1997

The Ms. Stereotype : Could it be a Health Risk?

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The Ms. stereotype: Could it be a health risk?

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A Thesis Submitted in Partial Fulfillment of the

Requirements for the Award of

Bachelor of Arts (Psychology) Honours

Faculty of Health and Human Sciences

Edith Cowan University

Date of Submission: 31.10.1997

Abstract

Two studies extend previous findings of stereotyping (a) within the nursing context (Ganong, 1993; Ganong & Coleman, 1992, Ganong et al., 1988), and (b) in relation to female title of address (Dion, 1987; Dion & Cota, 1991; Dion & Schuller, 1991; Heilder, 1975). Against the theoretical background of person perception theory and its influence upon the therapeutic nurse client relationship, study 1 investigates the extent to which nurses' stereotype a vignetted female client on the basis of title of address. Fifty registered nurses from two hospitals rated their impressions and subsequent expectations of a vignetted client on the First Impressions Questionnaire (FIQ) and the Predicted Behavior of a Hospitalised Adult Questionnaire (PBHAQ). Three versions of the vignette corresponded to three titles of address: Ms., Miss, Mrs. Based on the previous findings of Ganong, (1993), it was predicted that title of address effects would be found. Results failed to support this prediction. However, feedback indicated that these results were potentially an artifact of the brevity of stimulus information supplied. Methodological, conceptual and theoretical implications of this finding were discussed. A second study was conducted to investigate these implications. Specifically, the impact of the level of apparent information upon a participant's ability to form and record a stereotype was investigated. Participants consisted of 116 undergraduate psychology students who were randomly assigned to one of six conditions (explicitly preferred title of address x level of apparent information). The two title of address conditions were Ms. and Mrs. The three level of apparent information conditions were basic paragraph (low), basic plus transcript (moderate), and basic plus transcript plus audio recording (high). Participants were provided with a stimulus vignette of a female and asked to rate their first impressions and expectations of the stimulus person. Measures were the

same as for study 1 (i.e., FIQ & PBHAQ) with the addition of confidence ratings. On the basis of both the previous findings of Dion (1987), and of study 1, it was predicted that title of address and level of apparent information effects would be found. While expected level of information effects were found, no title of address effects were obtained. These findings were interpreted as indicating (a) the salience of level of apparent information as a methodological consideration for research, and (b) the limited replicability of title of address effects. The overall conclusion was that research, both within and without stereotyping, needs to pay more attention to examining stimulus presentation and boundedness of replicability in order to build a more valid and cohesive knowledge base.

Declaration

I certify that this thesis does not incorporate, without acknowledgment, and material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature: [redacted]

Date: 31/10/97

Acknowledgments

I would like to sincerely thank:

Dr Susan Gee for her ever encouraging guidance, direction, and assistance; for the sharing of her knowledge and expertise; and for her willingness to be available.

Dr L. H. Ganong for his willingness to provide the First Impressions and Predicted Behavior of a Hospitalised Adult Questionnaires.

The two nursing directors of the hospitals that I accessed the nursing participants in.

My fellow honour's students who always had an encouraging word.

My family for their understanding of all the times I was "in the study".

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Chapter 1: Overall introduction to the present thesis

Overview

This present thesis is composed of two studies. The first study investigates the nature and role of stereotyping on the basis of title of address within the nursing context. The second study, conducted in response to methodological issues raised by the first study, investigates the degree to which varying the level of apparent information provided to participants impacts upon (a) the extent to which they record a stereotype, and (b) their confidence in the accuracy of their recorded stereotype. In order to establish the theoretical underpinnings of these two studies, this first chapter outlines the nature and role of stereotyping through examining it within the context of person perception.

Person perception: The normative first crucial stage in relationship formation

Person perception, as a normative cognitive process, is considered to be the crucial first stage of interaction between two people (Forgas, 1985). This process (a) is believed to be motivated by the fundamental human need to understand and predict the behavior of others in order to prepare one's own behavioral response (Van Knippenberg, 1984; Snyder, 1981; Argyle, 1978), and (b) encompasses both the actual receiving (i.e., perceiving) of stimulus information about another person, as well as the organising of such information into a form that is cognitively manageable in terms of both available cognitive resources and processing time (Forgas, 1985; Fiske, & Taylor, 1984).

According to social cognition literature, the cognitive transformation and organisation of stimulus information undertaken by these perceptual processes enables humans to function effectively in what would otherwise be an impossible situation. Specifically, it is widely believed that the flow of stimulus information

emitted from a newly perceived person frequently exceeds the perceiver's relatively limited conscious cognitive processing capacity (Oakes, Haslam, & Turner, 1994; Schneider, 1995). Thus, without some effective means of information reduction and organisation, human cognitive processing capacities would be in a constant state of overload (Jones et al., 1984).

In order to explain how the human mind deals with the discrepancy between the vast amount of perceptual information it receives and its relatively limited processing capacity, two hypothesised information reduction and organisation mechanisms have been conceptualised. These two distinct, yet interrelated mechanisms (Jones et al., 1984) are referred to as cognitive categorisation and stereotyping. Given the hypothesised inter-relatedness of these two mechanisms, an overview of both categorisation and stereotyping is necessary in order to provide a basis for understanding the process of person perception explored in the present thesis.

Person perception mechanisms

Categorisation defined

Categorisation is the name given to the hypothesised process of cognitively sorting through the vast spectrum of incoming stimuli and grouping salient information units into more cognitively manageable information chunks (Allport, 1954; Argyle, 1978; Schneider, 1995). In this way, the potentially overwhelming array of stimulus information that faces a perceiver is reduced to a level that enables the perceiver to function effectively and efficiently. However, because information units believed by the perceiver to be salient (i.e., representative of a selected category) are focused upon, whereas those believed to be unrepresentative of the category are virtually ignored (Jones et al., 1984), the final outcome of categorisation

is a perceptive construction of reality rather than an actual representation of reality (McCauley, Stitt, & Segal, 1980).

Why do we categorise?

An examination of the categorisation literature reveals a diversity of belief regarding the degree to which categorisation is a reflection of the inherent inter-relatedness of objects and/or people in the real world, versus a reaction against the inherent lack of inter-relatedness of objects and/or people in the real world. For example, Allport (1954) suggested that categorisation was the means by which the nearly random variation inherent in real world stimuli was transformed into a more systematic arrangement required for humans to achieve "orderly living" (p.20). In contrast, Rosch, Mervis, Gray, Johnson, and Boyes-Braem (1976) proposed that, while the world does contain "intrinsically separate things" (p. 383), these things tended to be related via "correlational attributes" (p. 383) and therefore form natural categories. As Rosch et al. noted, "creatures with feathers are more likely also to have wings than creatures with fur, and objects with the visual appearance of chairs are more likely to have functional sit-on-ableness than objects with the appearance of cats" (1976, p. 383). Thus, while Allport (1954) saw the human tendency to categorisation as cognitive reaction against the disorder of the real world, Rosch et al. (1976) saw it as a reflection of the real world. This latter view is the basis for the two most notable contemporary theories of how categorisation takes place.

How do we categorise?

Of the various theories that have been advanced in order to describe how a newly perceived object or person is categorised, three in particular appear to stand out. According to what is known as the "classical view" of categorisation (Oakes, Haslam, and Turner, 1994, p.52), the assignment of an object, or person, to a

category is believed to require a complete match between the object or person and the full set of necessary category attributes. However, as Tajfel (1969) has noted, while it is true that sometimes the set of classification attributes clearly match with those required for membership within a given category (e.g., the majority of classification instances of someone as male or female), more frequently category membership is a question of degree rather than absoluteness (e.g., classification on the basis of continuous dimensions such as height, intelligence, honesty, etc.).

In an attempt to account for how this latter classification might occur, Rosch (1978) pioneered what is known as the prototype theory of classification. Prototype theory is based on two main aspects that are relevant to social categorisation (Brewer, Dull, and Lui, 1981). Firstly, there is an awareness that many times attributes of one category are also attributes of another category, and as a result categories frequently have 'fuzzy' rather than clearly defined boundaries. Hence, membership or placement of an object or person within a category is seen as a function of the degree of similarity between an object, or person, and the prototypical or best example of that category. Thus, if a perceiver were trying to categorise a person on the basis of height, they would compare the observed height of a perceived person with the prototypical for categories such as tall or short in order to decide which category the person is closest to. Rather than having to possess the full set of necessary attributes (as suggested by classical categorisation theory), membership within a selected category is based upon the object or person being judged as relatively more like the prototype of that category than the prototypes representative of the non-selected category or categories. It is important at this point to note Rosch's (1978) emphasis on the judgement of prototypicality rather than the existence of a fixed prototype itself, as focus on the latter would be nothing more

than a reworking of classical categorisation theory (Oakes et al., 1994).

The second aspect of prototype theory is the taxonomical or hierarchical organisation of categories (Oakes et al., 1994). Specifically, categories can be relatively broad and inclusive or narrow and less inclusive. For example, the category "dog" is relatively broad and inclusive of many members. In contrast, "Dalmatian" is narrower and more specific in its requirements for membership. Broad categories are known as subordinate, while narrow categories are known as superordinate. Lying between the subordinate and superordinate categories are what are termed basic categories. Basic categories are those that are most frequently used for classification in that they represent a functionally efficient balance between specificity and generality (Rosch et al, 1976; Oakes et al., 1994). This is not, however, to suggest that categorisation is always at the level of basic categories, nor that basic categories are equidistant from subordinate and superordinate categories. Rather, while categorisation is most often at the level of the average basic category, there are times when categorisation might be at a higher or lower level than average in accordance with what is most personally meaningful to the perceiver (Van Knippenberg, 1984).

An illustration of the variance regarding the particular specificity of categorisation used by a person is provided by Rosch et al's (1976) study. In Rosch et al's study, members of the general public were asked to classify both biological and non-biological items. While the majority of participants classified flying craft in the category 'airplane', one participant (an ex-aircraft mechanic) classified each flying craft at a higher level of specificity. It was also interesting to note that participants in general classified biological items at higher, more specific levels than non-biological items. Thus, the basic categories for biological classification appear

to be relatively more superordinate than for non-biological classification.

Yet another explanation of how categorisation might occur has been advanced by exemplar-based models (e.g., Hintzman, 1986; Linville, Salovey and Fischer, 1986). Although similar in many respects to prototype theory, exemplar theory proposes that a conceptual representation of an actual category example is activated by the categorisation process as opposed to the activation of an abstract prototype. However, like prototype theory, membership to a category is based upon judgement of the relative similarity between the person being perceived and the example person that the perceiver holds as representative of the category.

In addressing the questions as to which theoretical position best describes the process of categorisation, it appears that the principle of contextual variation provides an answer (Oakes et al., 1994). Specifically, it is reasonable to suggest that there are times where categorisation is likely to be on the basis of possession of the full set of features. As mentioned before, judgement of a person's gender would generally be on this basis. At other times however, categorisation might be on the basis of prototypicality where no concrete example is yet available. An example of this would be an ethnic category that a perceiver is aware of, but has not yet met an example. However, when an example does become available, categorisation may well then be undertaken on the basis of exemplar similarity.

In commenting on these and other models of categorisation, Hilton and von Hippel (1996) note that each of these theories lacks the necessary detail to enable empirical examination. Furthermore, these theories tend to be accepted rather than tested. Thus, further refinement of categorisation theories in general appears to be needed to enable empirical findings within this area to be more strongly based on theory.

It is important to emphasise that the simplicity of the above descriptions of categorisation can easily mask the bias that is typically employed when determining category membership. As has been noted, categorisation is not an objective process involving systematic consideration and reality checking (Tajfel, 1969), but is, in fact, more a reflection of what is personally meaningful to the perceiver (Tajfel, 1969; Van Knippenberg, 1984). In a classic demonstration of one aspect of this subjectivity, Tajfel (1969) presented a series of eight lines, one at a time (each differing by a constant ratio) to three groups of participants. For one group of participants the four shorter lines were labeled A and the four longer were labeled B. For the second group, the labels A and B were randomly attached to the lines, while for the third group no labels were attached. Participants were asked to estimate the length of each line as it was presented. Examination of the resultant estimates showed that participants in the first group exaggerated the differences between the groups (i.e., the short A lines were judged shorter than they actually were while the B lines were judged longer than they actually were) significantly more than either of the other groups and, at the same time, minimised the differences within each group (i.e., the shorter lines were judged to be more similar to each other in length than they actually were, as were the longer). Thus, it appears that the expectation that a line labeled A would be short led to it being judged or categorised as shorter than it actually was while a line labeled B led to it being categorised as longer than it actually was. In commenting on this accentuation tendency, Tajfel noted that although these findings were obtained on lines as opposed to people, they nevertheless represented the essential features inherent in categorisation of people: i.e., the subjective accentuation of within group similarities and between group differences. Tajfel therefore concluded that, "it is not unreasonable to assume that

the same features of the same categorising process are responsible, in part at least, for biases found in judgements of individuals belonging to various human groups" (1969, p. 85). Hence, the tendency to see people in terms of category membership appears to result in their being seen as relatively like or unlike ourselves, and therefore as in-group or out-group members respectively (Saks, & Krupat, 1988). When this tendency is combined with the above mentioned bias to accentuation, members of the perceiver's in-group are seen as more similar than they actually are, and differences between the in and out-groups are seen as greater than they actually are.

Categorisation: a multi-level mechanism

Following on from the above mentioned belief in personal and situational categorisation variation, there is some suggestion that people may in fact utilise a multiple level categorisation system (Brewer, 1988; Schneider, 1995). At the most universal level, it is proposed that categorisation may be undertaken in terms of the target's gender, age and race. These "generic categories" (Oakes et al., 1994, p. 53) are believed to be automatically activated at the beginning of the person perception process. However, additional categorisation in terms of culturally relevant categories is also believed to frequently occur. In support of this suggestion, Brewer (1988) notes that people in Western countries tend to categorise people in terms of their marital or parental status in addition to their gender, age and race. At the most refined level, categorisation is believed to be based upon categories that are personally salient to the immediate context in that they allow for differentiation between various targets within that context (Jones et al., 1984). Thus, while categorisation at the generic level may be sufficient in some circumstances, categorisation at more refined levels may be required at other times.

In a similar vein, Argyle (1978) reports that research employing Kelly's (1955) repertory grid has found that people categorise others in terms of three constructs (i.e., roles, personality traits, and physical characteristics). Again, the most salient construct is believed to be a function of the perceiver's context.

In contrast to the diversity regarding the manner by which a person may be categorised, there is general agreement within the literature that the outcome of categorisation is the representation of a person in terms of membership to a single category (Blalock & DeVellis, 1986; Jones et al., 1984). Consideration of the above-mentioned theoretical explanations would suggest that categorisation somehow is continued until the perceiver is satisfied that the particular category selected is sufficiently representative of the perceived person according the demands of the perceiver's situation.

In summary, it can be seen that categorisation, as a person perception mechanism, involves the organisation and classifying of information perceived about another person in order to arrive at a single category believed to be sufficiently representative of that other person. In so doing, categorisation serves to reduce the seemingly vast array of stimulus information emitted from a newly perceived person into something which is more homogeneous, and therefore cognitively manageable, in nature. Furthermore, it appears that the particular category eventually selected is predominately a function of its personal salience to the perceiver, rather than an objective and systematic consideration of all available details.

Categorisation: providing only half the picture

While categorisation facilitates the reduction and editing of complex environmental stimuli into meaningful, manageable units, such reduction also results in a loss in detail. However, it is precisely this detail that provides the perceiver with

a more complete understanding of the stimuli. This is where stereotyping, as a complementary mechanism to categorisation, serves to fill in the detail that categorisation has removed (Brewer, 1988; Stewart, Powell, & Chetwynd, 1979).

Stereotypes defined

Stereotypes were originally proposed by Lippmann (1922) to describe how the reality of the outside world came to be represented as "pictures in our heads" (p.1). More recently, stereotypes have been defined as highly simplified (Tajfel, 1969; Vaughan, & Hogg, 1995), overgeneralised and widely accepted (Snyder, 1981) summary impressions of personal attributes that are believed to be highly correlated with category membership (Ashmore & Del Boca, 1981; Jones et al., 1984). Stereotypes are believed to act somewhat like standardised templates, providing a virtually instantaneous detailed portrait of characteristics, features and behaviors that are assumed to be applicable to an individual within a selected category, and therefore, to the person being perceived in terms of that category (Anderson, Klatzky, & Murray, 1990; Jones et al., 1984; Taylor, 1981).

Stereotypes: more than just "pictures in our heads"

At first glance, it may seem that stereotypes do little more than provide a kind of static "snapshot" of the person being perceived. However, as McCauley et al. (1980) point out, this limited (and unfortunately too frequently held) view of stereotypes has resulted in the misconceptualisation of them as "bad" or "faulty" mechanisms. Thinking of stereotypes primarily in this way too easily draws attention away from seeing them within the context of their fundamental purpose: i.e. to enable the perceiver to form impressions, and to make inferences and judgements about a newly perceived person so as to prepare appropriate behavioral responses in advance (Argyle, 1978; McCauley et al., 1980; Snyder, 1981). Thus, via their

predictive capacity, stereotypes allow the perceiver to go beyond the level of information that is actually observable or available (Sears, Peplau, Freedman, & Taylor, 1985). For this reason, McCauley et al. (1980) suggest that stereotypes should be viewed as "distinctive predictions" (p.202), rather than "pictures in our heads" (Lippmann, 1922, p.1). Viewing stereotypes in this way highlights the dynamic (as opposed to static) nature of stereotypes, and also focuses attention on the impact of stereotypes upon subsequent interactions between the perceiver and the perceived (Snyder, 1981).

In order to appreciate how stereotypes enable this process to occur, consider the following highly simplified scenario. A perceiver, walking along a street at night, suddenly becomes aware of another person walking towards them. Upon awareness of this other person, the perceiver begins scanning the available array of stimuli presented by the newly perceived person in order to categorise this person as quickly as possible. Depending upon how the perceiver categorises this other person will determine the subsequent behavior of the perceiver. As has been pointed out, this link between categorisation and behavior is due to the function of stereotyping. Specifically, if the perceiver categorises the other person as someone of whom they have a positive stereotype, the perceiver may, upon the basis of the information provided by that stereotype, either plan to keep on walking down the street, or perhaps even stop and engage that person in conversation. If, on the other hand, the perceiver categorises the other person as someone of whom they have a negative stereotype and, in turn, predict this person to represent a threat, it is likely that a sudden change in behavior will be planned whereby the perceiver finds some way to remove themselves to safety as quickly as possible. In this way, the perceiver's stereotypes have set the direction for their subsequent behavior towards the newly

perceived person in terms of the initial interaction.

In summary, it can be seen that stereotyping, as a complementary process to categorisation, serves to provide a virtually instantaneous, yet detailed representation of characteristics, features and behaviors that are assumed to apply to the newly perceived person. At the same time, stereotyping also serves to guide future interactions between the perceiver and the perceived via creating expectations and predictions about the behavior of the person being perceived. These combined features make stereotyping a mechanism of considerable power and influence upon interpersonal interactions.

Active and Automatic processing: keys to functional efficiency

There is widespread agreement within the literature that the cognitive mechanisms of categorisation and stereotyping are both active (e.g., Hilton & von Hippel, 1996; Snyder, 1981) and automatic (e.g., Bargh, 1984; Butler & Geis, 1990; Devine, 1989; Hilton & von Hippel, 1996; Lepore & Brown, 1997; Schneider, 1995). While these two terms may appear contrary, they are in fact congruent. Active processing is the term used to describe the constructive nature of cognitive processes. As Lippmann (1922) noted, one does not directly know the world as it is. Rather, each person constructs a perceptual representation of the world, and it is to this that they respond. For example, when a person initially becomes aware of a newly perceived person and attempts to categorise them, features of that person believed by the perceiver to be salient will be attended to, whilst non-salient features will be excluded. This is done in order to produce a vastly simplified synthesis of information that is, nevertheless, meaningful to the perceiver. Similarly, active cognitive processing is demonstrated by way of applying a stereotype to the newly perceived person whereby details that go well beyond what was actually observed are

ascribed to the perceived person.

A second feature common to the functioning of both categorisation and stereotyping is their automaticity (Bargh, 1984; Butler, & Geis, 1990; Devine, 1989; Schneider, 1995). Automaticity means that both processes operate without the conscious attention, or awareness, of the perceiver (Bargh, 1989; Devine, 1989). Thus, these processes are believed to operate within what is considered to be the unconscious domain of cognitive processing. As a consequence of their automaticity, these processes are, by nature, difficult to monitor and/or control (Bargh, 1989). However, the positive side to this is that automatic processes require fewer cognitive resources than do conscious processes, and are therefore more cognitively efficient (Bargh, 1989). Thus, categorisation and stereotyping are able to be undertaken "without giving them a thought" so to speak. In this way, valuable conscious processing resources are freed up for what are considered to be potentially more important functions, such as dealing with unexpected information which may pose a threat to the perceiver (Bargh, 1984).

Functional efficiency: The threat to person perception accuracy

By this point, it should be clear that the processes of categorisation and stereotyping are highly efficient processes in terms of (a) the amount of input stimuli they deal with, (b) the way in which they utilise available cognitive resources to maximum effectiveness, and (c) the speed with which they accomplish their designated task of enabling a newly perceived person to be categorised in a way that is rapid yet cognitively manageable. However, rarely do benefits come without costs. Rather, the very features that enable the categorisation and stereotyping to be so efficient also potentially threaten their accuracy and hence the outcome of the process of person perception. Although this is unfortunate, perhaps it should not be

surprising. As Fiske, & Taylor (1984) note, cognition has many goals of which accuracy is but one.

Categorisation and stereotyping: The making of an artificial distinction

Up to this point, characteristics pertaining to categorisation and stereotyping have been discussed somewhat separately. In reality their influence is inseparable. For example, while cognitive categorisation is seen as a necessary precursor to stereotyping, it is also likely that stereotypic beliefs guide cognitive categorisation (Jones et al., 1984). Consequently, the present study will, from this point forward, primarily use the term stereotyping (as opposed to repeatedly using the term categorisation and stereotyping), although it is intended that a background awareness of the close role played by categorisation be borne in mind.

