercise. (*nUnderstanding*)
3. It is personally satisfying to accept criticism without complaint. (*nAbasement*)
4. It is personally satisfying to attend to the needs of others even when it means neglecting myself. (*nNurturance*)
5. It is personally satisfying to continue striving to reach a goal, and never admit defeat no matter what it costs me. (*nCounteraction*)
6. It is personally satisfying to have fun rather than attend to responsibilities. (*nPlay*)
7. It is personally satisfying to experience the company of other people, regardless of the type or quality of relationship. (*nAffiliation*)
8. It is personally satisfying to follow the directions of a respected leader. (*nDeference*)
9. It is personally satisfying to attract and hold the attention of other people. (*nExhibition*)
10. It is personally satisfying to do things in my own way, without others directing me. (*nAutonomy*)
11. It is personally satisfying to direct or influence others. (*nDominance*)
12. It is personally satisfying to experience a variety of sensory stimulation (different smells, interesting sounds and sights, textures to touch, etc.) (*nSentience*)
13. It is personally satisfying to obtain comfort and support and to be cared for by another person. (*nSuccorance*)
14. It is personally satisfying to keep myself and my belongings neat, tidy and in order. (*nOrder*)
15. It is personally satisfying to avoid pain, injury, or a risk of any harm. (*nHarmavoidance*)
16. It is personally satisfying to defend myself against blame and justify my opinions or actions. (*nDefendence*)

17. It is personally satisfying to avoid situations that are potentially humiliating.
(*nInfavoidance*)
18. It is personally satisfying to feel attractive or desirable to others. (*nSex*)
19. It is personally satisfying to keep my distance from people who are difficult to get along with. (*nRejection*)
20. It is personally satisfying to forcefully fight for what I believe and defeat an opponent. (*nAggression*)

Appendix M: Statements Allocated to the Random Group (Study Four)



Appendix N: Discarded Statement Alternatives

nAchievement

All versions for nAchievement were generated based on findings from Studies One and Two. The following four statements were formulated with the intention of maintaining the integrity of nAchievement without overlapping with Recognition:

1. It is personally satisfying to seek out and master difficult tasks, without reward or recognition from others.
2. It is personally satisfying to always achieve the highest standards, even if it goes unnoticed.
3. It is personally satisfying to attain high standards and master difficult tasks, even if it goes unnoticed.
4. It is personally satisfying to master difficult tasks even if it goes unnoticed.

The following seven options were discarded because they do not adequately capture need satisfaction (findings from Study Two). Those with terms and phrases like “work towards” or “challenge” were discarded as there was evidence in the qualitative data that this language was viewed positively. Others were not expected to effectively reduce the social desirability:

5. It is personally satisfying to demand the best of myself in all situations.
6. It is personally satisfying to continue achieving and attaining high standards.
7. It is personally satisfying to focus on a goal and reach high standards.
8. It is personally satisfying to challenge myself and meet high standards.
9. It is personally satisfying to work hard and achieve expert status.
10. It is personally satisfying to stay focused and achieve something that is difficult to do.
11. It is personally satisfying to work toward or producing something that is of a high standard.

The following six options were discarded because they overlap with nAggression:

12. It is personally satisfying to succeed with difficult tasks and beat your opponents.
13. It is personally satisfying to master difficult tasks and overcome opposition in the process.
14. It is personally satisfying to succeed with difficult tasks even at the cost of other people.
15. It is personally satisfying to succeed with difficult tasks at all costs.
16. It is personally satisfying to work hard and achieve success at all costs.
17. It is personally satisfying to work hard and be competitive to succeed with difficult tasks.

nUnderstanding

All versions generated for nUnderstanding were based on the Study One and Study Two findings. The first three versions do not adequately convey thought rather than action. Versions four and five are variants of the final selection version presented in-text:

1. It is personally satisfying to fanaticize, and ponder ideas that others may find irrelevant.
2. It is personally satisfying to fully understand things, regardless of the content or subject matter.
3. It is personally satisfying to fully understand ideas and theory, regardless of relevance or usefulness.
4. To reflect on ideas and concepts solely for the intellectual stimulation/gratification.
5. To reflect on and understand ideas and concepts solely as an intellectual exercise.