It is perhaps worth noting at this point that research concerning effects arising from what amounts to the influence of the entire process of person perception is frequently only presented in conjunction with a mention of stereotyping, rather than a mention of both stereotyping and categorisation. A possible explanation for this may be due to stereotyping being seen as something akin to the last link in the chain of person perception. Nevertheless, the astute reviewer of the literature would do well to keep the above mentioned inter-relatedness issue in mind.

The dark side of the stereotype: Influences on members of a stereotyped category

Stereotypes are capable of exerting a negative impact upon members of a stereotyped category via their self-fulfilling tendency (Fiske, & Taylor, 1984; Hilton, & von Hippel, 1996; McCauley et al., 1980). This self-fulfilling tendency can be expressed in two ways. Firstly, it appears that subsequent cognitive processing by the perceiver can be biased towards finding confirmatory support for the activated stereotype, even in circumstances when the majority of information available would

suggest that the activated stereotype is erroneous. In this way, the perceiver's expectation-based behavior towards the newly perceived person can be inappropriate or unwarranted.

Secondly, "a perceiver's actions, although based upon initially erroneous beliefs about a target individual...channel social interaction in ways that cause the behavior of the target to confirm the perceiver's beliefs" (Snyder and Swann, 1978, p. 148). While both forms of stereotype self-fulfillment are of concern, this second type is perhaps of greatest concern. Given the previously mentioned suggestion that stereotypes operate at an unconscious level of cognitive functioning, a behavioral change on the part of the perceived can be effected without the conscious awareness of either the perceiver or the perceived.

Stereotype self-fulfillment: Consequences for the perceiver

Stereotype self-fulfillment on the part of the perceiver arises as a consequence of normative biases in cognitive processing. Examples of these biases are the cognitive confirmation effect (Darley, & Gross, 1983), the availability heuristic effect (Tversky, & Kahneman, 1973; Tversky, & Kahneman, 1974), and the previously mentioned accentuation principle (Tajfel, 1969). Cognitive confirmation effect refers to the tendency to pay disproportionate attention to evidence which confirms a stereotype thereby virtually ignoring evidence to the contrary. Availability heuristic effect refers to the combined tendency to more easily recall recent or highly impactive examples of a cognitive image (as opposed to more regular and therefore more likely normative examples of that image), and to believe the more recent or more impactive example to be the more typical. As has been mentioned, the accentuation principle refers to the cognitive tendency to minimise within-group differences, whilst at the same time maximising between-group

differences.

That stereotypes influence the subsequent behavior of the perceiver is consistent with theoretical expectations. As has been noted, one of the major underlying motivations for engaging in person perception, and hence stereotyping, is the fundamental need to anticipate and predict another's behavior for the purpose of planning one's own behavior (Argyle, 1978; Snyder, 1981; Van Kinppenberg, 1984). Confirmation of this theoretical expectation has been provided by a diverse range of research investigations. For example, Kleck, Ono and Hastorf (1966) found that participants who interacted with an apparently physically disabled research confederate demonstrated stereotypical patterns of interaction with that confederate. Specifically, these participants (a) spent less time talking with the apparently disabled person, and (b) modified their verbal responses to the apparently disabled person so as to yield a greater differential between actual and expressed opinion than did participants interacting with a physically able research confederate. According to Kleck et al. (1966), the presence of the apparently disabled person had activated the participants disabled person stereotype which, in turn, had activated perceiver behaviors that were stereotype consistent.

Snyder, Tanke and Berscheid (1977), have similarly found stereotype-based perceiver behaviors in response to stereotypically conditioned perceiver expectations. In Snyder et al's. study, male undergraduate participants conversed with female undergraduate participants via the telephone. Prior to the conversation, each of the male participants were assigned to one of two conditions: attractive versus unattractive. Participants in the attractive condition were given one of four independently rated photos of an attractive female whom they believed they would be conversing with. Participants in the unattractive condition were correspondingly

given an unattractive photo. Verbal recordings of the subsequent telephone conversations (as rated by a panel of independent judges naive to the purposes of the experiment) were found to differ significantly in relation to expressed friendliness, likability, and sociability, despite there being no actual difference in the attractiveness of the female participants (as also rated by independent judges). Consequently, the stereotypical differences initiated in the participant's (i.e., perceiver's) mind had presumably been translated into differential participant verbal behaviors that were consistent with the stereotypes even though there was no actual basis for the differences outside the perceiver's mind (McCauley et al., 1980).

While studies such as these demonstrate the impact of stereotypes upon subsequent perceiver behaviors, few studies illustrate the possible implications of these behaviors as vividly as the one conducted by Rosenhan (1973). In this now classic study, eight sane people (including Rosenhan) presented to various mental hospitals with the complaint that they were "hearing voices". Apart from this complaint, all other information provided at the assessment (e.g., personal history and family relationship history) was truthful. According to Rosenhan, objective consideration of this information should have yielded a diagnosis of sanity, yet all eight participants were subsequently admitted to hospital. Upon admission, the 'pseudo-patients' acted sanely and no longer reported hearing voices. Although all eight patients were eventually discharged, each was given the diagnosis of "schizophrenia in remission." In commenting on the experience, Rosenhan (1973, p. 253) stated, "As far as I can determine, diagnoses were in no way affected by the relative health of the circumstances of a pseudo-patient's life. Rather, the reverse occurred: the perception of his circumstances was shaped entirely by the diagnosis."

Stereotype self-fulfillment: Consequences for the perceived

While Rosenhan's (1973) study illustrates how the stereotype-based behaviors of a perceiver can directly affect the actions of the perceiver towards the perceived person, other studies (e.g., Bodenahusen & Wyer, 1985; Kleck, 1968; Snyder et al., 1977; Snyder & Swann, 1978; Word et al., 1974) have found support for the suggestion that the actual behaviors of a perceived person may themselves be altered. Via the influence of what is termed the self-fulfilling prophecy (Merton, 1948) or, more recently, the behavioral confirmation effect (Snyder & Swann, 1978), stereotype based perceiver behaviors have been found to, in turn, induce stereotype consistent behaviors in the perceived person thereby providing further apparent confirmation of the perceiver's initial stereotype. In order to illustrate this point, two of the studies in this area will be briefly outlined.

In the first study of their two study investigation, Word et al. (1974) found that while participants exhibited differential behaviors to black versus white research confederates despite there being no actual differences between the behavior of the black versus white confederates (as a result of prior training of the confederates and monitoring of confederates' behavior during the experiment). Specifically, participants (a) sat physically closer to white research confederates, (b) spent 25% more time with white confederates, and (c) used more refined verbal communication when talking with white confederates as compared with black confederates. In this way, white confederates were treated with relatively more immediate behaviors, while black confederates were treated with relatively more non-immediate behaviors. Immediacy in this instance is defined as, "the extent to which communication behaviors enhance closeness to and nonverbal interaction with another" (Mehrabian, 1969, p. 203). Similar to the above-mentioned studies concerning perceiver

behaviors, it was presumed that these differential perceiver behaviors were a function of stereotype induced expectations. The salience of a person's "blackness" as a stereotype cue has previously been identified by Goffman (1963).

Based on these findings, a second study was conducted to investigate whether these differential stereotype-based behaviors would actually elicit confirmatory behaviors from another person (Word et al., 1974). In study two, trained confederates interviewed white naïve participants using either immediate behaviors or non-immediate behaviors that had been found in study one. Independent judges' ratings revealed that participants who were treated with greater immediacy (a) appeared more calm and composed during the interview and were therefore judged as more competent, (b) sat physically closer to the interviewer, (c) exhibited more refined verbal communication behavior, and (d) rated their interviewers as more friendly and adequate than did participants who were treated in a more non-immediate manner. Taken together, the findings of these two studies by Word et al. (1974) support the suggestion that (a) stereotype-based perceiver behaviors can affect the subsequent behaviors of the perceived person such that the perceived person's behaviors conform to the expectations of the stereotype, and (b) that this process can occur without awareness of the perceiver or the perceived.

Further support for the influence of the perceiver's stereotype-based behavior upon the behavior of the person being perceived is also provided by the previously mentioned study conducted by Snyder et al. (1977). Female participants, who were believed by their male telephone partners to be physically attractive, and who were therefore treated in a more warm and sociable manner, actually responded (as rated by independent observer judges) in a more warm and sociable manner, thereby reinforcing the stereotypical expectations of their partner.

The combined consideration of both (a) the magnitude of the perceiver-induced effects demonstrated in studies such as these, and (b) the previously outlined explanation of cognitive bias tendencies on the part of the perceiver (e.g., cognitive confirmation effect), suggests that stereotyping can be a potentially influential phenomenon capable of effecting significant behavioral and attitudinal changes in the perceived person without their awareness. Admittedly, this situation represents a worst case scenario. And, it is true that the magnitude of the consequences to the person perceived may not, in many cases, affect their overall wellbeing to any significant degree. But, by the same token, there are certain contexts where such stereotyping effects could have serious implications, even if its occurrence was only rare. An example of one such context is nursing.

It is appropriate, at this point, to mention a general limitation of many of the studies that have been conducted within this area. In commenting on the Snyder et al. (1977) study, McCauley et al. (1980) noted that the link between activation of a stereotype within a perceiver and the perceiver's subsequent behavior was presumed rather than actually assessed within the study. Although this presumption is consistent with the previously mentioned theoretical expectation that the purpose of stereotype activation is to direct ensuing behavior, the inclusion of measures of stereotype activation within studies aimed at examining the link between stereotype activation and subsequent perceiver and/or perceived person's behavior would serve to increase the strength of their empirical validity.

In response to this suggestion, the first study in this present thesis will further examine the nature and role of stereotyping within the nursing context through the measuring of both stereotype activation and subsequent perceiver cognitive behavior. Specifically, this study will investigate (a) the extent to which a nurse's first

impressions of a female nursing client (as an outcome of the normative cognitive process of stereotyping) reflect stereotypical title of address attributes, and (b) the impact of any such impressions upon the nurse's subsequent cognitive beliefs and expectations about the client. This first study is reported in chapter 2.

Chapter 2: Study 1

Stereotyping in the nursing context

Nursing is, by nature, embedded within an interpersonal context (Potter & Perry, 1995; Sills, as cited in O'Toole & Welt, 1983). Consequently, within the nursing literature there is a consistent emphasis that the nurse's provision of optimal client care encompasses far more than merely the competent performance of medical and nursing procedures. Rather, it is recognised that factors which influence the interpersonal interactions between the nurse and their client also need to be carefully and systematically considered by the nurse (Arnold & Boggs, 1989; Sorensen & Luckmann, 1979; Thobaben, 1991).

In response to this widely held belief, various aspects of the "complex social phenomena" (DeVellis, Adams, & DeVellis, 1984, p. 237) that together influence the formation and development of nurse-client relationships have been investigated. Of particular relevance to the present study is research relating to stereotyping by nurses. It will be recalled from the previous chapter that stereotyping is believed to be a normative cognitive process (Blalock & DeVellis, 1986; Oakes et al., 1994; Tajfel, 1969) activated during what might be considered the pre-interactional stage of relationship formation known as person perception. While this first stage of any relationship is arguably one of the most critical in that it significantly influences the subsequent course of that relationship (Forgas, 1985), its potential impact is believed to be even greater within the nursing context given that the quality of the nurse-client relationship is a significant factor in determining the overall welfare of the client (e.g., DeVellis et al., 1984; McDonald, 1994; McDonald & Bridge, 1991; Thobaben, 1991). Thus, it can be seen that the need for accurate person perception by the nurse is of paramount importance.

While person perception processes are generally initiated in response to the visual sighting of a new person, there are other instances when the person perception process is triggered by verbal or written information alone. Such is often the case in nursing. For example, a nurse's first exposure to a client is frequently via verbal and/or written information provided at the change-of-shift hand-over report. Within this context, the amount of personal information provided about the client is very limited. Motivated by the previously mentioned fundamental human need to anticipate another's behavior a priori (Argyle, 1978; Snyder, 1981), the nurse utilises normative cognitive mechanisms (e.g., categorisation and stereotyping) to process available information and plan, what is deemed by the nurse to be, an appropriate initial response to the client (Blalock & DeVellis, 1986; McCauley et al., 1980). However, as has also been mentioned, these normative cognitive processes are, by nature, influenced by certain processing biases (Darley & Gross, 1983; Tversky & Kahneman, 1974; Tversky & Kahneman, 1973). If left unchecked (e.g., due to lack of awareness), these biases potentially threaten both the nurse's accuracy of person perception and, consequently, the accuracy of the nurse's initial behaviors toward the client (Blalock & DeVellis, 1986). This threat to accuracy is particularly likely when nurses attend to client stereotype cues that are irrelevant to the client's particular nursing needs (McDonald, 1994). Examples of such cues may include gender (Ashmore & Del Boca, 1979), ethnicity (McDonald, 1994), or marital status (Ganong, 1993; Ganong & Coleman, 1992; Ganong, Coleman, & Riley, 1988). Cues such as these are frequently available to nurses via client information records (Ganong et al., 1988).

In light of the potential for inaccurate or irrelevant stereotyping within the nursing context as well as the potential consequences of such, it would seem

reasonable to suggest that the provision of empirically validated information aimed at increasing the nurse's awareness of factors that potentially threaten accurate client perception, would be an important first step towards improving both (a) the accuracy of client perception, and (b) the quality of the nurse-client relationship that is formed from the outset. Similarly, it would seem reasonable to suggest that the provision of such a knowledge base would also better equip the nurse to fulfil their professional obligations in terms of providing nursing intervention that is as potentially beneficial as possible (Craven & Hirnle, 1996; Ismeurt, Arnold, & Carson, 1990).

Stereotyping and nursing: Bridging the gap

In order to appreciate the relevance of the above-mentioned scenario to the nursing context, it is necessary to firstly understand one of the most fundamental concepts in nursing: the therapeutic nurse-client relationship.

The importance of the therapeutic nurse-client relationship

Recurring throughout the nursing literature is the philosophically-based belief (Craven & Hirnle, 1996) that interactions between the nurse and their client should be characterised as recovery-promoting. For this reason, nurses are encouraged to provide not only a safe and comfortable physical environment, but also a positive psychosocial environment through the formation of a 'therapeutic' or 'professional-helping' relationship with the client (Arnold & Boggs, 1989; Ismeurt et al., 1990; Potter & Perry, 1995). While caring, trust, empathy and mutuality are seen as the central hallmarks of a therapeutic relationship (Arnold & Boggs, 1989; Potter & Perry, 1995), other concepts such as personal space, confidentiality and stereotyping (the concept of particular relevance to this present study) are also believed to be especially salient (Arnold & Boggs, 1989).

Therapeutic versus general interpersonal relationships: Similarities and contrasts

In many respects, the therapeutic nurse-client relationship is similar to general interpersonal relationships in that it too is the product of an interaction between two people. Despite the fact that the nurse enters the nurse-client relationship as a professional, they are, none the less, still human. Consequently, even within their role as a professional, the nurse is, at the very least, influenced by what are considered to be normative interpersonal behaviors (Blalock & DeVellis, 1986; Ganong, 1993). For example, given that (a) each human is significantly influenced by the personal life experiences of their past, and (b) that such experiences are an intrinsic part of who each one is, the nurse necessarily brings, at least, some degree of their background experiences into the nursing context (Arnold & Boggs, 1989; Ganong, 1993; Sorensen & Luckmann, 1979). Such experiences are the basis of many of the perceptual filters through which humans, and therefore nurses, interpret the content of their environment. It is within this context that the nurse's stereotypes, being a product of their background experiences, enter the nursing context and therefore the nurse-client relationship. By nature, some of these stereotypes will enhance the formation of a given nurse-client therapeutic relationship, while others, if left unchecked, will hinder its formation (Devine, 1989; Blalock & DeVellis, 1986; DeVellis et al., 1984; Snyder, 1981; Sorensen & Luckmann, 1979).

By the same token, the formation and development of a therapeutic relationship is also unique in that responsibility for its formation and development lies predominantly with the one party: i.e., the nurse (Craven & Hirnle, 1996; Potter & Perry, 1995). Given that the therapeutic nursing relationship is a professional

relationship, it can be seen that the nurse is somewhat more responsible for being knowledgeable in regard to initiating, developing and monitoring the relationship that would otherwise be the case in a general relationship. This responsibility extends to the awareness and monitoring of the nurse's personal stereotypes and how these may potentially enhance or hinder the initial person perception phase of a nurse-client relationship. Only by so doing will the nurse be able to assess client characteristics in the objective manner that is required for the provision of optimal client care (Blalock & DeVellis, 1986).

Empirical investigations into stereotyping within the nursing context

An overview of an underdeveloped research field

In light of the potential impacts of inaccurate or irrelevant stereotyping within the nursing context, a number of studies into stereotyping by nurses have been conducted. Stereotypes that have been examined within the nursing context include the client's race (e.g., Frenkel, Gerden, Robinson, Gryden, & Miller, 1980; LaFargue, 1972; Morgan, 1984), culture (e.g., Bonaparte, 1979; Geissler, 1991), ethnicity (e.g., McDonald, 1994), old age (e.g., Brower, 1985; Brower, 1981; Buschmann, Burns, & Jones, 1981; Campbell; 1971; Gillis, 1973; Hatton, 1977; Heller & Walsh, 1976; Kayser & Minnigerode, 1975; Penner, Ludenia, & Mead, 1984; Wilhite & Johnson, 1976), alcoholism and disability (e.g., Schmid & Schmid, 1973), socio-economic status (e.g., Larson, 1977), gender (e.g., Kjervik & Palta, 1978; McDonald, 1994; McDonald & Bridge, 1991), emotionality (e.g., Wallston, Wallston, & DeVellis, 1976), diagnostic label (e.g., Anderson, 1978), attractiveness (e.g., Damrosch, 1982), intelligence (e.g., DeVellis et al., 1984), and marital status (e.g., Ganong, 1993; Ganong & Coleman, 1992; Ganong, Coleman, & Riley, 1988).

While this outline of investigated stereotypes might, at first glance seem to

suggest a well-developed body of knowledge, closer inspection of (a) the findings obtained, and (b) the methodologies used in many of these studies reveals that far less benefit has been collectively derived from this research than could otherwise have been the case (Brower, 1985; Ganong, Bzdek, & Manderino, 1987). For example, Ganong et al., after reviewing 38 nursing stereotype studies conducted between 1955 and 1985, found that "it is difficult to draw any firm conclusions regarding stereotyping by nurses and nursing students" (1987, p. 67). Two contributing factors that were identifited by Ganong et al. (1987) as particularly responsible for this situation were (a) the quality and diversity of measures used, and (b) the diversity of sample nursing populations employed.

Additional review of research into the "old age" or "elderly" stereotype (one of the most frequently researched stereotypes within nursing) provides support for the validity of Ganong et al's. (1987) two proposed factors. Firstly, studies investigating the old age stereotype have variously employed the Tuckman-Lorge Questionnaire (Tuckman & Lorge, 1953), the Kogan's Attitude Towards Old People Scale (Kogan, 1961), and the Semantic Differential Scale (Osgood, Suci, & Tannenbaum, 1957). At the extreme, one study (Buschmann et al., 1981) even failed to specify the scale utilised. As a consequence of this diversity of measures, comparision across measures, and therefore across studies, has been hampered.

In respect to Ganong et al's. (1987) second proposed factor (i.e., diversity of nursing populations employed), it was noted that while some participant samples consisted entirely of either registered nurses (e.g., Brower, 1981; Campbell, 1971; Gillis, 1973; Penner et al., 1984) or student nurses (e.g., Heller & Walsh, 1976), other samples consisted of blends of registered nurses and student nurses (e.g., Kayser & Minnigerode, 1975), other health care workers (e.g., Smith et al., 1982)

and even nursing students and faculty members (e.g., Wilhite & Johnson, 1976). Again, comparison across studies is hampered by this situation. Thus, while a number of studies into nursing stereotypes have been conducted, comparisons between studies have been made difficult by a lack of standardisation of measures and participant populations. Consequently, the body of knowledge concerning nursing stereotypes is not as advanced as it could potentially be.

Recommendations for further development

In addition to identifying factors that have limited the conclusions that can be drawn from research in this area of stereotypes within the nursing context, Ganong et al's. (1987) review has also highlighted an important point that future research would do well to consider. Specifically, it was noted by Ganong et al. that, of the 38 studies reviewed, all but three had limited their focus to merely addressing the basic question "Do nurses or nursing students hold a particular stereotype?" (1987, p. 67). Once again, additional review of the old age stereotype literature confirms this conclusion, though it perhaps widens the apparent question asked to, "Under what conditions does a nurse hold and/or change a particular stereotype?" Consequently, Ganong et al. (1987) proposed that potentially more important considerations regarding whether the holding of a particular stereotype by the nurse impacts upon (a) the nurse's subsequent thoughts and behaviors towards their client and, (b) the client's own subsequent behavior, "had not been recognised in the existing body of literature" (p. 68). Concern for the importance of these latter questions stems from the aforementioned belief that if stereotyping is found to be evident within the nursing context, it may well pose a risk to the quality of therapeutic intervention that a nursing client might receive via distorted judgements and inappropriate responses on the part of the nurse (DeVellis et al., 1984; Ganong, 1993; Ganong et al., 1988;

McDonald, 1994; McDonald & Bridge, 1991).

In order to help future research address this neglected focus, five major recommendations were made Ganong et al. (1987). Specifically, it was recommended that future investigations should:

1. Be thoroughly grounded in stereotype theory so that they go beyond being merely descriptive accounts of the presence of a stereotype. This was seen as an important prerequisite to the second recommendation.
2. Go beyond merely measuring the presence of stereotyping by nurses to measuring the consequences of any stereotyping identified upon the nurse's subsequent behaviors. By the same token, grounding research in theory would also potentially help reduce the previously noted tendency (McCauley et al., 1980) by general stereotype behavior research to presume, rather than measure, the links between holding a stereotype and resultant behavior.
3. (a) Develop and employ multiple methods of data collection, and (b) devise and employ methods of data collection that address the issue of social desirability response bias.
4. Incorporate greater use of standardised or well-developed instruments.
5. Strive to build more upon previous investigations in order to reduce the amount of fragmentation that exists within this field of research and thereby better develop the body of knowledge concerning stereotypes in the nursing context.

<u>Incorporating recommendations for further development: The contribution of the present study</u>

In light of the validity of these recommendations, this present study has been designed to incorporate as many of these recommendations as is practically possible. Specifically, the present study:

1. Is grounded within both (a) stereotyping theory and the broader field person perception theory (see chapter 1), and (b) therapeutic nursing relationship theory.
2. Has selected independent variables on the basis of prior empirical validation.
3. Will utilise two dependent variable measures with established psychometric validity.
4. Will assess both (a) the presence of a stereotype, and (b) the effects of that stereotype upon a nurse's subsequent behavior. The specific behavior measured was the nurse's cognitive expectations of the client's ability to cope with hospitalisation.
5. Will incorporate an analogue vignette stimulus that is designed to be (a) as close to reality, and (b) as social response bias-free as possible within the practical constraints of this study.

In summary, the present study is intended to both add to, and extend, the existing body of knowledge regarding stereotyping within the nursing context through the incorporation of recommendations designed to allow for greater comparison between previous research, the present study, and also future research.

The focus of this present study will now be turned to providing a more specific grounding within the context of two stereotypes that are potentially irrelevant, and therefore inappropriate, within the nursing context: (a) female marital status, and (b) female title of address. Although the former stereotype has been investigated within the nursing context, the latter is yet to be investigated within this domain.

<u>Finding the hidden cues: The search for subtle stereotype cues within the nursing context</u>

While research within the general area of stereotypes initially focused on

overt stereotype cues such as race, sex, ethnic orientation, religion, age, and occupation, (Worchel, Cooper, & Goethals, 1991; Ganong et al., 1988; Bryan, Coleman, Ganong, & Bryan, 1986), more recent attention has turned to the identification of subtle cues such as female marital status (Ganong et al., 1988; Ganong & Coleman, 1992; Ganong, 1993) and female title of address (Dion, 1987; Dion, & Cota, 1991; Dion, & Schuller, 1991; Heilman, 1975).

Female marital status

Support for the existence of the female marital status stereotype has been provided by three studies conducted by Ganong and his associates (Ganong, 1993; Ganong & Coleman, 1992; Ganong et al., 1988). Each of these studies investigated whether (a) family structure information, an empirically validated stereotyping cue (Bryan et al., 1986; Bryan, Ganong, Coleman, & Bryan, 1985; Santrock & Tracy, 1978), would function as a stereotyping cue for nursing students, and (b) whether subsequent nursing student behaviors towards the client would be affected as a result.

In the first study (Ganong et al., 1988), forty-three undergraduate nursing students were presented with a brief descriptive paragraph and a Client Prenatal Record of a hypothetical pregnant nursing client. In one of the two conditions, the client was presented as married, whilst in the other the client was presented as never-married. After reading the information, participants were instructed to complete a First Impressions Questionnaire (FIQ), an empirically validated six dimension questionnaire previously developed by Bryan et al. (1986). Students then viewed one of two versions (corresponding to the two study conditions) of a videotape simulation depicting the client being interviewed by a nurse during a prenatal visit. After viewing the videotape, students then completed a further four questionnaires: (a) the Family Role Stereotype Instrument (FRSI), a piloted, though not yet empirically

validated instrument developed by Ganong and Coleman (1987) to measure cultural stereotypes of married and never-married mothers; (b) the Predicted Behavior of a Hospitalised Adult (PBHA), an empirically derived unidimensional scale adapted for the study from a previous instrument by Siebert, Ganong, Hagemann, and Coleman (1986) to measure students' behavioral expectations of the client; (c) the Assessment Checklist (AC) also developed for the study to evaluate what client data the nursing student would seek; and (d) the Student's Questions for the Client (SQC), an open-ended measure of the nursing student's data seeking behavior. The SQC was not developed prior to the study. After completing these four measures, students viewed an additional videotape segment depicting the client asking five questions. After each question was asked, nursing students were directed to provide a written answer.

While significant differences, as a function of marital status, were reported for (a) five of the six FIQ dimensions, and (b) the FRSI and PBHA measures, no significant differences were found for the AC or SRC. Consequently, it appeared that nursing students had in fact stereotyped the pregnant client on the basis of marital status, and in so doing, their subsequent behavioral expectations of the client had been altered. Specifically, the married client appeared to have been (a) evaluated more positively, and (b) expected to have less difficulty whilst hospitalised, than the never-married client. This was despite the fact that the only actual difference between the two hypothetical clients was their marital status.

Interestingly, these findings did not find support for significant differences in other participant behaviors such as the information nursing students would seek from the client, or in the responses they gave to the client's questions. This may have been due, in part, to the more overt attention given to these latter areas as part of the student's nursing education. That these behaviors had presumably been part of

nursing education may have served to make the student participants more overtly conscious of these behaviors, and consequently rendered the students susceptible to a kind of response biasing in the way they performed these behaviors. This possibility was acknowledged by Ganong et al. (1988).

In the second study (Ganong and Coleman, 1992), 83 nursing students were given a brief developmental history and a brief Client history of either a married or a never-married hypothetical nursing client seeking assistance for vaginitis, followed by a five-minute audio-tape recording of a simulated interview between the client and a nurse. Students were then directed to complete three questionnaires: the FIQ, FRSI and PBHAQ (formerly the PBHA). These three questionnaires were the same as used in the Ganong et al. (1988) study. Following completion of these questionnaires, the students were asked to respond orally to a series of questions asked by the client via audiotape. Responses were similarly recorded onto an audiotape and later coded by independent judges. Finally, the students completed a Patient Recollection Instrument (PRI) developed for the study to determine if there was any significant differential recollection in relation to the information that had been provided about the nursing client across the two conditions.

Results of this second study generally appeared to contradict those of the previous (Ganong et al., 1988) study. Specifically, no significant difference was found on (a) five of the six FIQ dimensions, (b) the PBHAQ, whereas a significant difference in favour of the unmarried mother was found for the amount of data sought from the client. Additionally, there was also a significant difference regarding the amount of recalled information about the client, again in favour of the never-married group. The only finding that was consistent with the previous study was in regard to no difference for the verbal responses provided to the client's

questions.

In trying to ascertain possible reasons for these apparently contradictory findings reported by these two above studies, it appears that they too may be an artifact of the "inconsistency phenomenon" noted by Ganong et al. (1987). Specifically, it will be recalled that in the first study (Ganong et al., 1988), participants completed the FIQ after receiving a descriptive paragraph and a Client Prenatal record, but before viewing a videotape interview of the client. In contrast, participants in the second study (Ganong & Coleman, 1992) completed the FIQ after hearing an audiotaped interview of the client. Thus, participants in the second study were given considerably more information about the client upon which to form a stereotype. As noted by Ganong and Coleman (1992), "the respondents did not rely solely on stereotypes to make judgements about the patients, obviously, but also used information from audiotaped interviews and from the background information sheet." Thus, these two studies highlight the need for consistency across studies not only of measures, but also of stimulus presentation.

In the most recent of Ganong's studies (Ganong, 1993), 71 female registered nurses were, via mail, provided with a brief paragraph description of a pregnant female nursing client and a two-page transcript of an interview between the client and a nurse. The client was identified as married in one condition and unmarried in the other. Instructions to the nurses directed them to read the client information provided before completing four questionnaires: the FIQ, FRSI, PBHAQ and AC. Findings from these measures once again supported the existence of stereotyping within the nursing context. In this study, nurses rated the married client more positively on all FIQ dimensions, and similarly predicted more positive behaviors on the PBHAQ. Consistent with the first study (Ganong et al., 1988), no differences

were found across the two conditions regarding the amount of information that nurses purportedly would have sought from the client. Once again, while the measures were kept constant, the stimulus presentation had been varied. Although the participant sample had also differed from the two previous samples (Ganong & Coleman, 1992; and Ganong et al., 1988), it can perhaps be argued as a justifiable departure from the previous studies on the grounds of greater validity to the nursing context.

In summary, despite there being some degree of apparent contradiction in the above-mentioned findings, the overall suggestion that a female client's marital status may act as a stereotyping cue within the nursing context, is of particular relevance to the present study. Specifically, as Ganong et al. (1988) alluded to, nurses frequently have access to a wide range of client information, some of which is directly relevant to the client's particular nursing needs at the time, and some of which is irrelevant. The client's marital status would seem to generally fall within the latter category. Hence, to the extent that nurses are stereotyping a client on the basis of a cue that is irrelevant to the client's current nursing needs, that stereotype is irrelevant and therefore potentially biasing in regards to accurate perception of the client. In light of the previously outlined link between stereotype activation and subsequent behavior of both the perceiver and the perceived (chapter 1), it can be seen that activation of an irrelevant stereotype, such as the client's marital status, unnecessarily threatens the accuracy of the nurse's perception of, and subsequent behavior towards, the client. In turn, the quality of the client's nursing care may also be unnecessarily compromised (DeVellis, Wallston, & Wallston, 1980).

Female title of address

The salience of a female's title of address as a stereotype cue was initially

researched by Heilman (1975). Heilman (1975) asked a sample of (a) male high school students, and (b) male college students to rate one of two proposed courses (i.e., technical vs. non-technical) that would be taught by an instructor whose title of address was varied across Ms., Miss, Mrs, Mr, or no title. While there was no significant difference for title of address in the technical course, a non-technical taught by an instructor titled Ms. was predicted to be more enjoyable and more intellectually stimulating than when the instructor was titled Miss or Mrs. Hence, it appeared that title of address was a stereotype cue for the male high school and college students.

Building upon these initial findings, Dion (1987) conducted two further experiments aimed at further delimiting the Ms. stereotype. In the first experiment, 82 female and 25 female undergraduate psychology students were presented with a brief description of a vignetted stimulus person who was variously titled Mr, Mrs, Miss, or Ms. One important addition to this experiment over Heilman's (1975) study was the mentioning of the stimulus person's title of address as a personal preference. This inclusion was justified by Dion (1987) on the grounds that participants would see the title of address as a behavior of choice and therefore presumably also see it as more representative of the stimulus person. After reading the stimulus vignette, participants rated the stimulus person on 29 adjective semantic differential rating items. This measure was a modified form of Osgood et al's. (1957) Semantic Differential. Participants' ratings were then factor analysed into four dimensions: (a) achievement motivation, (b) social assertiveness, (c) interpersonal warmth, and (d) fortunate person. These dimensions accounted for 46.9% of the variance. Results yielded title of address effects on all dimensions except for fortunate person. Specifically, Ms. was rated highest on achievement motivation and social

assertiveness, but lowest on interpersonal warmth when compared with the other titles of address.

In Dion's (1987) second experiment, 77 male and 30 female undergraduate psychology students rated a similar stimulus person vignette. However, this time the rating scale incorporated 51 semantic differential rating items. Results were factor analysed into four dimensions (interpersonal warmth, achievement motivation, attractiveness, and dynamism) accounting for 45.5% of variance. Attractiveness was seen as the only significantly different dimension to those obtained in experiment one. Analysis of findings again indicated that the Ms. title of address was seen as highest in achievement motivation and dynamism, but lowest in interpersonal warmth. No significant difference was found for the attractiveness dimension.

The generality of the Ms. stereotype was further extended by Dion and Cota (1991). In this study, 230 visitors to the Toronto Ontario Science Centre were given a brief paragraph description similar to the Dion (1987) study and asked to rate the stimulus person using the Extended Personal Attributes Questionnaire (EPAQ: Spence, Helmreich, & Holahan, 1979). Six conditions corresponding to title of address (Ms., Miss, Mrs.) by preference (statement of title of address as explicit preference vs. merely appending title of address) were investigated. Findings yielded significant main effects for both title of address and preference. In particular, the Ms. title of address was seen as possessing relatively more "masculine" (i.e., more personally competent and goal directed) and less "feminine" (i.e., more socio-emotionally sensitive and interpersonally oriented) personality traits than either Miss or Mrs. An interaction effect was also found whereby more extreme ratings were attributed to the Ms. title of address across the preference condition. However, the same was not the case for Miss or Mrs. Thus, it was concluded that the incorporation

of explicit title of address preference was a necessary consideration for obtaining the full stereotype effects for the Ms. title of address.

Similarly, Dion and Schuller (1991), in a two experiment study, also found that vignettes of females who prefer the title Ms. were perceived by adult members of the general public as more achievement motivated, more stereotypically "masculine", but less likeable than females who prefer a traditional title of address. It is worth noting that the findings in this study were primarily based on the use of two versions of an author-developed trait rating scale as opposed to using a previously established or standardised scale such as was the case in Dion & Cota's (1991) study.

While the findings for the Ms. title of address effect are consistent across the above-mentioned studies, it can be seen that these same studies also appear to have fallen victim to the inconsistency phenomenon. Specifically, while the stimulus presentation was held relatively constant, the measures used were varied across each study as was noted above. However, it can perhaps be argued that obtaining a consistent finding under such inconsistent circumstances may in fact testify to the generality and robustness of the finding. On the basis of this apparent generality and robustness, it is perhaps reasonable to expect that the Ms. title of address may also be found within the nursing context.

The presentation of title of address as an explicitly preferred versus a merely appended inclusion is also of relevance to this study. As the findings of Dion & Cota (1991) tentatively demonstrate, statement of preference may be an important inclusion where it is desirable to obtain the full effects of the Ms. stereotype. Such a suggestion is consistent with Jones and Davis' (1965) Correspondent Inferences theory of attribution. According to Correspondent Inferences theory, a perceiver

more confidently attributes a disposition to a stimulus person on the basis of the stimulus person's actions when the perceiver believes that the stimulus person's actions are the result free choice. Therefore, according to this theory, a perceiver will more confidently attribute stereotypical characteristics that are associated with a particular title of address in response to a stimulus person's expression of their personal (and therefore freely chosen) preference for their particular title of address.

In summary, it is of interest to the present study to see whether the seemingly robust and generalised finding for the Ms. stereotype can also be elicited within the nursing context. In addition, the present study is also interested in extending the previous Ms. stereotype findings through examining whether the Ms. stereotype impacts upon a nurse's subsequent cognitive expectations of the client's hospitalised behavior. Like marital status, information regarding title of address is frequently available to nurses. Consequently, if title of address is found to act as a stereotype cue within the nursing situation, it would provide yet another example of the practice of irrelevant stereotyping. Similarly, if title of address were also found to impact upon a nurse's subsequent cognitive expectations of a client's hospitalised behavior, further empirical support would be provided for the suggestion that irrelevant stereotyping potentially impacts upon the nurse-client therapeutic relationship.

Three hypotheses of the present study

In light of the above-mentioned recent findings regarding (a) stereotyping effects for marital status of a female client within the nursing context (Ganong, 1993; Ganong et al., 1988), and (b) Ms. title of address effects within a range of sample populations (Dion, 1987; Dion & Cota, 1991; Dion & Schuller, 1991; Heilman, 1975), the present study aims to examine whether the Ms. stereotype is also relevant within the nursing context. Based on these previous findings, three hypotheses were

advanced. It was predicted that:

1. Nurses would stereotype a vignette of a client on the basis of title of address as evidenced by significantly different ratings on the First Impressions Questionnaire (Bryan et al., 1986) subscales for the title Ms.
2. A stronger effect for title of address stereotyping would be obtained when title of address was explicitly stated as a preference compared with merely being appending to the client's name. Evidence of a stronger effect would be in the form of scale ratings that were further from the midpoint for explicit as compared to appended title of address.
3. The finding of stereotyping effects for client title of address would also be accompanied by differential cognitive expectation effects. Support for this hypothesis would be provided by a significantly different rating of the client's predicted hospitalised behavior (as a function of title of address) measured by the Predicted Behavior of a Hospitalised Adult Questionnaire (Ganong et al, 1988).

Method

Research design

This study originally intended to employ a 3 x 2 (title of address x preference) between subjects design. However, due to circumstances beyond the researcher's control (as is outlined below), the participant sample was exhausted before the second level of preference (i.e., explicitly preferred) condition was able to be administered. Consequently, the present study had to be reduced to a one-way, between-subjects design. The three independent variables correspond to the three female titles of address that were varied for the client vignette (i.e., Ms., Miss. or Mrs.). The dependent variables were the participant's three subscale total scores on the multidimensional First Impressions Questionnaire (FIQ), and scale total score on

the unidimensional Predicted Behavior of a Hospitalised Adult Questionnaire (PBHAQ).

Participants

Four major metropolitan hospitals were contacted regarding their willingness to allow access to their nursing personnel for the purposes of conducting this study. Of these four hospitals contacted, two agreed to provide the researcher with access to their staff as potential participants. The two hospitals that declined did so on the grounds that their research policy precluded access to research conducted at less than a Master's level.

Approximately 700 Registered Nurses, employed within the two accessed hospitals, were approached (over a two day period) upon entry to the staff cafeteria during their meal break. Each of the nurses was asked whether they would agree to participate in a study regarding how people in professional settings process written information. Of the 700 nurses approached over the two day period, only 50 agreed to participate. Reasons given for not wanting to participate generally related to being too busy or wanting a break from concentrating.

No demographics were collected for this study in order to both increase the perception of anonymity by the participants, and minimise the time required to participate in the study. The need to maximise anonymity and minimise time required were two points that had previously been raised by the hospital administration as worthy of consideration when it was important to attract as many participants as possible. A sensitivity amongst nurses to providing any personal data was reflected in a reluctance by some nurses to sign the consent form despite assurances that the forms would be separated from the data and stored confidentially. While most participants finally agreed to provide written consent, three declined

despite being willing to complete the questionnaires. Given the difficulty of obtaining participants, it was decided to include these three participants in the study.

Direct participant contact was selected as the mode of participant recruitment and data collection for this study in preference to mail-out due to time and financial constraints. Additionally, it was also anticipated that this mode of participant contact facilitated greater opportunity for direct participant feedback.

Participants were assigned to a study condition on the basis of the timing of their meal break. All participants at a given meal break were assigned to the same condition. This was to minimise the chance that participants would find out the variable manipulation given that the participants completed their questionnaire whilst eating their meal in the hospital dining room. This precaution was additional to requesting that participants refrain from discussing the study.

Ethical requirements outlined in the Edith Cowan University Policy for the Conduct of Ethical Research Involving Human Subjects (Committee for the conduct of ethical research, 1994) were strictly adhered to.

Materials

Participant materials in this study consist of:

(a) *a brief vignette* of a female hypothetical nursing client incorporating the client's age, name and title of address as well as brief medical diagnosis information. Three versions of the vignette were utilised. All details for each version were constant except for title of address (i.e., Miss, Mrs., Ms.) which was varied across each condition (refer Appendix A).

The information provided is similar (with respect to amount of personal details provided) to that received by nurses during a hand-over reporting session, or when a client is received as a telephone admission to the ward. In addition to making

the amount of personal information provided about the hypothetical nursing client appear as valid as possible to the nursing context, the omission of any further personal information from the vignette also makes it as consistent as possible with the stimulus presentation of previous studies relating to the Ms. stereotype (e.g., Dion, 1987; Dion & Cota, 1991; Dion & Schuller, 1991). In this way, Ganong et al's. (1987) general point of critique (i.e., methodological inconsistency across studies), has been addressed with respect to stimulus presentation.

(b) *the First Impressions Questionnaire* (FIQ): This 40-item, seven-point semantic differential scale developed by Bryan et al. (1986) consists of bipolar adjective pairs designed to measure perceiver's attitudes toward a target individual (refer Appendix A). The items on this scale have been subjected to principal components factor analysis on two samples with the same three empirically derived subscales emerging on both occasions: Independence, Agreeable and Moral. Coefficient alpha for each of these factors was .84, .87 and .74 respectively (Ganong, personal communication, September 9, 1997: refer Appendix B). Approximately half the items are reverse coded (i.e., the more positive adjective is at the lower end of the scale) in order to detect response sets. Higher scores on each scale are interpreted as a more positive perceiver impression of the target individual.

(c) *the Predicted Behavior of a Hospitalised Adult Questionnaire* (PBHAQ): This eight item unidimensional scale, adapted by Ganong et al. (1988) is designed to measure whether a nurse holds an overall positive or negative expectancy of the client's behavior (refer Appendix A). A higher score represents a more positive prediction for the client's behavior. Again, approximately half the items are reverse coded in order to detect response bias. Coefficient alpha for the scale is reported at .91 (Ganong, & Coleman, 1992).

Procedure

After permission was granted by the relevant hospital authority, a suitable arrangement was formalised whereby contact could be made with prospective participants. In both cases, this involved meeting prospective participants at the entrance to the staff dining room during their meal break.

Initial contact with prospective participants involved asking whether they would be prepared to participate in a brief, non-invasive, anonymous study which would involve reading a short description of a hypothetical nursing client and answering two brief questionnaires relating to their first impressions of the client they would read about. Confidentiality of the participant's data was also assured. Participants who agreed to participate in the study were then provided with a package of materials that they took with them into the staff dining room for completion during their meal. The package of materials given to each participant consisted of a covering letter explaining the general nature for participation in the study; an informed consent form; a brief vignette of a hypothetical nursing client; and a copy of the FIQ and PBHAQ response questionnaires. Included with these two questionnaires were standard instructions for recording semantic differential item responses (refer Appendix A).

In addition to requesting that participants not discuss the study with each other, participants at any one meal break were each allocated to the same condition in order to further reduce the chance that participants would detect the manipulation.

Written instructions contained within the participant package of materials directed each participant to read the enclosed brief vignette of a hypothetical nursing client before completing both the FIQ and PBHAQ questionnaires. The instructions directed the participant to complete both the questionnaires as quickly, yet as

accurately as possible, without thinking too deeply about their response as it was their first impressions that were important.

Upon completion of both questionnaires, each participant returned their completed questionnaires and their consent form to the researcher. Questionnaires were immediately placed in one box, and consent forms in another, in order to reassure the participant of anonymity of the data. A debriefing was conducted for each participant during which time any questions or concerns were addressed.