The following seven options were discarded as they were not expected to adequately reduce the social desirability. Further, they do not adequately communicate lack of action (Study One findings), nor do they convey the possibility that the subject matter may not be of particular use or value:

6. It is personally satisfying to think deeply and logically about new ideas and concepts.
7. It is personally satisfying to achieve a thorough understanding of new ideas and concepts.
8. It is personally satisfying to learn about and develop a deep understanding of ideas and theories.
9. It is personally satisfying to apply reason and logic to gain an understanding of events/concepts.
10. It is personally satisfying to use an analytical approach to gain an understanding of events/concepts.
11. To deal only with facts and logic to make sense of ideas and concepts.

nNurturance

All versions generated for nNurturance were based on the findings from Studies One, Two, and Three. The twelve options listed below were not expected to sufficiently decrease the social desirability; thus, they were discarded:

1. It is personally satisfying to care for others and put their needs first.
2. It is personally satisfying to care for others and attend to their needs rather than my own.
3. It is personally satisfying to care for others and gratify their needs.
4. It is personally satisfying to sympathise with others and gratify their needs.
5. It is personally satisfying to sympathise with, and gratify the needs of others.
6. It is personally satisfying to comfort and care for others regardless of whether or not I receive it in return.
7. It is personally satisfying to comfort and care for others regardless of whether or not it is reciprocated.
8. It is personally satisfying to care for others and attend to their needs.
9. It is personally satisfying to attend to the needs of others.
10. It is personally satisfying to put the needs of others first.

11. It is personally satisfying to attend to the needs of others, even if it is not reciprocated.
12. It is personally satisfying to care for others and put their needs first.

nAbasement

All versions generated for nAbasement were based on the Study One and Study Two findings. The below versions were discarded as they are likely to reduce the social desirability too much.

1. It is important to apologise for my actions and accept blame.
2. It is important to apologise for my actions and accept criticism.
3. It is important to act with humility and let others have the best.
4. It is important to act with humility and accept criticism.

nCounteraction

All versions generated for nCounteraction were based on the Study One and Study Two findings. Option one was discarded as it overlaps with nInfavoidance. The others were discarded as they were expected to reduce the social desirability too much.

1. It is personally satisfying to continue striving to reach a goal, rather than experience the shame of failure.
2. It is personally satisfying to continue striving to reach a goal no matter what.
3. It is personally satisfying to continue striving to reach a goal and ensure I never fail.
4. It is personally satisfying to persevere even if there is very little chance of success.
5. It is personally satisfying to continue striving to reach a goal against all odds.
6. It is personally satisfying to overcome weakness and failure at all cost.

nPlay

The below options for nPlay were based on findings from Study Three, but were discarded as they were likely to reduce the social desirability too much:

1. It is personally satisfying to have fun and forget my troubles
2. It is personally satisfying to have fun and make a joke of things

nInfavoidance

All alternatives generated for nInfavoidance were based on the Study One and Study Two findings. The below versions are similar to those presented in-text with some minor variations in language.

1. It is personally satisfying to avoid potentially humiliating situations.
2. It is personally satisfying to avoid risk of humiliation or belittlement.
3. It is personally satisfying to avoid humiliation.
4. It is personally satisfying to quit embarrassing or humiliating situations.

nSex

The alternatives for nSex were generated on the basis of the findings from Study One, Two, and Three. The three statements listed below were discarded as they imply a relationship with one other and, thus, may overlap with nNurturance:

1. It is personally satisfying to be affectionate and romantic with another.
2. It is personally satisfying to be affectionate and intimate with another.
3. It is personally satisfying to experience sexual attraction and intimacy.

The following statements were discarded because the references to multiple relationships and/or sexual expression are likely to be associated with sexual promiscuity:

4. It is personally satisfying to enjoy healthy and fulfilling sexual relationships.
5. It is personally satisfying to form physically intimate relationships.
6. It is personally satisfying to form sexually intimate relationships.
7. It is important to enjoy sexual relationships and experiences.
8. It is important to experience sexual relationships and expression.
9. It is important to experience and express sexuality in a variety of ways.

The below versions were generated following the Study Three findings, but were discarded as the language may sound feminine:

10. It is personally satisfying to pursue or seduce someone I find attractive.
11. It is personally satisfying to be romanced or to romance another.
12. It is personally satisfying to be intimate and romantic with another.
13. It is personally satisfying to pursue or seduce an intimate partner.

nRejection

The alternatives for nRejection were generated on the basis of the findings from Study One, Two, and Three. The following eight statements were constructed in an attempt to intensify externalising behaviour. Versions one, five, six, and eight were discarded as they are likely to overlap with nHarmavoidance. The remaining versions were not expected to resolve the social desirability problem:

1. It is personally satisfying to keep my distance from people who aggravate me.
2. It is personally satisfying to stay away from people who are difficult or irritating.
3. It is personally satisfying to stay away from people who are difficult or have a bad attitude.
4. It is personally satisfying to avoid people who are negative.
5. It is personally satisfying to avoid people who have a negative impact on me.
6. It is personally satisfying to avoid people who are negative or annoying.
7. It is personally satisfying to avoid people who are rude or arrogant.
8. It is personally satisfying to avoid people who are rude or aggravating.