Results

First Impressions Questionnaire

As insufficient participants were obtained to enable a factor analysis of the 40 FIQ items, analysis was based upon the three factor solution obtained by Ganong (personal communication, September 9, 1997). The three factors (and reliabilities) reported by Ganong were: Independence (12 items, α = .84); Agreeable (9 items, α = .87); and Moral (6 items, α = .74) (refer Appendix B).

Item raw scores were reverse coded as necessary (19 out of 40 items) in order that higher scores represented more positive impressions. Items reported by Ganong (personal communication, September 9, 1997) to load on each factor were submitted to a reliability analysis using Cronbach's Alpha. Items with an item-total correlation of less than .30 were omitted one at a time until an acceptable final solution was obtained: Independence (9 items, α = .83), Agreeable (8 items, α = .91) and Moral (5 items, α = .82) (refer Appendix C). Item totals for each factor were divided by the number of items per factor in order to yield a mean item score. This was done to allow easier comparison of means between FIQ factors and means between the FIQ factors and the PBHAQ.

Item totals for each factor by group were examined for assumptions relevant

to one-way ANOVA analysis. Although no outliers were present, significant violations of both normality (as measured by Kolmogorov-Smirnov Lilliefors Significance Correction) and homogeneity of variance (as measured by Levene's Test of Equality of Variances) were found. Inspection of the data stem-and-leaf plots by group revealed that this finding was largely due to approximately half of all cases located at the scale midpoint resulting in a considerably constrained distribution with the remaining cases distributed at differing scale points causing differential skewing between the groups. While such data would sometimes be considered for transformation, it was decided to leave the data in its untransformed state in order to retain its meaningfulness and interpretability (Tabachnick, & Fidell, 1996). In addition, Shavelson (1988), suggests that ANOVA is not sensitive to normality assumption violations when there are a fixed number of levels on the independent variable, or to homogeneity of variance violations when cell sizes are approximately equal (Table 1).

Table 1. Cell Sizes for the First Impressions Questionnaire as a Function of Title of Address

Title	N
Ms.	15
Mrs.	18
Miss	17
Total	50

Note: Cells sizes were constant across all factors.

Group means for each factor (Table 2) were each analysed using one-way ANOVAs (refer Appendix C). No significant differences for title of address were found on any of the three factors: Independence (F (2, 47) = 1.83, p = .17); Agreeable (F (2, 47) = 1.00, p = .37); or Moral (F (2, 47) = 1.56, p = .22). These results indicated that client title of address did not result in differential impressions by the nurses of the client's independence, agreeableness or morality as measured by the FIQ. Observed power for each factors was .36, .22, and .32 respectively with effect sizes (η^2) for each factor being .07, .04, and .06 respectively.

Table 2. First Impressions Questionnaire Item Mean and Standard Deviation Scores as a Function of Title of Address

Title	M	SD
Independence		
Ms.	4.45	.82
Mrs.	4.63	.99
Miss	4.12	.45
Total	4.40	.80
Agreeable		
Ms.	4.50	1.05
Mrs.	4.63	1.01
Miss	4.21	.44
Total	4.45	.88
Moral		
Ms.	4.43	1.28
Mrs.	4.71	.75
Miss	4.19	.47
Total	4.45	.89

Predicted Behavior of a Hospitalised Adult Questionnaire

Item raw scores were reverse coded as necessary (5 out of the 8 items) so that higher scores represented more positive behavioral expectations. Mean item total scores were then calculated in the same manner as for the FIQ in order to allow for

direct comparison between the PBHAQ and FIQ scales.

Because insufficient participant numbers were obtained to enable a confirmatory factor analysis, a Chronbach's Alpha Reliability Analysis was conducted on all 8 items (refer Appendix C). Item-total correlations ranged between .43 and .80 indicating that the assumption of unidimensionality was tenable. Reliability for the scale was .86.

The data was examined for assumptions relevant to one-way ANOVA analysis. Although the data were still somewhat constrained, violation of normality (as measured by Kolmogorov-Smirnov Lilliefors Significance Correction) was only a problem for the Miss category due to most responses being at the scale midpoint with the remainder distributed above the midpoint. Testing for homogeneity of variance (as measured by Levene's Test of Equality of Variances) failed to find significant violation. On this basis, it was decided to leave the data untransformed.

The one-way ANOVA analysis (refer Appendix C) of the PBHAQ item means (Table 3) failed to find a significant difference between the groups ($F(2, 47) = 1.16$, $p = .32$) indicating that the client's title of address did not result in differential behavioral expectations by the nurses as measured by the PBHAQ. Observed power and effect size (η^2) for the ANOVA was .24 and .05 respectively.

Table 3. Predicted Behavior of Hospitalised Adult Questionnaire Item Mean and Standard Deviation Scores as a Function of Title of Address

Title	M	SD
Ms.	4.97	1.16
Mrs.	5.43	.91
Miss	4.93	1.16
Total	5.12	1.08

Discussion

Do registered nurses stereotype a vignette of a female client on the basis of title of address? Are nurses' expectations of a client's hospitalised behavior affected by the same? On the basis of previous findings for title of address effects (Dion, 1987; Dion & Cota, 1991; Dion & Schuller, 1991; Heilman, 1975), it was predicted that nurses would in fact stereotype the vignetted client on the basis of the client's title of address. Similarly, on the basis of previous findings for differential behavior expectation effects following the activation of a stereotype (Ganong, 1993; Ganong et al., 1988), it was also predicted that nurses would form differential behavioral expectations of the client on the basis of the client's title of address. However, the present results, as they stand, fail to support these hypotheses. Rather, these results reveal that nurses' ratings of the vignetted client were consistent across all three titles of address for both the FIQ and the PBHAQ. Thus, the presence of the title Ms. did not appear to result in the formation of a stereotypical impression of the client. That no such impression was formed also appears to be supported by the failure of the

PBHAQ to record any significant title of address difference for a nurse's subsequent behavioral expectations of the client. While this statement may seem obvious given that no subsequent expectation can be formed if no stereotype is activated, by the same token it can be suggested that the failure to find any subsequent differential expectations can conversely provide additional support to the claim that no stereotype has been activated. Examination of the mean item scores obtained for each condition (on both the FIQ and PBHAQ) also appears to discount the suggestion that these findings may simply be an artifact of low observed statistical power of the ANOVAs. Rather, other possible explanations which may account for the apparent discrepancy between these findings and those of previously cited studies must be considered.

There appear to be several possible explanations for the lack of consistency between previous findings and these present ones:

1. It is possible that, in contrast with members of the general population, nurses do not in fact stereotype clients on the basis of title of address. While this is a possibility, the previous findings by Ganong (1993) regarding stereotyping effects on the basis of a client's marital status would suggest that it is, at best, a rather tentative one.
2. It is possible that these findings are due to the "merely appended" effect. The salience of stating a female's title of address as a preferred versus merely appended title has been previously outlined (Dion & Cota, 1991). Given that the explicitly preferred condition was unable to be administered, this possible explanation cannot be ruled out. Further investigation of this point in subsequent investigations therefore appears justified.
3. Given that findings must show a significant difference in order to be published, it

is possible that the set of previously published findings are in fact not typical of the actual situation regarding title of address as a stereotype cue. As Lykken (1968) has noted, the consistent replication of a finding is of relatively greater importance than mere statistical significance alone. While it is acknowledged that replication was conducted in both the Dion (1987), and Dion and Schuller (1991) studies, the replication of these studies was perhaps limited in that they each drew from the same participant sample pools. For example, participants for both of the Dion (1987) studies were undergraduate psychology students from the same university. Similarly, participant samples for both of the Dion and Schuller studies (1991) were visitors to the Ontario Science Centre. It can perhaps be argued that a more robust replication would have been obtained by sampling undergraduate psychology students (or even other undergraduate students) from other universities (as in the case of Dion, 1987), or other members of the general population than those who visit the Ontario Science Centre (in the case of Dion and Schuller, 1991). Consequently, further investigations in this area using a wider sampling of participants are warranted in order to help identify the extent to which this possibility is a valid one.

4. It is possible that title of address is no longer as significant a stereotyping cue as it was when the previous research was conducted half a decade ago in the United States. Given the social climate of the present, it certainly seems a valid possibility and therefore one worthy of further investigation. Such investigations may perhaps employ sample populations similar to those employed by earlier studies within the title of address research (e.g., undergraduate students; members of the general public) in order to allow for more direct comparison with earlier findings. In this respect, replication of studies across time also appears warranted

in order to increase the robustness of research findings.

5. It is possible that these results may be an artifact of the particular methodology used. One of the most notable points of feedback provided by a significant number of nurses during debriefing was their uneasiness at being asked to rate a person on the basis of such brief information. Consequently, it appears that the FIQ was not, in fact, tapping into the measurement of unconscious cognitive processing. Rather, it seems that many of the nurses saw the activity as requiring them to make a judgement on someone they did not yet know: an activity which is more conscious in nature Such feedback seems to be supported by, as well as explain, the observed tendency of almost half the participants to rate a considerable number of FIQ (and to a slightly lesser extent PBHAQ) items at the scale midpoint. According to detailed feedback received from several nurses, a midpoint response was indicative of not being able to make a judgement. Thus, the demonstrated inability to rate the vignetted client on the FIQ items suggests that either the nurse's first impressions were not being activated, or that these activated impressions were not being tapped into by this study. This observation highlights the need for researchers to obtain detailed feedback from participants as part of a systematic examining of a study's methodological robustness. Consequently, given the nurses' comments regarding the brevity of the information supplied as the reason for their inability to rate the client on the measures presented, it makes sense to explore further the effect that information presentation, as a methodological issue, may have upon the results of stereotyping. Interestingly, this issue does not appear to have been empirically explored to date.

Although the amount and nature of the stimulus information provided in this

present study was designed to be as consistent as possible with that used in previous (a) title of address research (e.g., Dion, 1987; Dion & Cota, 1991; Dion & Schuller, 1991), and (b) research relating to stereotypes within nursing (e.g., Ganong, 1993; Ganong & Coleman, 1992; Ganong et al., 1988), it appears, in the case of this study, to have been perceived as overly artificial. Yet, when various nurses were asked whether they would actually receive any additional personal information (i.e., beyond what was provided in the vignette) about a client when receiving a telephone ward admission or participating in a change-of-shift hand-over report, each agreed that they would not.

In light of the feedback provided, two possible theoretical explanations may be advanced to account for the reticence of nurses to form an impression of a client on what was acknowledged to be a typical amount of personal information about a client that would be provided within a nursing context. On the one hand, it is possible that the provision of brief information per se evoked an artificially high level of resistance towards forming impressions, or at least towards recording formed impressions within the context of a pencil and paper type measurement. Within this context then, it may be that the brevity of the information in total, as opposed to the brevity of the personal information provided, may have contributed to the task being seen as overly artificial, thereby evoking what are termed "demand characteristics" (Orne, 1962, p.776). Within this context, demand characteristics would influence the participant to pay conscious attention to what is normally an unconscious process thereby rendering results atypical. A perception of artificiality may have been aroused by the presenting of the information in a different context to what is normally the case. For example, when similar client information to that contained in the vignette is presented within its usual context of a telephone admission to the

ward, it is perceived as "normal". However, when the same information is presented out of context (e.g., as in a vignette), it seems that it is perceived as unexpected and therefore given increased attention. The tendency for a perceiver to pay disproportionally greater attention to out-of-context (i.e., novel) behaviors has been noted by several researchers (e.g., Jones, Davis, & Gergen, 1961; McArthur, 1982). This increased attention may, in turn, facilitate a shift from unconscious to conscious processing of the information. Having thus become a consciously attended activity, it is then susceptible to the effects of social desirability response bias. From this point forward, the present thesis will refer to this theoretical explanation as the out-of-context effect.

Alternatively, a second explanation alluded to by Ganong and Coleman (1992) is also worthy of consideration. Specifically, Ganong and Coleman (1992, p. 144) suggest that "when little information is given, each characteristic may have a comparatively greater impact on first impressions." Thus, it may be that the presentation of a brief vignette is cognitively manageable in terms of the number of details presented in comparison with the processing capacity of the short-term memory. Given that the capacity of short-term memory is believed to generally be 5 +/- 2 units of information (Oakes et al., 1994), it would seem that the cognitive demands of the vignette were able to be processed in their entirety. From this point forward, the present thesis will refer to this alternative theoretical explanation as the minimal-cognitive-load effect.

Which of these theoretical explanations best accounts for the observed phenomenon is grounds for further investigation? One way this may be examined is by providing different participant groups with increasingly greater apparent levels of information, whilst at the same time not actually providing any additional personal

details about the client. An out-of-context effect would be suggested when the item scale mean for participants in the low information condition was placed towards the midpoint, while the item scale mean for participants in the high level condition would be more towards stereotypic expectations. Conversely, a minimal-cognitive-load effect would be suggested when more diverse mean item ratings were achieved for the low information condition (in the direction of stereotypic expectations) but not for the high information condition due to applying a greater cognitive load on a participant's short term memory.

In light of the preceding discussion, it can be seen that the findings of this present study have been limited in two main ways. Firstly, the inability to obtain sufficient participants to enable the preferred title of address conditions to be conducted is certainly a limitation that has some empirical support (e.g., Dion & Cota, 1991). Secondly, the presentation of the stimulus client via a descriptive paragraph appears to have prevented the stimulus from tapping into the participants' unconscious processing domains. The implications of this latter limitation are particularly significant. Specifically, this latter limitation highlights the value of obtaining detailed participant feedback as part of a systematic assessment of a study's methodological robustness. As such, it should be an issue that is kept in mind when reviewing previous research findings, and addressed by all future research investigations.

In summary, the findings of this present study have failed to support the hypothesised expectation that nurses would (a) stereotype a vignetted female client on the basis of title of address, and (b) form subsequent differential behavioral expectations of the client as a consequence of stereotype activation. Consideration of alternative explanations for these unexpected findings suggest that stimulus

presentation may represent a methodological issue needful of further investigation. Within this context, it is worth noting an important point raised by Ganong and Coleman (1992, p. 144) that "stereotyping is difficult to measure when study designs become more complex and closer to 'real life' situations." The findings of this study seem to suggest that the same may be said concerning the other end of the spectrum where study design becomes more simple and further from real life.

Chapter 3: Introduction to study 2

In light of the methodological, conceptual, and theoretical issues raised by study 1, a second study aimed at addressing these issues was conducted.

Methodological issues

The first issue under investigation concerns the presentation of the stimulus person's title of address as explicitly preferred rather than merely appended. This second study aims to investigate the extent to which merely appending the client's title of address may have been responsible for the findings of the first study by employing the explicitly preferred option in this instance. If a title of address effect is obtained under this condition, it would offer support to the suggestion that explicitly preferred versus merely appended title of address is a salient distinction.

In regard to the second methodological issue raised in study 1 (i.e., the amount of information provided as the stimulus to participants), it will be recalled that a significant number of nurses expressed uneasiness at being asked to rate a person on the basis of such apparently limited information. Yet, as was mentioned in study 1, the majority of the studies regarding the existence of the Ms. stereotype have been based upon the presentation of precisely this amount of personal information (e.g., Dion, 1987; Dion & Cota, 1991; Dion & Schuller, 1991). Surprisingly, whether this is the most valid method of stimulus presentation has not been investigated.

In a similar vein, it was also noted in study 1 that the three published studies to date that have employed the PBHAQ and FIQ (i.e., Ganong, 1993; Ganong & Coleman, 1992; Ganong et al., 1988) have varied according to the (a) amount, and (b) mode of stimulus information presentation. Yet again, the effect that variation in the amount and mode of stimulus information may have upon the results obtained on

these measures has not been investigated.

Within the context of these two methodological issues, this present study investigates (a) whether title of address effects are obtained when the stimulus person's title of address is stated as an explicit preference, and (b) whether increasing the amount of apparent information given to participants disarms their reluctance to rate a vignetted client on the FIQ and PBHAQ.

In regard to the first investigation focus, it was decided that only two levels of title of address would be used: Mrs. and Ms. The omission of the one title of address from this study was necessary in order to match the number of participants needed for statistical analysis under each condition with the number of participants available. Given the similarity of response patterns between Ms. and Miss obtained in study 1, it appears that Ms. and Mrs. represent relatively more extreme titles of address, and should therefore yield the strongest title of address effects. Consequently, it was decided to omit the title Miss from the present study.

In regard to the second investigation focus, it was decided that three levels of apparent information would be given:

1. The basic (low) level would be a replication of the paragraph description provided in study 1.
2. The second (moderate) level would provide a printed version of hypothetical partial nursing history interview transcript in addition to the basic paragraph.
3. The third (high) level would provide an audiotape recording of the partial nursing interview transcript in addition to both the basic paragraph and the printed partial transcript.

In addition to exploring the extent to which preferred title of address and level of apparent information would affect actual ratings on both the FIQ and

PBHAQ, it was also decided to explore whether these variables similarly affected participant's confidence in the ratings they had ascribed to each of the measures. As was mentioned in study 1, Correspondent Inferences theory (Jones and Davis, 1965) would predict that a perceiver will more confidently attribute stereotypical characteristics associated with a particular title of address when the stimulus person's has explicitly expressed a personal (and therefore presumably freely chosen) preference for their particular title of address. This theoretical expectation should therefore be reflected in a higher confidence rating for the title Ms. compared with Mrs. given that a preference for the title Ms. represents the strongest departure from the traditional female titles of address.

As has been mentioned, detailed feedback from a significant proportion of nurses indicated that the perceived brevity of the stimulus information was accompanied by in a lack of confidence in being able to rate the client on the measures provided. Hence, it would seem reasonable to propose that if participants felt as though they were being given more information and therefore felt they somehow knew the client better, then they should also be increasingly confident in their ratings of the client. Given that the aim of this present study was to alter participants' perceptions of the amount of personal information they were actually receiving about the client, the recording of confidence ratings should give a relatively direct measure of the extent to which this aim was actually being achieved.

Conceptual issue

In addition to addressing these two methodological issues, this present study also addresses the conceptual issue raised in study 1 concerning whether published title of address effects are replicable, or more specifically, under what conditions replication can be demonstrated. Specifically, this present study will therefore return

to investigating title of address effects within a sample of undergraduate psychology students. On this basis, the findings of the present study will be more directly comparable with those of Dion's (1987) study, and will therefore add to the delimiting of the conditions under which Dion's findings can be replicated. As will be recalled, Dion's study has demonstrated title of address effects, based on presentation of a brief paragraph vignette, within a sample of undergraduate psychology students.

Theoretical issue

Study 1 raised the theoretical issue of whether the apparent relocation of the impression formation task from unconscious to conscious awareness was due to out-of-context effects or to minimal-cognitive-load effects. Furthermore, it was proposed that varying the level of apparent information given to participants may provide a way of testing which theoretical explanation was the more valid. Specifically, it was suggested that an out-of-context effect would be indicated when the item scale mean for participants in the low information condition was placed towards the midpoint, while the item scale mean for participants in the high level condition was located further from the midpoint (i.e., in the direction of stereotypic expectations). Conversely, a minimal-cognitive-load effect would be indicated when more diverse mean item ratings were achieved for the low information condition (i.e., in the direction of stereotypic expectations), but not for the high information condition due to applying a greater cognitive load on a participant's short term memory. As can be seen, the design of this present study potentially enables these theories to be tested.

Hypotheses of the present study

Three hypothesised findings were anticipated for this present study. In particular, it was predicted that:

1. An effect for title of address would be found on the FIQ subscale and PBHAQ scale items. A title of address effect would be indicated by differential mean item ratings for the client titled Ms. as compared with the client titled Mrs.
2. Differential mean item ratings would be recorded on each of the FIQ subscale and PBHAQ scale items as a function of the level of information presented. Specifically, in light of the findings of study 1, it was anticipated that the basic level of information condition would again result in mean item ratings closest to the scale midpoint, while the second and third levels of information would result in mean item ratings that were further from the scale midpoint with the third level condition reporting the furthest differentiation.
3. Differential confidence ratings would be found as a function of level of apparent information provided, but not as a function of title of address. Concerning this first prediction, the lowest level of provided information should be accompanied by the lowest confidence ratings, the highest level of provided information should be accompanied by the highest confidence ratings, whilst the moderate level of provided information should result in a confidence rating somewhere in between. Concerning this second prediction, Correspondent Inference theory (Jones & Davis, 1965) would expect that participants under each title of address condition would be equally confident in their assigned ratings given that each title of address is expressed as an explicit preference.

Method

Participants

Participants consisted of 116 undergraduate psychology students enrolled in the second year unit Applied Developmental Psychology. Given that these participants represent a group that is homogenous to those used in Dion's (1987)

study, it was decided to forego the collection of demographic data in this instance so as to make participation as easy and quick as possible, and thereby attract as many available participants as possible.

Direct participant contact was again selected as the mode of participant recruitment and data collection for this study in preference to mail-out due to time and practical constraints (e.g., administration of audio taped stimulus). Additionally, it was also anticipated that this mode of participant contact facilitated greater opportunity for direct participant feedback.

Participants were accessed during their weekly Applied Developmental tutorial session. All participants at a given tutorial group were assigned to the same condition given that it was not possible to deliver the differing levels of information simultaneously without one level receiving the information of the others. Six tutorial sessions in total were accessed with each session representing one of the six conditions in this study.

Participants were provided with a brief verbal explanation regarding the general nature and purpose of the study before being invited to participate. Only participants who completed a consent form were included in the study. All ethical requirements outlined in the Edith Cowan University Policy for the Conduct of Ethical Research Involving Human Subjects (Committee for the conduct of ethical research, 1994) were strictly adhered to.

Materials

Participant materials in this study consisted of:

Participant scenario and stimulus information: Six printed versions of the participant scenario and stimulus information (corresponding to two titles of address by three levels of apparent information) were designed (refer Appendix D). Each

version was constant with regards to the participant scenario. Participants were asked to imagine they were each part of a team conducting an Applied Developmental class project involving collecting data about a nursing client regarding how that client was coping with hospitalisation arising as a result of unplanned injury. Participants were then given information about a client (including the client's preferred title of address as either Ms. or Mrs.) that would be potentially suitable for their project. Three levels of information were then supplied:

1. Basic (i.e., low information level): This incorporated the same personal details as used in study 1 except that only two title of address conditions were used (i.e., Ms. and Mrs.). However, rather than present the personal details in standard paragraph format (as in study 1), these details were presented point form in order to increase the perceived validity of the data within the context of the particular scenario used in this study.
2. Transcript (i.e., moderate information level): This consisted of the basic information plus an additional single page transcript of a partial, hypothetical nursing history interview between the client an a nurse. No additional personal information was included in the transcript. Rather, the transcript predominantly consisted of the nurse introducing themselves to the client and then checking that the details outlined in the basic information were infact correct.
3. Audio (i.e., high information level): This consisted of all the information provided at the moderate level plus an additional audio tape recording of the information presented in the partial transcript. A portable audio cassette recorder was used to play the audio tape to the participant group.

Questionnaires: The two questionnaires used in study 1 were again used in this second study in order to allow for comparison of findings yielded by these

measures across the two studies comprising the present thesis. As will be recalled, the two questionnaires used were the First Impressions Questionnaire (FIQ: Bryan et al., 1986) and the Predicted Behavior of a Hospitalised Adult Questionnaire (PBHAQ: Ganong et al., 1988).

In this present study, a slight modification was made to both questionnaires by way of increasing the "visibility" of the client's title of address as a preference. Specifically, whereas the client was simply addressed as Mary within the questionnaires in the first study, in the present study, the client is addressed as either Ms. Reid or Mrs. Reid (refer Appendix D).

Confidence ratings: Each participant's confidence in the ratings they had given for each of the two questionnaires was assessed on a seven-point scale ranging from not confident (1) to very confident (7).

Research design

This study employed a 2 x 3 (title of address x level of information), between-subjects design. The two titles of address consisted of Ms. versus Mrs. The three levels of information were basic (low), transcript (moderate), and audio (high). The dependent variable measures consisted of:

1. Subscale mean item scores (i.e., total scale score divided by number of items in scale) on the multidimensional First Impressions Questionnaire (FIQ).
2. Mean item score on the unidimensional Predicted Behavior of a Hospitalised Adult Questionnaire (PBHAQ).
3. Mean confidence rating on each of the two questionnaires.

Procedure

After permission was granted from the Applied Development unit coordinator and the individual tutorial supervisors, initial contact was made with prospective

participants at the commencement of their tutorial time. Each member of the tutorial group was provided with a set of participant materials and was invited to read the covering letter informing participants of the general nature and purpose of the study. Confidentiality of both the participant's identity and data were assured. Participants were then asked to sign the attached consent form before proceeding further. All tutorial group members agreed to participate in the study, and all agreed to sign consent forms.

The researcher then commenced leading the participants, as a single group, through the provided scenario. Participants were then instructed to read carefully the client information provided. In addition, participants in the audio condition were also instructed to listen to the audio tape recording as they read the transcript. After all participants indicated they had completed reading, they were again led through the remainder of the scenario before being directed to complete the two attached questionnaires. Standardised instructions for completing a semantic differential were included as part of the questionnaires (for further details, refer Appendix D).

Upon completion, questionnaires were individually collected by the researcher. When all participants had finished, a group debriefing session was held during which any participant questions were addressed. Participants were then requested not to discuss the study with any other students until the next day in order to avoid biasing the participation of subsequent tutorial sessions.

Results

First Impressions Questionnaire

Item raw scores were reverse coded as necessary (19 out of 40 items) in order that higher scores represented more positive impressions. As insufficient participants were obtained to enable a factor analysis of the 40 FIQ items, initial analysis was

again based upon the three factor solution obtained by Ganong (personal communication, September 9, 1997) (refer Appendix B). The three factors were Independence (12 items, α = .84), Agreeable (9 items, α = .87) and Moral (6 items, α = .74). Cronbach's Alpha reliability analysis was conducted separately on each factor (refer Appendix E). Items with an item-total correlation of less than .30 were omitted one at a time until an acceptable final solution was obtained. Results of the analysis yielded acceptable (i.e., > .60) reliability estimates for all three factors: Independence (10 items, α = .89), Agreeable (9 items, α = .92), and Moral (3 items, α = .62). An initial principal components factor analysis with varimax rotation was conducted on the 22 items comprising these three factors (refer Appendix E). Although an initial three factor solution was obtained, inspection of the item values loading on the third factor revealed equal-high-loadings (i.e., > .40 on both factors) on all four of the five items comprising the third factor. Inspection of the resultant scree plot also suggested that a two factor solution was appropriate. After exclusion of the 4 equal-high-loading items, a subsequent factor analysis (restricted to a two factor solution) was conducted on the remaining 18 items (refer Appendix E). Each of the two resultant factors was then submitted to Cronbach's Alpha reliability analysis (refer Appendix E). Items recording low (< .30) item-total correlations were omitted one at a time with reliability analyses reruns conducted each time until a final acceptable solution was obtained (refer Appendix E). The factor loadings, communalities ($\underline{h}^2$), and percentages of variance after varimax rotation are displayed in table 4. Factor loadings less than .30 have been suppressed to aid interpretation. As factor 1 consisted of 8 of the 9 items identified by Ganong (personal communication, September 9, 1997) as representing the factor Agreeable, it was similarly labelled Agreeable. As factor 2 was found to consist of 5 out of the 12

original items identified by Ganong as representing the factor Independence, it too was similarly labelled Independence. Final Cronbach's Alpha reliability estimates for Agreeable and Independence were .92 and .85 respectively (refer Appendix E).

Table 4. Varimax Rotated Factor Loadings for First Impressions Questionnaire

Item	Factors		h^2
	1	2	
Respectful	.87	...	.78
Agreeable	.83	...	.69
Grateful	.82	...	.70
Congenial	.82	...	.66
Friendly	.79	...	.69
Loving	.71	...	.59
Kind	.68	...	.56
Fair	.66	...	.47
Wholesome	.61	...	.37
Sophisticated	...	.81	.66
Secure	...	.78	.70
Independent	...	.76	.60
Intelligent	...	.76	.63
Competent	...	.72	.62
Not Lonely	...	.55	.38
Eager	...	.53	.30
% of variance	42.00	16.60	58.50
Label	Agreeable	Independence	

Item totals for each factor (by group) were calculated and examined for assumptions relevant to General Factorial ANOVA analysis. No outliers were present. Violations of normality (as measured by Kolmogorov-Smirnov Lilliefors Significance Correction) were only recorded for the Ms x basic (Agreeable and Independence) and Mrs. x basic (Independence only) conditions. Examination of the distributions under each of these conditions revealed a similar constraining of data that was experienced with study 1. The assumption of homogeneity of variance (as measured by Levene's Test of Equality of Variances) was found to be tenable for both factors. Based on the combined consideration of these findings, in conjunction with the equality of cell sizes (Table 5), it was decided that data transformation was not warranted in this instance (Tabachnick, & Fidell, 1996).

Table 5. Cell Sizes for the First Impressions Questionnaire as a Function of Level of Information and Title of Address

	Title		
Info Level	Ms.	Mrs.	Total
Basic	20	18	38
Transcript	23	17	40
Audio	20	18	38
Total	63	53	116

Note: Cell sizes were constant across both factors.

Group means for each factor (Table 6) were analysed using two separate 2 x 3 (title x information level) General Factorial ANOVAs (refer Appendix E). This

analysis investigated whether mean item ratings obtained on each factor varied as a function of title of address and level of information. No significant main effect for title of address was found for Agreeable ($\underline{F}$ (1, 110) = 2.91, $\underline{p}$ = .09). Observed power and effect size (η^2) was .39 and .03 respectively. No significant effect was found for Independence ($\underline{F}$ (2, 47) = .00, $\underline{p}$ = .96). Observed power and effect size (η^2) was .05 and < .01 respectively. These results indicated that client title of address did not result in any significant differential impression formation of the client's agreeableness or independence as measured by the FIQ.

Table 6. First Impressions Questionnaire Mean and Standard Deviation Item Scores for Agreeable and Independence as a Function of Level of Information and Title of Address

	Title					
	Ms.		Mrs.		Total	
Info Level	M	SD	M	SD	M	SD
Agreeable						
Basic	4.47	.80	4.75	.88	4.60	.84
Transcript	5.44	.94	5.82	.59	5.60	.83
Audio	5.31	.84	5.44	.81	5.37	.82
Total	5.09	.96	5.33	.88	5.20	.93
Independence						
Basic	4.73	.79	4.48	.97	4.61	.88
Transcript	4.89	1.25	5.00	1.06	4.94	1.16
Audio	4.26	1.16	4.37	1.35	4.31	1.24
Total	4.64	1.11	4.61	1.15	4.62	1.12

No significant interaction between title of address and level of information was found for Agreeable ($F(2, 110) = .21$, $p = .81$). Observed power and effect size (η^2) was .08 and < .01 respectively.

In contrast to the finding of no significant main effect for title of address, a significant main effect was found for level of information for: (a) Agreeable ($F(2, 110) = 15.74$, $p < .001$): observed power and effect size (η^2) 1.00 and .95

respectively; and (b) Independence ($F(2, 110) = 3.09$, $p = .05$): observed power and effect size (η^2) .58 and .05 respectively. These findings indicated that differential ratings of mean item scores on each factor varied as a function of the level of information presented. In order to discover where the differences were, post hoc pairwise comparisons were conducted among the three cell means for each factor using the Tukey Honestly Significant Difference test.

Results from the post hoc analysis of Agreeable revealed that the mean item score for basic information was significantly lower than both transcript and audio, but that transcript and audio were not significantly different from each other (Figure 1).

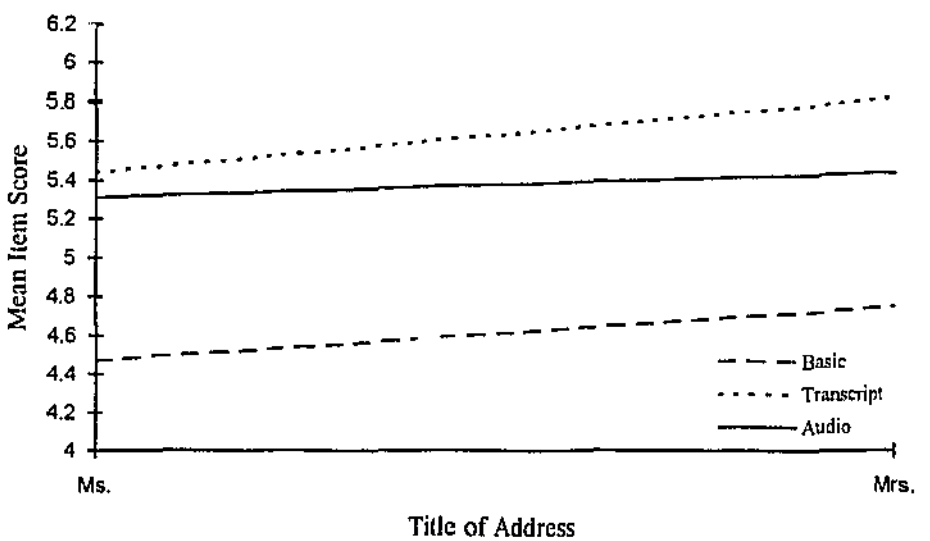

Figure 1. Agreeable mean item score as a function of level of apparent information.

Results for post hoc analysis of Independence revealed that audio was significantly lower than transcript, and that basic was not significantly different to either transcript or audio (Figure 2).

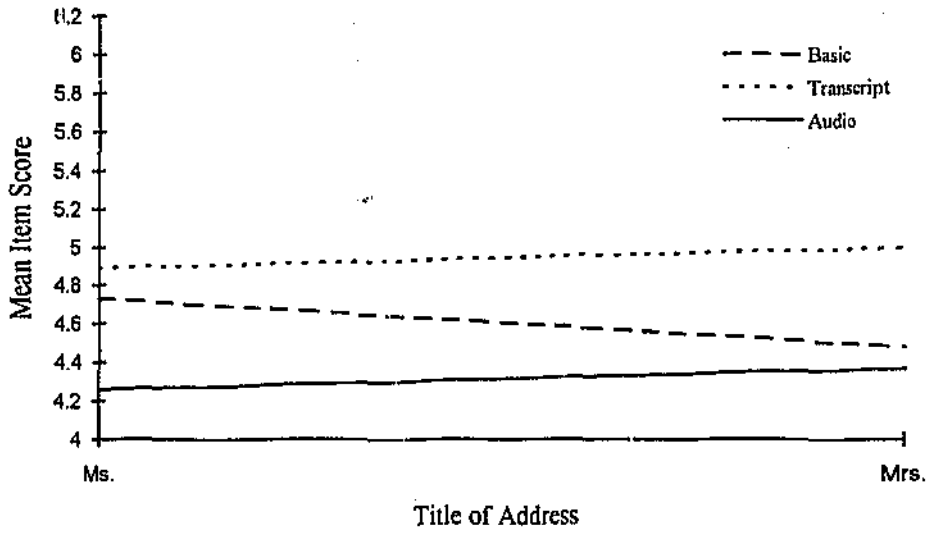

Figure 2. Independence mean item score as a function of level of apparent information.

No significant interaction between title of address and level of information was found for Independence ($F(2, 110) = .33$, $p = .72$). Observed power and effect size (η^2) was .10 and .01 respectively.

Predicted Behavior of a Hospitalised Adult Questionnaire

Item raw scores were reverse coded as necessary (5 out of the 8 items) so that higher scores represented more positive behavioral expectations. Cell sizes for each condition are the same as those displayed in Table 5.

Given that the scale was reportedly unidimensional (Ganong et al., 1988), Chronbach's Alpha reliability analysis was initially conducted on the total scale. Items with low (< .30) item-total correlations were deleted one at a time with analysis reruns after each deletion (refer Appendix E). A three-item scale proved to be the most satisfactory final solution ($\alpha = .70$). Based on this solution, mean item

total scores for each group were calculated (Table 7).

Table 7. Predicted Behavior of Hospitalised Adult Questionnaire Item Mean and Standard Deviation Item Scores as a Function of Title of Address and Information Level

	Title					
	Ms.		Mrs.		Total	
Info Level	M	SD	M	SD	M	SD
Basic	5.35	.93	5.00	1.18	5.18	1.06
Transcript	5.96	.61	6.12	.60	6.03	.61
Audio	5.93	.93	5.78	1.05	5.86	.98
Total	5.76	.86	5.62	1.07	5.70	.96

The data was then examined for assumptions relevant to General Factorial ANOVA analysis. Although violation of normality (as measured by Kolmogorov-Smirnov Lilliefors Significance Correction) was a problem for the Ms. x basic and Ms. x audio conditions due to the constrained range of the data, ANOVA is not sensitive to this violation when the independent variable has a fixed number of categories (Shavelson, 1988). Similarly, although testing for homogeneity of variance (as measured by Levene's Test of Equality of Variances) found this assumption to be violated, the large and approximately equal cell sizes (Table 5) mean that ANOVA is also not sensitive to this violation (Shavelson, 1988). While transformation of the data may have resulted in improved satisfaction of the assumptions, it was decided to leave the data in its untransformed state in order to

retain the meaningfulness and direct comparability of the data (Tabachnick, & Fidell, 1996).

A 2 x 3 (title x information level) General Factorial ANOVA analysis was run on the data (refer Appendix E). This analysis investigated whether mean item total scores varied as a function of title of address and level of information. The main effect for title was found to be non significant ($F(1, 110) = 0.46$, $p = .50$) indicating that the client's title of address did not result in differential behavioral expectations by participants as measured by the PBHAQ. Observed power and effect size (η^2) was .10 and < .01 respectively.

In contrast, the main effect for level of information was found to be significant ($F(2, 110) = 9.67$, $p < .001$): observed power and effect size (η^2) was .98 and .15 respectively. This indicated that the amount of information provided resulted in differential behavioral expectations of the client as measured by the PBHAQ.

In order to discover where the differences were, post hoc pairwise comparisons were conducted among the three cell means for level of information using the Tukey Honestly Significant Difference test. It was found that the mean item score for basic information was significantly lower than both transcript and audio, but that transcript and audio were not significantly different from each other (Figure 3).

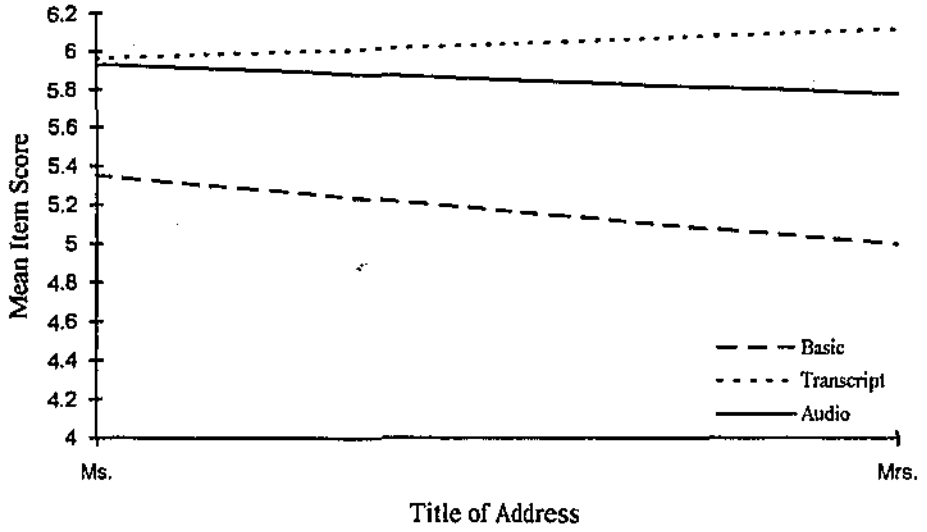

Figure 3. Predicted Behavior of a Hospitalised Adult mean item score as a function of level of apparent information.

No significant interaction between title of address and level of information was found for the PBHAQ ($F(2, 110) = .79$, $p = .46$). Observed power and effect size (η^2) was .18 and .01 respectively.

Confidence Ratings

Upon inspecting the data it was observed that whilst all participants had completed the confidence ratings for the PBHAQ, 8 participants had omitted to complete the FIQ confidence ratings. Given that this item was the last item to be completed by participants, it appears likely that participants merely overlooked completion of this item. Cell sizes for each questionnaire by condition are shown in Table 8.

Table 8. Cell Sizes for Confidence Ratings of the First Impressions and Predicted Behavior of a Hospitalised Adult Questionnaires as a Function of Level of Information and Title of Address

	Title		
Info Level	Ms.	Mrs.	Total
FIQ			
Basic	19	16	35
Transcript	22	15	37
Audio	19	17	36
Total	60	48	108
PBHAQ			
Basic	20	18	38
Transcript	23	17	40
Audio	20	18	38
Total	63	53	116

Mean item confidence scores were calculated for each group for both the FIQ (Table 9) and PBHAQ (Table 10).

Table 9. First Impression Questionnaire Confidence Rating Mean and Standard Deviation Item Scores as a Function of Title of Address and Information Level

	Title					
	Ms.		Mrs.		Total	
Info Level	M	SD	M	SD	M	SD
Basic	3.95	1.93	3.44	1.79	3.71	1.86
Transcript	5.09	1.54	4.73	1.28	4.95	1.43
Audio	4.42	1.77	4.29	2.39	4.36	2.06
Total	4.52	1.78	4.15	1.94	4.35	1.85

Table 10. Mean Item Confidence Ratings of the Predicted Behavior of a Hospitalised Adult Questionnaire as a Function of Title of Address and Information Level

	Title					
	Ms.		Mrs.		Total	
Information Level	M	SD	M	SD	M	SD
Basic	4.40	1.96	3.89	1.81	4.16	1.88
Transcript	4.91	1.73	5.24	1.35	5.05	1.57
Audio	5.30	1.75	5.39	1.58	5.34	1.65
Total	4.87	1.82	4.83	1.71	4.85	1.76

The data was examined for assumptions relevant to General Factorial ANOVA analysis. No outliers (+/- 3 SD's) were present. However, violation of normality (as measured by Kolmogorov-Smirnov Lilliefors Significance Correction) was found for all conditions except Mrs. x basic and Ms x basic on the PBHAQ and FIQ confidence ratings respectively. Levene's test for homogeneity of variance was tenable for the PBHAQ, but was violated for the FIQ. However, as ANOVA is not sensitive to violations of normality when the independent variable has a fixed number of categories, or to violations of homogeneity of variance when cell sizes are large and equal (Shavelson, 1988), it was decided to leave the data in its untransformed state in order to retain its meaningfulness and comparability (Tabachnick, & Fidell, 1996).

A 2 x 3 (title x information level) General Factorial ANOVA analysis was run on the data corresponding to each confidence rating (refer Appendix E). These analyses investigated whether mean confidence scores for the FIQ and PBHAQ varied as a function of title of address and level of information.

For the FIQ confidence rating, a significant main effect was found for level of information ($F(2, 102) = 3.99$, $p = .02$): observed power and effect size (η^2) was .70 and .07 respectively. However, no significant main effect was found for title of address ($F(1, 102) = .89$, $p = .35$): observed power and effect size (η^2) was .15 and .01 respectively. These findings indicate that the amount of information provided to participants corresponded to differential FIQ confidence ratings, but that there was no difference in these ratings on the basis of the client's title of address.

In order to discover where the differences for level of information were, post hoc pairwise comparisons were conducted among the three cell means using the Tukey Honestly Significant Difference test. It was found that the mean FIQ

confidence score for basic information ($\underline{M}$ = 3.71, SD = 1.86) was significantly lower than transcript ($\underline{M}$ = 4.95, SD = 1.43), but that audio ($\underline{M}$ = 4.36, SD = 2.06) was not significantly different from either basic or transcript.

No significant interaction between title of address and level of information was found for the FIQ confidence rating ($\underline{F}(2, 102) = .10$, $\underline{p} = .91$). Observed power and effect size (η^2) was .07 and <.01 respectively.