The six statements below represent various attempts to remove references to “avoiding or ignoring others”. They were discarded because they potentially overlap with nAutonomy:

9. It is personally satisfying to choose who I associate with.
10. It is personally satisfying to make my own choices about who I associate with.
11. It is personally satisfying to be selective about who I associate with.
12. It is personally satisfying to be selective in my choice of friends or associates.
13. It is personally satisfying to choose my friends and associates wisely.
14. It is personally satisfying to be selective about whom I associate with.

The 11 versions below were discarded as they were not expected to effectively increase the social desirability. Versions 16 to 18 were constructed in hope of removing the rudeness conveyed by the original statement, but were discarded as they are not well phrased.

15. It is personally satisfying to avoid people I dislike when it can be done diplomatically.
16. It is personally satisfying to diplomatically avoid people I don't like.
17. It is personally satisfying to avoid, where possible, people I dislike.
18. It is personally satisfying to associate only with those I enjoy being with.
19. It is personally satisfying to associate solely with people I enjoy being with.
20. It is personally satisfying to surround myself with pleasant company.
21. It is personally satisfying to separate myself from or avoid people I don't enjoy being with.
22. It is personally satisfying to exclude myself from groups I'd rather not associate with.
23. It is personally satisfying to be selective about whom I associate with.
24. It is personally satisfying to avoid those I dislike or resent.
25. It is personally satisfying to avoid rather than attack an opponent.

nAggression

All alternatives for nAggression were based on the findings from Studies One and Two. Versions one to three were discarded as they are likely to overlap with nDefence; the remaining six were discarded as they were not expected to effectively increase the social desirability:

1. It is personally satisfying to face up to and overcome an opponent.
2. It is personally satisfying to take on and overcome opposition.
3. It is personally satisfying to stand up for myself and overcome opposition.
4. It is personally satisfying to fight for what I believe and forcefully overcome opposition.
5. It is personally satisfying to fight for what I believe and defeat opposition.
6. It is personally satisfying to fight for what I believe and beat the opposition.
7. It is personally satisfying to overcome opposition and fight for what I believe is right.
8. It is personally satisfying to fight for what I believe in and overcome opposition.
9. It is personally satisfying to fight for what I believe in and take on opposition.

Appendix O: Versions of the Altered Test Statements From Each Study

nAchievement

1. Being able to work toward producing or achieving something that is difficult to do.
2. It is personally satisfying to work toward producing or achieving something that is difficult to do.
3. It is personally satisfying to set myself difficult tasks, just so I can feel like I'm achieving something.

nUnderstanding

1. Being able to learn new things and fully understand things.
2. It is personally satisfying to learn new things and fully understand them.
3. It is personally satisfying to reflect on and understand things, solely as an intellectual exercise.

nAbasement

1. Being able to admit to, apologise for, and accept the consequences of my actions.
2. It is personally satisfying to admit to, apologise for, and accept the consequences of my actions.
3. It is personally satisfying to accept criticism without complaint.

nNurturance

1. Being able to comfort and care for another person.
2. It is personally satisfying to comfort and care for another person.
3. It is personally satisfying to attend to the needs of others without regard for my own needs.
4. It is personally satisfying to attend to the needs of others even when it means neglecting myself.

nCounteraction

1. Being able to continue striving to reach a goal rather than admit defeat.
2. It is personally satisfying to continue striving to reach a goal rather than admit defeat.
3. It is personally satisfying to continue striving to reach a goal and never admit defeat.
4. It is personally satisfying to continue striving to reach a goal, and never admit defeat no matter what it costs me.

nInfavoidance

1. Being able to avoid any risk of embarrassment or humiliation.
2. It is personally satisfying to avoid any risk of embarrassment or humiliation.
3. It is personally satisfying to avoid situations that are potentially humiliating.

nSex

1. Being able to have my sexual needs fulfilled/satisfied.
2. It is personally satisfying to have my sexual needs fulfilled/satisfied.
3. It is personally satisfying to experience and express my sexuality.
4. It is personally satisfying to feel attractive or desirable to others.

nRejection

1. 11. Being able to avoid or ignore people whom I don't enjoy being with.
2. It is personally satisfying to avoid or ignore people whom I don't enjoy being with.
3. It is personally satisfying to avoid people I have reason to dislike.
4. It is personally satisfying to keep my distance from people who are difficult to get along with.

nAggression

1. Being able to forcefully overcome opposition or beat an opponent.
2. It is personally satisfying to forcefully overcome opposition or beat an opponent.
3. It is personally satisfying to fight for what I believe and overcome opposition.
4. It is personally satisfying to forcefully fight for what I believe and defeat an opponent.

nPlay (not altered until Study Three)

1. It is personally satisfying to have fun.
2. It is personally satisfying to have fun rather than attend to responsibilities.