For the PBHAQ confidence rating, a significant main effect was found for level of information ($\underline{F}(2, 110) = 5.11$, $\underline{p} = .01$): observed power and effect size (η^2) was .81 and .09 respectively. However, no significant main effect was found for title of address ($\underline{F}(1, 110) = .01$, $\underline{p} = .92$): observed power and effect size (η^2) was .05 and < .01 respectively. These findings indicate that the amount of information provided to participants corresponded to differential PBHAQ confidence ratings, but that there was no difference in these ratings on the basis of the client's title of address.

In order to discover where the level of information differences were, post hoc pairwise comparisons were conducted among the three cell means for level of information using the Tukey Honestly Significant Difference test. It was found that the mean item score for basic information ($\underline{M}$ = 4.16, $\underline{SD}$ = 1.88) was significantly lower than for audio ($\underline{M}$ = 5.34, $\underline{SD}$ = 1.65), but that transcript ($\underline{M}$ = 5.05, $\underline{SD}$ = 1.57) was not significantly different from either basic or audio. No significant interaction between title of address and level of information was found for the PBHAQ confidence ($\underline{F}(2, 110) = .60$, $\underline{p} = .55$). Observed power and effect size (η^2) was .15 and .01 respectively.

Discussion

This second study investigated the extent to which an undergraduate psychology student's first impression and expected behavior ratings of female

stimulus person varied as a function of (a) the stimulus female's preferred title of address, and (b) the level of apparent information presented. Contrary to hypothesised expectations, the present findings failed to yield significant main effects (i.e., on either the FIQ or PBHAQ) for title of address. However the finding of significant main effects for level of information was consistent with predicted expectations, though there were some anomalies that require further exploration. No significant interaction effects were found.

Additionally, this second study also examined participant's confidence in the ratings they had ascribed to their first impressions and expected behaviors as a function of title of address and level of information provided. Consistent with hypothesised expectations, no title of address main effects were found. Also consistent with hypothesised expectations was the finding of level of information main effects, although there were again some anomalies that require further exploration. Once again, no significant interaction effects were found. These findings, along with their implications for the methodological, conceptual and theoretical issues raised at the outset of this present study will each be discussed in greater detail below.

Methodological issues

Do undergraduate psychology students stereotype a vignette of a female on the basis of explicitly preferred title of address? The first hypothesis of this present study predicted that differential mean scale ratings for both the FIQ and PBHAQ would be obtained as a function of the vignetted stimulus person's title of address. This prediction was based upon (a) the previously mentioned findings of significant Ms. title of address effects for undergraduate psychology students (Dion, 1987), and (b) Correspondent Inference theory (Jones, & Davis, 1965) which suggests that a

person expressing a preference for title of address will likely be attributed the characteristics associated with that title. The finding of no significant difference for first impressions (as measured by the FIQ), or predicted behaviors (as measured by the PBHAQ) for a female who prefers to be title Ms. as opposed to a female who prefers to be titled Mrs. therefore fails to provide support for this first hypothesis. Two explanations in particular that may account for this unexpected finding are:

1. Given that a decade has elapsed since title of address effects were last reported in a sample of undergraduate psychology students (i.e., Dion, 1987), it is possible that social conditions have changed such that the distinction previously caused by title of address is no longer as salient within an undergraduate psychology student population. Alternatively, it is also possible that cultural differences between Dion's (1987) study conducted in the United States, and the present study conducted in Australia, may be a contributing factor.
2. The discrepancy between these present findings (based on the FIQ and PBHAQ) and those of Dion (1987) (an unstandardised trait rating scale developed by Dion) may be due to the different dependent variable measures utilised by each study. Thus, Ganong et al's. (1987) observation regarding the limitation of comparison between studies due to differential measures again appears to be a relevant consideration that should be addressed in future investigations.

It would appear that further replication of Dion's (1987) study within universities within the United States would address (a) whether title of address is still a relevant stereotyping cue amongst undergraduate university students a decade on, and (b) the extent to which this cue may be culturally bound. Through additionally incorporating the FIQ in such a replication, the suggestion regarding the effects of differential measures would also be addressed.

Does the level of apparent information provided about a hospitalised person affect the first impressions and behavioral expectations formed in relation to that person? The present study predicted it they would. This second hypothesis was based upon the suggestion that providing a greater level of apparent information, whilst not actually giving any more personal details of the stimulus person, would somehow disarm participant's apparent conscious awareness (and hence reluctance) of being asked to rate a person on the basis of brief information. This would presumably allow the process of impression formation to proceed at its more usual unconscious level of cognitive processing. The results of this present study generally appear to provide support for this hypothesised expectation on two grounds. Firstly, there was an overall general trend towards the mean scale item score being further from the midpoint for moderate and high information conditions relative to the low information condition. Secondly, none of the reticence that was again expressed (i.e., similar to study 1) by those in the basic condition (towards being asked to rate a person on the basis of such brief information) was expressed by those in the moderate and high information conditions. This finding makes it more likely that those in the moderate and high conditions were actually involved in the unconscious cognitive processing of the stimulus information.

The expressed reticence by a number of participant's in the basic information condition is significant in that it has now been obtained on two different sample populations (i.e., nurses and undergraduate psychology students). The consistency of this observation across the two studies comprising this present thesis raises questions regarding the validity of this form of stimulus presentation, and in turn, also raises questions regarding the validity resultant data obtained under such conditions. Given that many of title of address studies (e.g., Dion, 1987; Dion & Cota, 1991; Dion &

Schuller, 1991) have incorporated the use of brief paragraph descriptions as the sole mode of stimulus presentation, it would appear that the present research calls these studies, and their findings, into question.

Before concluding the discussion regarding level of information effects on the FIQ and PBHAQ scales, it must be noted that there are some anomalies within the findings that need to be explored. For example, results for both the FIQ factor Agreeable and the PBHAQ saw (a) mean client ratings under the basic (low) information condition closest to the scale midpoint, and (b) transcript (moderate) and audio (high) information conditions furthest from the scale midpoint (though there was no significant difference between transcript and audio conditions). Yet, when it came to comparative ratings of the FIQ factor Independence, audio was found to be the closest to the scale midpoint, transcript the furthest from the midpoint, with basic in between (though not significantly different from either audio or transcript).

One possible explanation for this apparent fluctuation found in the audio condition concerns the tone of voice used by the client on the audio tape. The tone of voice used by the client was designed to be as emotionally neutral as possible in order to avoid providing actual additional information above merely giving the impression that the participant had actually heard the client. While the aim of intended emotional neutrality appears to have been achieved in regard to the participants' perceptions of the client's Agreeableness (i.e., as indicated by the finding of no significant difference to the transcript condition), it appears that the same emotional neutrality was perceived as indicative of lower Independence. In this way it can perhaps be argued that the high information condition did actually contain additional information as opposed to merely appearing to contain additional information. Consequently, the degree to which a particular mode of stimulus

presentation has been empirically validated appears to represent a salient methodological consideration that should be assessed when reviewing past investigations, and when designing future investigations. For example, it will be noted that the effect of varying stimulus presentation between video tape (Ganong et al, 1988), audio tape (Ganong & Coleman, 1992) and printed (Ganong, 1993) modes was not taken into consideration by any of these studies, and therefore represent a limitation of the resultant findings.

In summary, it appears that increasing the level of apparent information provided more readily facilitates the necessary tapping into unconscious cognitive processing that is required for the measuring of stereotype activation. Nevertheless, these suggestions are tentative, and require further investigation before greater confidence can be attributed to them.

Do confidence ratings vary as a function of title of address? The data support this hypothesised suggestion that they would not. This suggestion was based upon the principles of Correspondence Inference Theory (Jones & Davis, 1965) whereby a statement of explicit preference is perceived (by a perceiver) as a behavior that is indicative of the stimulus person's disposition, and as such, readily activates corresponding stereotypical attributes. The lack of any significant difference between the confidence ratings of the FIQ and PBHAQ as a function of title of address suggests that both titles of address were equally confidently attributed to the disposition of the stimulus person, and must therefore have been equally noticed and processed by the participants.

Do confidence ratings vary as a function of apparent level of information provided? Again the present findings support the hypothesised expectation that they would. This expectation was based upon the suggestion that the provision of

apparent additional information would cause the participant to somehow believe they knew the stimulus person better. This finding, in conjunction with the above mentioned absence of expressed reticence by participants in the moderate and high information groups serves to further support the proposition that amount of apparent information is a salient methodological consideration for research within the field of stereotype activation.

Once again, however, there are anomalies that need to be explored. For example, results for the FIQ confidence rating found those in the transcript condition were significantly more confident than those in the basic condition, while those in the audio condition were neither significantly more, nor less, confident than either the basic or transcript conditions. Yet, when it came to confidence in the PBHAQ ratings, those in the audio condition were significantly more confident than those in the basic condition, while those in the transcript condition were neither significantly more nor less confident than either the basic or audio conditions. Thus, while increasing the amount of apparent information provided to participants beyond the level of basic paragraph presentation corresponded with an increase in participant's confidence in the ratings they ascribed, it made little difference whether the increase was to a moderate or to a high level. One possible explanation for this observation concerns the practical magnitude of the findings. Examination of the magnitude of actual differences in confidence ratings between moderate and high level information revealed that they were relatively slight. Consequently a minor variation in confidence may well have contributed to these observed anomalies. Yet, despite these anomalies, the confidence rating findings do serve to provide further support for the suggestion that level of apparent information is a salient methodological issue that should be taken into account when evaluating and/or planning research designs.

Conceptual issues

It will be recalled that this present study was concerned with investigating the extent to which published findings for title of address (e.g., Dion, 1987) could be replicated. As can be seen, the findings of the present study suggest that title of address effects may not be as widespread as some have proposed (e.g., Dion & Schuller, 1991). This observation highlights the need for further delimiting of the conditions under which title of address effects can be demonstrated. Such delimiting should identify and document the geographical, cultural, and time boundedness of the title of address stereotype. The closer that research moves towards this level of specificity, the more valuable it will be to those who rely upon its information.

Theoretical issues

This present study proposed that varying the level of apparent information given to participants would potentially provide a way of testing whether the findings of study 1 were due to out-of-context effects versus minimal-cognitive-load effects. It will be recalled that out-of-context effects would be suggested when the item scale mean was located towards the midpoint for participants in the low information condition, and away from the midpoint for participants in the high information condition. Conversely, an opposite result would suggest minimal-cognitive-load effects. Unfortunately, the finding of no significant difference for title of address has served to considerably limit the ability of this present study in regards to testing these theories. However, the overall general finding of item scale means closest to the midpoint under the low information condition relative to the moderate and high information conditions does provide some tentative support in favour of the out-of-context effects. Consequently, much further investigation in this area is needed before greater confidence can be attributed to validity of out-of-context effects over

minimal-cognitive-load effects as accounting for why brief information that would normally be unconsciously processed becomes consciously attended to.

General Discussion

The two studies comprising this present thesis have investigated stereotyping on the basis of title of address. Underpinning these two studies has been the broad domain of person perception theory, and the more specific domain of stereotyping theory. Against the backdrop of therapeutic nurse client relationship formation, study 1 investigated whether registered nurses employed within a hospital setting, would stereotype a female vignetted client on the basis of title of address. Contrary to hypothesised expectations based upon (a) stereotyping theory, and (b) previous findings within the related field of marital status effects, no evidence of stereotyping was provided by the resultant findings. However, as a consequence of these findings, combined with detailed feedback obtained during the course of the investigation, methodological, conceptual and theoretical issues were raised.

The first methodological issue raised concerned the degree to which merely appending the stimulus person's title of address accounted for the failure to find title of address effects. The second methodological issue raised concerned the degree to which the findings were an artefact of the level of apparent information provided. The conceptual issue raised concerned the degree to which previously published findings were replicable, while the theoretical issue raised concerned the possible reasons why the provision of only brief information may have yielded findings that were contrary to hypothesised expectations.

In an effort to address these issues raised by study 1, a second study was conducted. This time, undergraduate psychology students were selected as title of address effects had previously been demonstrated amongst this population (Dion,

1987). The findings of this second study similarly failed to yield support for hypothesised title of address effects. However, significant level of apparent information effects were obtained. These findings were interpreted in light of the above mentioned issues.

In regards to first methodological issue raised, the findings for no title of address effects even when title of address was stated as an explicit preference suggest that title of address effects may not be as widespread as has previously been believed (e.g., Dion & Schuller, 1991). In light of the conceptual issue raised by study 1 concerning the degree to which published studies could be replicated, the findings of the second study therefore highlight the need for further delimiting of the conditions under which the title of address stereotype can be demonstrated. Consideration of this issue holds potential implications, not just for stereotyping research, but for all psychological research claiming validity on the basis of replication. In such instances, the basis and extent of replication must be examined. Simply to replicate a study by drawing upon the same local sample pool appears insufficient. Rather, synonymous sample pools from other areas need to be incorporated in order to find out the boundaries under which replication can, and equally importantly can not, be obtained.

In regards to the second methodological issue raised concerning the level of apparent information provided, the findings of the second study serve to raise doubts regarding whether the provision of brief, paragraph length vignettes are, of themselves, adequate for the activation of a stereotype such as title of address. Yet, as has been noted, this form of stimulus presentation is frequently employed in stereotyping research. In light of these observations, the validity of the findings that have been derived from brief, paragraph length vignettes must be questioned. By

implication, these findings therefore highlight the need for future research (both within and without the domain of stereotyping) to give careful and systematic consideration to the validity of the particular stimulus presentation selected. Ideally, the type of stimulus presentation selected should be on the basis of both theoretical justification and empirical validation.

While the failure to find title of address effects in the second study did not allow the theoretical issue raised by study 1 to be fully explored, the findings of level of information effects did provide tentative support to the validity of out-of-context effects over minimal-cognitive-load effects. Consequently, it appears that presentation of a brief paragraph outside of the "normal" context of a larger body of information, may infact render the information novel, and thereby attracting conscious rather than unconscious processing resources of the perceiver. However, this suggestion is only tentative at this stage and requires considerable further investigation before greater confidence can be attributed to its validity.

In addition to the individual contributions of the two studies comprising this present thesis, a more global contribution has also been made. Firstly, this present thesis has both raised and addressed the issue regarding presumption of links between stereotype activation and subsequent behavior that have characterised many of the previous studies within the field. Specifically, this thesis has incorporated the measuring of stereotype activation (i.e., the FIQ measuring impression formation) as well as the measuring of a subsequent perceiver behavior (i.e., the PBHAQ measuring the formation of cognitive expectancies of the perceiver's behavior).

Secondly, the failure to find title of address effects raises the possibility that more subtle stereotype cues may only be effective within certain contexts. For example, the presentation of marital status as a stereotype cue by Ganong (1993) was

within the context of pregnancy. Were this context to be removed, marital status effects may no longer be found. This suggestion regarding the need for thorough exploration of the substantive context of the variables under investigation should be kept in mind when reviewing and/or designing research within the area of stereotypes, particularly when subtle cues are being investigated.

In summary, the major limitations of the present thesis are the failure to administer both the merely appended and explicitly preferred forms of the title of address condition within the same study (and therefore the same sample). Secondly, the failure to collect demographic information from participants also, in hindsight, represents a limitation in that participant sub-group results may have been able to provide additional insights into some of the anomalies of the present findings. For example, recording of the participant's own preferred title of address may help identify why overall title of address effects are not apparently present. As such, these limitations represent areas for future consideration and exploration.

The major contributions of this present thesis have firstly been the documenting of the need to systematically consider the validity of all facets of the research design when reviewing and/or designing empirical investigations. While Ganong et al. (1987) have identified the need to select and evaluate measures on the basis of established validity, this present study has served to extend this recommendation to include the selection of stimulus presentation. Secondly, this present thesis has served to highlight the need for researchers to obtain detailed participant feedback as a valuable indication of what is actually going on within the specific research investigation. Had the present thesis not obtained such feedback, valuable insight into the reason for the non-significant results of the first study would not have been uncovered. The third important contribution of this present thesis is

by way of extending Lykken's (1968) call for replication as a measure of the true validity of an experiment (as opposed to mere statistical significance). Specifically, this present thesis has demonstrated the need to delimit the conditions under which replication is, and is not, possible. In this way, a contextual boundedness of the particular variable under investigation is identified and acknowledged. Fourthly, this present thesis has served to highlight the tendency within stereotyping research to presume, rather than measure, that activation of a stereotype has taken place prior to a behavioral occurrence. Finally, this present thesis has also highlighted the need to explore the substantive context of the variable under investigation in order to find whether the variable functions in isolation, or whether is effect is dependent upon the presence of another "catalyst" variable.

Taken together, these above points represent further tangible ways of evaluating and conducting research that will, if incorporated, help to develop a more valid and cohesive knowledge base, both within the field of nursing stereotypes, and beyond.

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Appendix A

Participant Information

Dear Participant,

This study is being conducted as part of my Bachelor of Psychology (Honours) degree at Edith Cowan University. The purpose of the study is to record people's first impressions and expectations of a person they have read about. I would be grateful for your assistance.

Your participation in this study would involve:
(a) reading a description of a potential nursing client before
(b) answering two brief questionnaires by circling your response.
Your participation is entirely voluntary and you are free to withdraw your participation at any stage. Your participation should take no more than 10 minutes.

If you agree to participate, please sign the space provided on the bottom of this page. Although the results of this study will be published in a report, *please be assured that the information obtained from you will be treated in the strictest confidence, and will remain anonymous. Your responses will NOT be able to be traced back to you in the report, as the data will be presented as group data and the attached slip will be stored separately from the questionnaire. Please do NOT record your name or any other information that could identify you on the questionnaire itself.*

Please complete the activity entirely on your own. It is also important that you do not discuss the activity with any other participants as it may influence their results.

It is anticipated that the information obtained from this research will further develop understanding of how people relate to someone they first meet within a professional setting.

Should you wish to find out about the results of the study, please feel free to write to me requesting a summary.

Should you have any queries regarding this project, please feel free to contact me, or my University supervisor, Dr Susan Gee (School of Psychology, Edith Cowan University: Ph 9400 5526).

Yours sincerely,

Phil van der Klift
Ph: 9250 7383

Nursing Client Description

Please read the following nursing client description. When you have done so, turn the page and begin completing the two attached questionnaires before returning them to me.

Thank you again for your participation.

In room 14:A is a female, 25 years of age. Ms Mary Reid has been admitted this shift following a car accident in which she sustained a compound fracture to her upper, right femur and two fractured ribs on her right side.

Nursing Client Description

Please read the following nursing client description. When you have done so, turn the page and begin completing the two attached questionnaires before returning them to me.

Thank you again for your participation.

In room 14:A is a female, 25 years of age. Miss Mary Reid has been admitted this shift following a car accident in which she sustained a compound fracture to her upper, right femur and two fractured ribs on her right side.

Nursing Client Description

Please read the following nursing client description. When you have done so, turn the page and begin completing the two attached questionnaires before returning them to me.

Thank you again for your participation.

In room 14:A is a female, 25 years of age. Mrs Mary Reid has been admitted this shift following a car accident in which she sustained a compound fracture to her upper, right femur and two fractured ribs on her right side.

How to complete these Questionnaires

The purpose of these questionnaires is to measure your first impressions and expectations of the nursing client you have just read about.

If you feel that your impression of the client is ***very closely related*** to one or the other end of the scale, you should circle the number as follows:

FAIR (3) : 2 : 1 : 0 : 1 : 2 : 3 UNFAIR

OR

FAIR 3 : 2 : 1 : 0 : 1 : 2 : (3) UNFAIR

If you feel that your impression of the client is ***quite closely related*** to one or the other end of the scale (but not extremely), you should circle the number as follows:

FAIR 3 : (2) : 1 : 0 : 1 : 2 : 3 UNFAIR

OR

FAIR 3 : 2 : 1 : 0 : 1 : (2) : 3 UNFAIR

If you feel that your impression of the client is ***only slightly related*** to one as opposed to the other side, you should circle the number as follows:

FAIR 3 : 2 : (1) : 0 : 1 : 2 : 3 UNFAIR

OR

FAIR 3 : 2 : 1 : 0 : (1) : 2 : 3 UNFAIR

The direction toward which you circle, of course, depends upon which of the two ends of the scale seem most characteristic of the client.

Work fairly rapidly through the form. Do not worry or puzzle over individual items. It is your first impression, your immediate feelings about the person that I want. On the other hand, please do not be careless, because I want your true impressions. Thank you.

First Impressions Questionnaire

Circle the number that best represents your first impressions of Mary. She is:

1. Honest	3 : 2 : 1 : 0 : 1 : 2 : 3	Dishonest
2. Insecure	3 : 2 : 1 : 0 : 1 : 2 : 3	Secure
3. Family-oriented	3 : 2 : 1 : 0 : 1 : 2 : 3	Not family-oriented
4. Incompetent	3 : 2 : 1 : 0 : 1 : 2 : 3	Competent
5. Hateful	3 : 2 : 1 : 0 : 1 : 2 : 3	Affectionate
6. Quarrelsome	3 : 2 : 1 : 0 : 1 : 2 : 3	Congenial
7. Predictable	3 : 2 : 1 : 0 : 1 : 2 : 3	Unpredictable
8. Unloving	3 : 2 : 1 : 0 : 1 : 2 : 3	Loving
9. Successful	3 : 2 : 1 : 0 : 1 : 2 : 3	Unsuccessful
10. Fortunate	3 : 2 : 1 : 0 : 1 : 2 : 3	Unfortunate
11. Disrespectful	3 : 2 : 1 : 0 : 1 : 2 : 3	Respectful
12. Lonely	3 : 2 : 1 : 0 : 1 : 2 : 3	Not Lonely
13. Responsible	3 : 2 : 1 : 0 : 1 : 2 : 3	Irresponsible
14. Sick	3 : 2 : 1 : 0 : 1 : 2 : 3	Healthy
15. Satisfied	3 : 2 : 1 : 0 : 1 : 2 : 3	Dissatisfied
16. Cruel	3 : 2 : 1 : 0 : 1 : 2 : 3	Kind
17. Happy	3 : 2 : 1 : 0 : 1 : 2 : 3	Sad
18. Disagreeable	3 : 2 : 1 : 0 : 1 : 2 : 3	Agreeable
19. Fair	3 : 2 : 1 : 0 : 1 : 2 : 3	Unfair
20. Intelligent	3 : 2 : 1 : 0 : 1 : 2 : 3	Not Intelligent

First Impressions Questionnaire (cont)

21. Understandable	3 : 2 : 1 : 0 : 1 : 2 : 3	Mysterious
22. Impulsive	3 : 2 : 1 : 0 : 1 : 2 : 3	Deliberate
23. Approving	3 : 2 : 1 : 0 : 1 : 2 : 3	Disapproving
24. Aggressive	3 : 2 : 1 : 0 : 1 : 2 : 3	Defensive
25. Disobedient	3 : 2 : 1 : 0 : 1 : 2 : 3	Obedient
26. Sexy	3 : 2 : 1 : 0 : 1 : 2 : 3	Not sexy
27. Wholesome	3 : 2 : 1 : 0 : 1 : 2 : 3	Unwholesome
28. Active	3 : 2 : 1 : 0 : 1 : 2 : 3	Passive
29. Insensitive	3 : 2 : 1 : 0 : 1 : 2 : 3	Sensitive
30. Changeable	3 : 2 : 1 : 0 : 1 : 2 : 3	Stable
31. Eager	3 : 2 : 1 : 0 : 1 : 2 : 3	Indifferent
32. Immoral	3 : 2 : 1 : 0 : 1 : 2 : 3	Moral
33. Sophisticated	3 : 2 : 1 : 0 : 1 : 2 : 3	Naive
34. Reputable	3 : 2 : 1 : 0 : 1 : 2 : 3	Disreputable
35. Ungrateful	3 : 2 : 1 : 0 : 1 : 2 : 3	Grateful
36. Good	3 : 2 : 1 : 0 : 1 : 2 : 3	Bad
37. Rude	3 : 2 : 1 : 0 : 1 : 2 : 3	Friendly
38. Poor	3 : 2 : 1 : 0 : 1 : 2 : 3	Rich
39. Independent	3 : 2 : 1 : 0 : 1 : 2 : 3	Dependent
40. Aimless	3 : 2 : 1 : 0 : 1 : 2 : 3	Motivated

Expected Behaviours Questionnaire

Circle the number that best represents your feelings about the following in relation to Mary.

1. How cooperative is Mary likely to be with the staff?

   Uncooperative 3 : 2 : 1 : 0 : 1 : 2 : 3 Cooperative

2. How well will is she likely to be coping with hospitalisation?

   Will cope well 3 : 2 : 1 : 0 : 1 : 2 : 3 Will not cope well

3. How informed is she likely to be about her condition?

   Well informed 3 : 2 : 1 : 0 : 1 : 2 : 3 Poorly informed

4. How receptive is she likely be to health teaching?

   Non-receptive 3 : 2 : 1 : 0 : 1 : 2 : 3 Very receptive

5. How compliant is she likely to be with prescribed medical and surgical regimes?

   Compliant 3 : 2 : 1 : 0 : 1 : 2 : 3 Noncompliant

6. How supportive is her family likely to be?

   Supportive 3 : 2 : 1 : 0 : 1 : 2 : 3 Non-supportive

7. How tolerant is she likely to be of hospital procedures and pain?

   Intolerant 3 : 2 : 1 : 0 : 1 : 2 : 3 Tolerant

8. How easy is it likely to be to care for a patient like Mary?

   Easy 3 : 2 : 1 : 0 : 1 : 2 : 3 Difficult

Appendix B

Ganong:

Personal Communication, September 9, 1997.

From: "Lawrence H. Ganong" <ganong@showme.missouri.edu>
Subject: Re: FIQ factor item loadings request
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"
X-PMFLAGS: 34078848

I have used the FIQ in a couple of studies on the past few years and I can
share the factors from those investigations. In one, perceptions of a pregnant woman were assessed. The factors were: Independence (security,
competence, not lonely, responsible, intelligent, deliberate, active, stable, eager, sophisticated, independent, motivated), Agreeable (affectionate, conegenial, loving, respectful, kind, agreeable, fair, grateful, friendly), and Moral (family-oriented, obedient, wholesome, moral, reputable, wealthy).
The factors were fairly stable in a second study of perceptions of a woman
presenting to a nurse with a vaginal infection of unknown etiology.

Coefficient alphas were .84, .87, .74.

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Appendix C

Initial Reliability study 1 FIQ Independence (study 1)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F2
2. F4
3. F12
4. F13
5. F20
6. F22
7. F28
8. F30
9. F31
10. F33
11. F39
12. F40

Correlation Matrix

	F2	F4	F12	F13	F20
F2	1.0000				
F4	.1865	1.0000			
F12	.0128	.1841	1.0000		
F13	-.2437	.3162	.1307	1.0000	
F20	-.2117	.3781	-.0077	.6828	1.0000
F22	.1320	.2899	.4630	.4180	.3978
F28	-.1070	.2130	-.0244	.4694	.6984
F30	.3123	.4506	.4459	.1784	.3446
F31	.2585	.1924	.1655	.5036	.5017
F33	.0954	.0299	.0957	.3592	.4924
F39	.0129	-.0445	.1567	.1623	.2354
F40	-.3260	-.0230	-.1799	.4373	.5111

	F22	F28	F30	F31	F33
F22	1.0000				
F28	.2884	1.0000			
F30	.3486	.2345	1.0000		
F31	.3363	.5504	.4201	1.0000	
F33	.2913	.5017	.3893	.4950	1.0000
F39	.4743	.3344	.2005	.2047	.5701
F40	.0409	.5243	.1534	.3326	.2166

	F39	F40
F39	1.0000	
F40	.1052	1.0000

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

N of Cases = 48.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	51.8333	66.5674	8.1589	12

Item-total Statistics

	Scale	Scale	Corrected

	Mean if Item Deleted	Variance if Item Deleted	Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F2	48.5000	64.3830	.0037	.5585	.8102
F4	47.5000	59.0638	.3476	.4785	.7698
F12	47.6667	59.1631	.2139	.5386	.7894
F13	47.3542	55.6804	.5363	.6384	.7512
F20	47.1250	53.8138	.6412	.7606	.7399
F22	47.6667	56.3121	.5889	.5875	.7487
F28	47.1667	53.4610	.5851	.6305	.7440
F30	47.3750	54.3245	.5772	.6220	.7459
F31	47.5000	54.5532	.6523	.6011	.7408
F33	47.4167	58.5035	.5885	.6135	.7543
F39	47.6042	56.0315	.3618	.5191	.7711
F40	47.2917	59.4450	.2590	.5333	.7803

Reliability Coefficients 12 items

Alpha = .7785 Standardized item alpha = .8033

Final Reliability FIQ Independence (study 1)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F13
2. F20
3. F22
4. F28
5. F30
6. F31
7. F33
8. F39
9. F40

Correlation Matrix

	F13	F20	F22	F28	F30
F13	1.0000				
F20	.6828	1.0000			
F22	.4180	.3978	1.0000		
F28	.4694	.6984	.2884	1.0000	
F30	.1784	.3446	.3496	.2345	1.0000
F31	.5036	.5017	.3363	.5504	.4201
F33	.3592	.4924	.2913	.5017	.3893
F39	.1623	.2354	.4743	.3344	.2005
F40	.4373	.5111	.0409	.5243	.1534

	F31	F33	F39	F40
F31	1.0000			
F33	.4950	1.0000		
F39	.2047	.5701	1.0000	
F40	.3326	.2166	.1052	1.0000

N of Cases = 48.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	40.0000	50.8085	7.1280	9

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F13	35.5208	40.4251	.5960	.5745	.8073
F20	35.2917	38.3387	.7406	.6970	.7902
F22	35.8333	43.1206	.4847	.4749	.8196
F28	35.3333	37.8440	.6867	.6181	.7951
F30	35.5417	42.7216	.3974	.3242	.8298
F31	35.6667	40.6950	.6219	.4958	.8051
F33	35.5833	43.2695	.6357	.5714	.8101
F39	35.7708	40.9038	.3909	.5070	.8365
F40	35.4583	41.6152	.4297	.3972	.8274

Reliability Coefficients 9 items

Alpha = .8311 Standardized item alpha = .8423

Initial Reliability FIQ Agreeable (study 1)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F5
2. F6
3. F7
4. F11
5. F16
6. F18
7. F19
8. F35
9. F37

Correlation Matrix

	F5	F6	F7	F11	F16
F5	1.0000				
F6	.8225	1.0000			
F7	.4344	.3014	1.0000		
F11	.7079	.4895	.4794	1.0000	
F16	.7045	.6313	.2994	.6134	1.0000
F18	.3391	.4059	.1631	.3770	.5454
F19	.5607	.4190	.2233	.5977	.4684
F35	.5376	.4492	.4849	.6655	.6306
F37	.7628	.6376	.4334	.8006	.7082

	F18	F19	F35	F37
F18	1.0000			
F19	.3966	1.0000		
F35	.3632	.3927	1.0000	
F37	.4512	.5037	.6663	1.0000

N of Cases = 47.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	40.1064	59.0971	7.6875	9

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F5	35.7447	47.2812	.8200	.8422	.8824
F6	35.7234	48.1175	.6749	.7304	.8912
F7	**36.0000**	**49.0435**	**.4563**	**.3272**	**.9098**
F11	35.3830	44.0675	.8010	.7533	.8807
F16	35.3830	46.7197	.7615	.6729	.8849
F18	35.6170	51.3719	.4846	.3960	.9036
F19	35.9362	48.7567	.5750	.4436	.8984
F35	35.5745	46.0759	.7013	.5805	.8890
F37	35.4894	43.9510	.8395	.7628	.8776

Reliability Coefficients 9 items

Alpha = .9022 Standardized item alpha = .9046

Final Reliability study 1 FIQ Agreeable

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F5
2. F6
3. F11
4. F16
5. F18
6. F19
7. F35
8. F37

Correlation Matrix

	F5	F6	F11	F16	F18
F5	1.0000				
F6	.8225	1.0000			
F11	.7079	.4895	1.0000		
F16	.7045	.6313	.6134	1.0000	
F18	.3391	.4059	.3770	.5454	1.0000
F19	.5607	.4190	.5977	.4684	.3966
F35	.5376	.4492	.6655	.6306	.3632
F37	.7628	.6376	.8006	.7082	.4512

	F19	F35	F37
F19	1.0000		
F35	.3927	1.0000	
F37	.5037	.6663	1.0000

N of Cases = 47.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	36.0000	49.0435	7.0031	8

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F5	31.6383	38.3228	.8192	.8356	.8906
F6	31.6170	38.8936	.6875	.7290	.9001
F11	31.2766	35.5957	.7863	.7489	.8912
F16	31.2766	37.5088	.7860	.6640	.8918
F18	31.5106	41.7336	.5047	.3951	.9137
F19	31.8298	39.3617	.5934	.4351	.9081
F35	31.4681	37.5587	.6734	.5438	.9018
F37	31.3820	35.2849	.8417	.7628	.8857

Reliability Coefficients 8 items

Alpha = .9098 Standardized item alpha = .9102

Initial Reliability FIQ study 1 Moral

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F3
2. F25
3. F27
4. F32
5. F34
6. F38

Correlation Matrix

	F3	F25	F27	F32	F34
F3	1.0000				
F25	.4399	1.0000			
F27	.5345	.5794	1.0000		
F32	.5314	.6049	.5302	1.0000	
F34	.1418	.5447	.4344	.4625	1.0000
F38	-.0432	.1362	.2332	.3846	.4202

	F38
F38	1.0000

N of Cases = 48.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	26.8750	17.4734	4.1801	6

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F3	22.4583	12.5089	.4636	.4659	.7991
F25	22.2708	11.9038	.6780	.5502	.7445
F27	22.3750	11.8989	.6734	.4836	.7454
F32	22.1875	11.0918	.7299	.5745	.7286
F34	22.4375	12.8471	.5337	.4427	.7781
F38	22.6458	15.4251	.2890	.3377	.8202

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Reliability Coefficients 6 items

Alpha = .8029 Standardized item alpha = .7971

Final Reliability FIQ study 1 Moral

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F3
2. F25
3. F27
4. F32
5. F34

Correlation Matrix

	F3	F25	F27	F32	F34
F3	1.0000				
F25	.4399	1.0000			
F27	.5345	.5794	1.0000		
F32	.5314	.6049	.5302	1.0000	
F34	.1418	.5447	.4344	.4625	1.0000

N of Cases = 48.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	22.6458	15.4251	3.9275	5

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F3	18.2292	10.3932	.5179	.4216	.8158
F25	18.0417	10.0408	.7085	.5207	.7575
F27	18.1458	10.1698	.6779	.4715	.7663
F32	17.9583	9.6152	.6981	.4976	.7581
F34	18.2083	11.3599	.4814	.3872	.8202

Reliability Coefficients 5 items

Alpha = .8202 Standardized item alpha = .8221

Reliability [redacted] of full PBHAQ (study 1)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. PB1
2. PB2
3. PB3
4. PB4
5. PB5
6. PB6
7. PB7
8. PB8

Correlation Matrix

	PB1	PB2	PB3	PB4	PB5
PB1	1.0000				
PB2	.2993	1.0000			
PB3	.3422	.2500	1.0000		
PB4	.5935	.3070	.2732	1.0000	
PB5	.6686	.4816	.5763	.5842	1.0000
PB6	.3555	.2647	.4644	.4132	.5884
PB7	.5034	.4360	.2598	.5029	.4515
PB8	.7045	.2207	.3992	.4849	.5543

	PB6	PB7	PB8
PB6	1.0000		
PB7	.3719	1.0000	
PB8	.4057	.5463	1.0000

N of Cases = 49.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	41.0612	75.5587	8.6924	8

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
PB1	35.7551	56.5638	.7074	.6509	.8335
PB2	36.6122	61.9090	.4321	.3246	.8661
PB3	35.4898	63.5884	.4923	.3830	.8572
PB4	35.7347	57.3656	.6317	.4647	.8426
PB5	35.5714	55.8750	.7949	.7058	.8241
PB6	35.6327	62.0289	.5567	.4072	.8510
PB7	36.5306	58.5876	.6180	.4555	.8441
PB8	36.1020	56.0102	.6637	.5802	.8387

Reliability Coefficients 8 items

H o Alpha = .8619 Standardi ed item alpha = .8625

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FIQ Independence (F1) General Linear Model (study 1)

Warnings

The DESIGN subcommand is empty, so a saturated design will be generated.

Between-Subjects Factors

		Value Label
title of address	0	Ms
	1	Mrs
	2	Miss

Descriptive Statistics

	title of address	Mean	Std. Deviation	N
independence total / no of items	Ms	4.4519	.8245	15
	Mrs	4.6296	.9879	18
	Miss	4.1242	.4494	17
	Total	4.4044	.8034	50

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
independence total / no of items	6.459	2	47	.003

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+TITLE

Tests of Between-Subjects Effects

Dependent Variable: independence total / no of items

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	2.282[b]	2	1.141	1.827	.172	.072	3.655	.362
Intercept	963.235	1	963.235	1542.912	.000	.970	1542.912	1.000
TITLE	2.282	2	1.141	1.827	.172	.072	3.655	.362
Error	29.342	47	.624					
Total	1001.580	50						
Corrected Total	31.624	49						

a. Computed using alpha = .05

b. R Squared = .072 (Adjusted R Squared = .033)

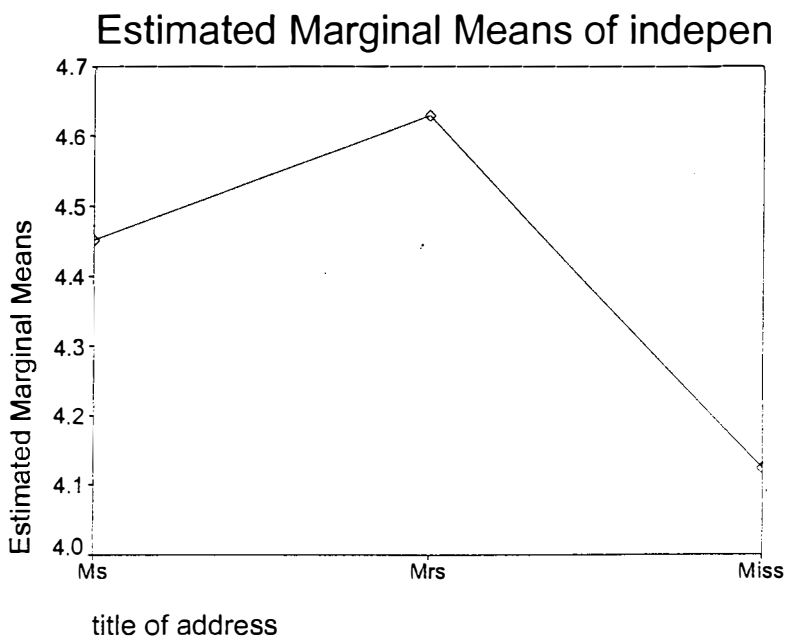
Estimated Marginal Means

title of address

Dependent Variable:
independence total / no of items

title of	Mean	Std. Error
Ms	4.4519	.204
Mrs	4.6296	.186
Miss	4.1242	.192

Profile Plots



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FIQ Agreeable (F2) General Linear Model (study 2)

Warnings

The DESIGN subcommand is empty, so a saturated design will be generated.

Between-Subjects Factors

		Value Label
title of address	0	Ms
	1	Mrs
	2	Miss

Descriptive Statistics

	title of address	Mean	Std. Deviation	N
agreeable total / no of items	Ms	4.5000	1.0511	15
	Mrs	4.6250	1.0146	18
	Miss	4.2132	.4414	17
	Total	4.4475	.8763	50

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
agreeable total / no of items	6.621	2	47	.003

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+TITLE

Tests of Between-Subjects Effects

Dependent Variable: agreeable total / no of items

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	1.541[b]	2	.771	1.004	.374	.041	2.008	.215
Intercept	982.672	1	982.672	1279.861	.000	.965	1279.861	1.000
TITLE	1.541	2	.771	1.004	.374	.041	2.008	.215
Error	36.086	47	.768					
Total	1026.641	50						
Corrected Total	37.628	49						

a. Computed using alpha = .05

b. R Squared = .041 (Adjusted R Squared = .000)

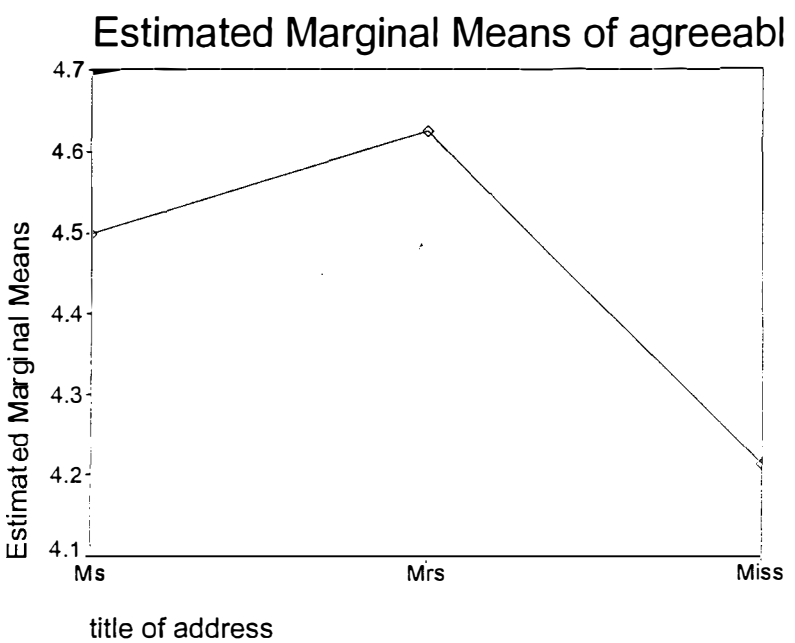
Estimated Marginal Means

title of address

Dependent Variable: agreeable total / no of items

title of	Mean	Std. Error
Ms	4.5000	.226
Mrs	4.6250	.207
Miss	4.2132	.213

Profile Plots



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  /DESIGN .
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FIQ Moral (F3) General Linear Model (study 1)

Warnings

The DESIGN subcommand is empty, so a saturated design will be generated.

Between-Subjects Factors

		Value Label
title of address	0	Ms
	1	Mrs
	2	Miss

Descriptive Statistics

	title of address	Mean	Std. Deviation	N
moral total / no of items	Ms	4.4267	1.2826	15
	Mrs	4.7111	.7522	18
	Miss	4.1882	.4662	17
	Total	4.4480	.8867	50

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
moral total / no of items	5.693	2	47	.006

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+TITLE

Tests of Between-Subjects Effects

Dependent Variable: moral total / no of items

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	2.400[b]	2	1.200	1.561	.221	.062	3.123	.315
Intercept	980.872	1	980.872	1276.160	.000	.964	1276.160	1.000
TITLE	2.400	2	1.200	1.561	.221	.062	3.123	.315
Error	36.125	47	.769					
Total	1027.760	50						
Corrected Total	38.525	49						

a. Computed using alpha = .05

b. R Squared = .062 (Adjusted R Squared = .022)

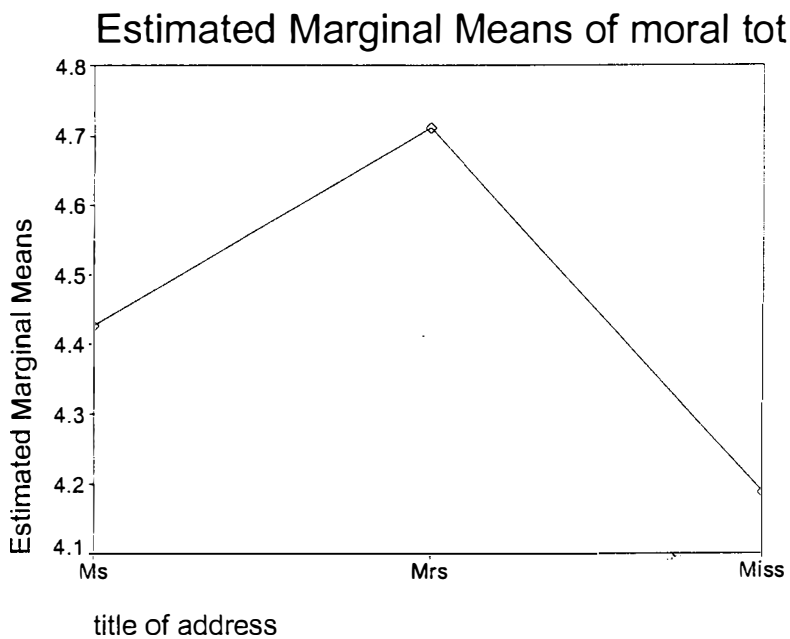
Estimated Marginal Means

title of address

Dependent Variable: moral total / no of items

title of	Mean	Std. Error
Ms	4.4267	.226
Mrs	4.7111	.207
Miss	4.1882	.213

Profile Plots



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  /PLOT = PROFILE( title )
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  /CRITERIA = ALPHA(.05)
  /DESIGN .
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PBHAQ General Linear Model (study 1)

Warnings

The DESIGN subcommand is empty, so a saturated design will be generated.

Between-Subjects Factors

		Value Label
title of address	0	Ms
	1	Mrs
	2	Miss

Descriptive Statistics

	title of address	Mean	Std. Deviation	N
PBHAQ total / no of items	Ms	4.9667	1.1606	15
	Mrs	5.4306	.9077	18
	Miss	4.9338	1.1559	17
	Total	5.1225	1.0778	50

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
PBHAQ total / no of items	1.173	2	47	.318

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+TITLE

Tests of Between-Subjects Effects

Dependent Variable: PBHAQ total / no of items

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	2.678[b]	2	1.339	1.160	.322	.047	2.320	.242
Intercept	1298.241	1	1298.241	1124.868	.000	.960	1124.868	1.000
TITLE	2.678	2	1.339	1.160	.322	.047	2.320	.242
Error	54.244	47	1.154					
Total	1368.922	50						
Corrected Total	56.922	49						

a. Computed using alpha = .05

b. R Squared = .047 (Adjusted R Squared = .006)

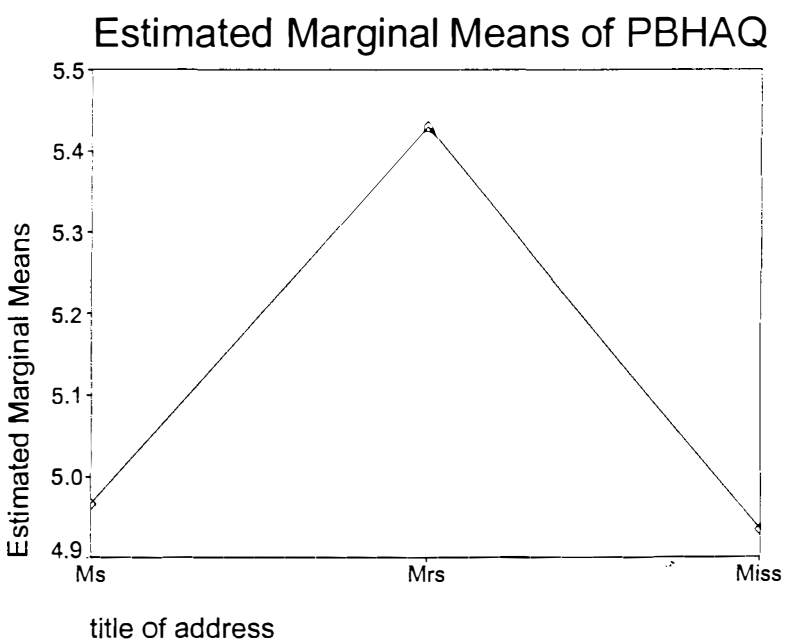
Estimated Marginal Means

title of address

Dependent Variable: PBHAQ total / no of items

title of	Mean	Std. Error
Ms	4.9667	.277
Mrs	5.4306	.253
Miss	4.9338	.261

Profile Plots



Appendix D

COVERING LETTER

Dear Participant,

This study is being conducted as part of my Bachelor of Psychology (Honours) degree at Edith Cowan University. The purpose of the study is to record people's first impressions and expectations of a person they have read about. I would be grateful for your assistance.

Your participation in this study would involve:
(a) reading a description of a potential nursing client before
(b) answering two brief questionnaires by circling your response.
Your participation is entirely voluntary and you are free to withdraw your participation at any stage. Your participation should take no more than 10 minutes.

If you agree to participate, please sign the space provided on the bottom of this page. Although the results of this study will be published in a report, *please be assured that the information obtained from you will be treated in the strictest confidence, and will remain anonymous. Your responses will NOT be able to be traced back to you in the report, as the data will be presented as group data and the attached slip will be stored separately from the questionnaire. Please do NOT record your name or any other information that could identify you on the questionnaire itself*.

Please complete the activity entirely on your own. It is also important that you do not discuss the activity with any other participants as it may influence their results.

It is anticipated that the information obtained from this research will further develop understanding of how people relate to someone they first meet within a professional setting.

Should you wish to find out about the results of the study, please feel free to write to me requesting a summary.

Should you have any queries regarding this project, please feel free to contact me, or my University supervisor, Dr Susan Gee (School of Psychology, Edith Cowan University: Ph 9400 5526).

Yours sincerely,

Phil van der Klift
Ph: 9250 7383

✂

I (the participant) have read the information above and agree to participate in this activity, realising that I may withdraw at any time. I am aware that I may contact the abovementioned persons should I have any further questions.

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

Signature _____ Date _____

Participant Information

As part of an Applied Developmental Project, your class is collecting information from hospitalised nursing clients (i.e., patients), each of whom represent a different life span developmental period. Your class is investigating the similarities and differences in the way that people from different developmental periods cope with hospitalisation arising from unplanned injury. Your assigned life span period is early adulthood.

You have been granted permission to access patients in a large hospital and are being informed by the charge nurse of a nursing client that might be able to assist you with your study. You are given the following information:

Name: Mary Anne Reid	**Room No:** 14 A
Preferred title of address: Ms	**Age:** 25 yrs
Reason for admission: Motor vehicle accident	
Medical Diagnosis: Compound fracture to upper, right femur and two fractured ribs on right side.	

You decide that Ms. Reid will be suitable for your project and are about to meet her. However, in order to track the path of your project, your lecturer requires that you complete questionnaires at various phases along the way. As you are now at one of the designated phases, please complete the attached questionnaires according to the instructions on the next page.

Thank you.

Participant Information

As part of an Applied Developmental Project, your class is collecting information from hospitalised nursing clients (i.e., patients), each of whom represent a different life span developmental period. Your class is investigating the similarities and differences in the way that people from different developmental periods cope with hospitalisation arising from unplanned injury. Your assigned life span period is early adulthood.

You have been granted permission to access patients in a large hospital and are being informed by the charge nurse of a nursing client that might be able to assist you with your study. You are given the following information:

Name: Mary Anne Reid **Room No:** 14 A

Preferred title of address: Mrs **Age:** 25 yrs

Reason for admission: Motor vehicle accident

Medical Diagnosis: Compound fracture to upper, right femur and two fractured ribs on right side.

You decide that Mrs Reid will be suitable for your project and are about to meet her. However, in order to track the path of your project, your lecturer requires that you complete questionnaires at various phases along the way. As you are now at one of the designated phases, please complete the attached questionnaires according to the instructions on the next page.

Thank you.

Participant Information

As part of an Applied Developmental Project, your class is collecting information from hospitalised nursing clients (i.e., patients), each of whom represent a different life span developmental period. Your class is investigating the similarities and differences in the way that people from different developmental periods cope with hospitalisation arising from unplanned injury. Your assigned life span period is early adulthood.

You have been granted permission to access patients in a large hospital and are being informed by the charge nurse of a nursing client that might be able to assist you with your study. You are given the following information:

Name: Mary Anne Reid	**Room No:** 14 A
Preferred title of address: Ms	**Age:** 25 yrs
Reason for admission: Motor vehicle accident	
Medical Diagnosis: Compound fracture to upper, right femur and two fractured ribs on right side.	

You have also been given a partial transcript of a nursing history interview that has been conducted with the client (see back of this page).

You decide that Ms. Reid will be suitable for your project and are about to meet her. However, in order to track the path of your project, your lecturer requires that you complete questionnaires at various phases along the way. As you are now at one of the designated phases, please complete the attached questionnaires according to the instructions on the next page.

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You have been granted permission to access patients in a large hospital and are being informed by the charge nurse of a nursing client that might be able to assist you with your study. You are given the following information:

Name: Mary Anne Reid	**Room No:** 14 A
Preferred title of address: Mrs	**Age:** 25 yrs
Reason for admission: Motor vehicle accident	
Medical Diagnosis: Compound fracture to upper, right femur and two fractured ribs on right side.	

You have also been given a partial transcript of a nursing history interview that has been conducted with the client (see back of this page).

You decide that Mrs Reid will be suitable for your project and are about to meet her. However, in order to track the path of your project, your lecturer requires that you complete questionnaires at various phases along the way. As you are now at one of the designated phases, please complete the attached questionnaires according to the instructions on the next page.

Thank you

Participant Information

As part of an Applied Developmental Project, your class is collecting information from hospitalised nursing clients (i.e., patients), each of whom represent a different life span developmental period. Your class is investigating the similarities and differences in the way that people from different developmental periods cope with hospitalisation arising from unplanned injury. Your assigned life span period is early adulthood.

You have been granted permission to access patients in a large hospital and are being informed by the charge nurse of a nursing client that might be able to assist you with your study. You are given the following information:

Name: Mary Anne Reid **Room No:** 14 A

Preferred title of address: Ms **Age:** 25 yrs

Reason for admission: Motor vehicle accident

Medical Diagnosis: Compound fracture to upper, right femur and two fractured ribs on right side.

You have also been given a partial transcript of a nursing history interview that has been conducted with the client (see back of this page), and an audio recording of the same.

You decide that Ms. Reid will be suitable for your project and are about to meet her. However, in order to track the path of your project, your lecturer requires that you complete questionnaires at various phases along the way. As you are now at one of the designated phases, please complete the attached questionnaires according to the instructions on the next page.

Thank you.

Participant Information

As part of an Applied Developmental Project, your class is collecting information from hospitalised nursing clients (i.e., patients), each of whom represent a different life span developmental period. Your class is investigating the similarities and differences in the way that people from different developmental periods cope with hospitalisation arising from unplanned injury. Your assigned life span period is early adulthood.

You have been granted permission to access patients in a large hospital and are being informed by the charge nurse of a nursing client that might be able to assist you with your study. You are given the following information:

Name: Mary Anne Reid **Room No:** 14 A

Preferred title of address: Mrs **Age:** 25 yrs

Reason for admission: Motor vehicle accident

Medical Diagnosis: Compound fracture to upper, right femur and two fractured ribs on right side.

You have also been given a partial transcript of a nursing history interview that has been conducted with the client (see back of this page), and an audio recording of the same.

You decide that Mrs Reid will be suitable for your project and are about to meet her. However, in order to track the path of your project, your lecturer requires that you complete questionnaires at various phases along the way. As you are now at one of the designated phases, please complete the attached questionnaires according to the instructions on the next page.

Thank you.

Partial Transcript of Nursing History Interview

Nurse:	Hello Ms Reid.
Client:	Hi.
Nurse:	My name is Steve and I'm a Registered Nurse. I'll be caring for you this afternoon and evening until about 9 pm. I'll just check your drip and make sure its OK. (Pause). Yep, it's fine - running right on schedule. If it's OK with you, I just need to run through a few questions with you as part of your nursing history. The reason we do this is to help us plan the best possible nursing care for you. I'd like to assure you that any information collected will be treated confidentially. By that I mean it will only be available the nursing staff, or to your doctor for the purpose of planning your nursing care.
Client:	Yes, that's OK.
Nurse:	Great. Now your surname is spelt R E I D?
Client:	Yes, that's right.
Nurse:	And your date of birth is?
Client:	26th of April, 1972.
Nurse:	OK. Do you have any allergies that you are aware of?
Client:	Hmm . . . I get hayfever sometimes, but other than that there's nothing I know of.
Nurse:	Do you know what it is that sets off your hayfever?
Client:	Well, it mainly seems to be on days that are very windy and dry.
Nurse:	So you think it's from pollens?
Client:	Yeah, I guess so.
Nurse:	And you're not allergic to any medications that you know of?
Client:	No. Not to any I've had so far.
Nurse:	How about foods?
Client:	No.
Nurse:	OK. Have you been hospitalised before?
Client:	Yes, once before. I had two wisdom teeth removed.
Nurse:	And when was that?
Client:	When I was 16.

Partial Transcript of Nursing History Interview

Nurse:	Hello Mrs Reid.
Client:	Hi.
Nurse:	My name is Steve and I'm a Registered Nurse. I'll be caring for you this afternoon and evening until about 9 pm. I'll just check your drip and make sure its OK. (Pause). Yep, it's fine - running right on schedule. If it's OK with you, I just need to run through a few questions with you as part of your nursing history. The reason we do this is to help us plan the best possible nursing care for you. I'd like to assure you that any information collected will be treated confidentially. By that I mean it will only be available the nursing staff, or to your doctor for the purpose of planning your nursing care.
Client:	Yes, that's OK.
Nurse:	Great. Now your surname is spelt R E I D?
Client:	Yes, that's right.
Nurse:	And your date of birth is?
Client:	26th of April, 1972.
Nurse:	OK. Do you have any allergies that you are aware of?
Client:	Hmm . . . I get hayfever sometimes, but other than that there's nothing I know of.
Nurse:	Do you know what it is that sets off your hayfever?
Client:	Well, it mainly seems to be on days that are very windy and dry.
Nurse:	So you think it's from pollens?
Client:	Yeah, I guess so.
Nurse:	And you're not allergic to any medications that you know of?
Client:	No. Not to any I've had so far.
Nurse:	How about foods?
Client:	No.
Nurse:	OK. Have you been hospitalised before?
Client:	Yes, once before. I had two wisdom teeth removed.
Nurse:	And when was that?
Client:	When I was 16.

First Impressions & Expected Behaviours Questionnaires

The purpose of this questionnaire is to measure your first impressions of the nursing client you have just read about.

If you feel that your impression of the client is ***very closely related*** to one or the other end of the scale, you should circle the number as follows:

FAIR (3) 2 : 1 : 0 : 1 : 2 : 3 UNFAIR

OR

FAIR 3 : 2 : 1 : 0 : 1 : 2 (3) UNFAIR

If you feel that your impression of the client is ***quite closely related*** to one or the other end of the scale (but not extremely), you should circle the number as follows:

FAIR 3 (2) 1 : 0 : 1 : 2 : 3 UNFAIR

OR

FAIR 3 : 2 : 1 : 0 : 1 (2) 3 UNFAIR

If you feel that your impression of the client is ***only slightly related*** to one as opposed to the other side, you should circle the number as follows:

FAIR 3 : 2 (1) 0 : 1 : 2 : 3 UNFAIR

OR

FAIR 3 : 2 : 1 : 0 (1) 2 : 3 UNFAIR

The direction toward which you circle, of course, depends upon which of the two ends of the scale seem most characteristic of the client.

Work fairly rapidly through the form. Do not worry or puzzle over individual items. It is your first impressions, your immediate feelings about the person that I want. On the other hand, please do not be careless, because I want your true impressions. Thank you.

Expected Behaviours Questionnaire

Circle the number that best represents your feelings about the following in relation to Ms. Reid.

1. How cooperative is Ms. Reid likely to be with the staff?

   Uncooperative 3 : 2 : 1 : 0 : 1 : 2 : 3 Cooperative

2. How well is she likely to be coping with hospitalisation?

   Will cope well 3 : 2 : 1 : 0 : 1 : 2 : 3 Will not cope well

3. How informed is she likely to be about her condition?

   Well informed 3 : 2 : 1 : 0 : 1 : 2 : 3 Poorly informed

4. How receptive is she likely be to health teaching?

   Non-receptive 3 : 2 : 1 : 0 : 1 : 2 : 3 Very receptive

5. How compliant is she likely to be with prescribed medical and surgical regimes?

   Compliant 3 : 2 : 1 : 0 : 1 : 2 : 3 Noncompliant

6. How supportive is her family likely to be?

   Supportive 3 : 2 : 1 : 0 : 1 : 2 : 3 Non-supportive

7. How tolerant is she likely to be of hospital procedures and pain?

   Intolerant 3 : 2 : 1 : 0 : 1 : 2 : 3 Tolerant

8. How easy is it likely to be to care for a patient like Ms. Reid?

   Easy 3 : 2 : 1 : 0 : 1 : 2 : 3 Difficult

9. How confident are you that your expected behaviors will be accurate?

   Not confident 3 : 2 : 1 : 0 : 1 : 2 : 3 Very confident

First Impressions Questionnaire

Circle the number that best represents your first impressions of Ms. Reid. She is:

1. Honest	3 : 2 : 1 : 0 : 1 : 2 : 3	Dishonest
2. Insecure	3 : 2 : 1 : 0 : 1 : 2 : 3	Secure
3. Family-oriented	3 : 2 : 1 : 0 : 1 : 2 : 3	Not family-oriented
4. Incompetent	3 : 2 : 1 : 0 : 1 : 2 : 3	Competent
5. Hateful	3 : 2 : 1 : 0 : 1 : 2 : 3	Affectionate
6. Quarrelsome	3 : 2 : 1 : 0 : 1 : 2 : 3	Congenial
7. Predictable	3 : 2 : 1 : 0 : 1 : 2 : 3	Unpredictable
8. Unloving	3 : 2 : 1 : 0 : 1 : 2 : 3	Loving
9. Successful	3 : 2 : 1 : 0 : 1 : 2 : 3	Unsuccessful
10. Fortunate	3 : 2 : 1 : 0 : 1 : 2 : 3	Unfortunate
11. Disrespectful	3 : 2 : 1 : 0 : 1 : 2 : 3	Respectful
12. Lonely	3 : 2 : 1 : 0 : 1 : 2 : 3	Not Lonely
13. Responsible	3 : 2 : 1 : 0 : 1 : 2 : 3	Irresponsible
14. Sick	3 : 2 : 1 : 0 : 1 : 2 : 3	Healthy
15. Satisfied	3 : 2 : 1 : 0 : 1 : 2 : 3	Dissatisfied
16. Cruel	3 : 2 : 1 : 0 : 1 : 2 : 3	Kind
17. Happy	3 : 2 : 1 : 0 : 1 : 2 : 3	Sad
18. Disagreeable	3 : 2 : 1 : 0 : 1 : 2 : 3	Agreeable
19. Fair	3 : 2 : 1 : 0 : 1 : 2 : 3	Unfair
20. Intelligent	3 : 2 : 1 : 0 : 1 : 2 : 3	Not Intelligent

First Impressions Questionnaire (cont)

21. Understandable	3 : 2 : 1 : 0 : 1 : 2 : 3	Mysterious
22. Impulsive	3 : 2 : 1 : 0 : 1 : 2 : 3	Deliberate
23. Approving	3 : 2 : 1 : 0 : 1 : 2 : 3	Disapproving
24. Aggressive	3 : 2 : 1 : 0 : 1 : 2 : 3	Defensive
25. Disobedient	3 : 2 : 1 : 0 : 1 : 2 : 3	Obedient
26. Sexy	3 : 2 : 1 : 0 : 1 : 2 : 3	Not sexy
27. Wholesome	3 : 2 : 1 : 0 : 1 : 2 : 3	Unwholesome
28. Active	3 : 2 : 1 : 0 : 1 : 2 : 3	Passive
29. Insensitive	3 : 2 : 1 : 0 : 1 : 2 : 3	Sensitive
30. Changeable	3 : 2 : 1 : 0 : 1 : 2 : 3	Stable
31. Eager	3 : 2 : 1 : 0 : 1 : 2 : 3	Indifferent
32. Immoral	3 : 2 : 1 : 0 : 1 : 2 : 3	Moral
33. Sophisticated	3 : 2 : 1 : 0 : 1 : 2 : 3	Naive
34. Reputable	3 : 2 : 1 : 0 : 1 : 2 : 3	Disreputable
35. Ungrateful	3 : 2 : 1 : 0 : 1 : 2 : 3	Grateful
36. Good	3 : 2 : 1 : 0 : 1 : 2 : 3	Bad
37. Rude	3 : 2 : 1 : 0 : 1 : 2 : 3	Friendly
38. Poor	3 : 2 : 1 : 0 : 1 : 2 : 3	Rich
39. Independent	3 : 2 : 1 : 0 : 1 : 2 : 3	Dependent
40. Aimless	3 : 2 : 1 : 0 : 1 : 2 : 3	Motivated

41. How confident are you that your first impressions will be accurate?

Not confident 3 : 2 : 1 : 0 : 1 : 2 : 3 Very confident

Expected Behaviours Questionnaire

Circle the number that best represents your feelings about the following in relation to Mrs Reid.

1. How cooperative is Mrs Reid likely to be with the staff?

   Uncooperative 3 : 2 : 1 : 0 : 1 : 2 : 3 Cooperative

2. How well is she likely to be coping with hospitalisation?

   Will cope well 3 : 2 : 1 : 0 : 1 : 2 : 3 Will not cope well

3. How informed is she likely to be about her condition?

   Well informed 3 : 2 : 1 : 0 : 1 : 2 : 3 Poorly informed

4. How receptive is she likely be to health teaching?

   Non-receptive 3 : 2 : 1 : 0 : 1 : 2 : 3 Very receptive

5. How compliant is she likely to be with prescribed medical and surgical regimes?

   Compliant 3 : 2 : 1 : 0 : 1 : 2 : 3 Noncompliant

6. How supportive is her family likely to be?

   Supportive 3 : 2 : 1 : 0 : 1 : 2 : 3 Non-supportive

7. How tolerant is she likely to be of hospital procedures and pain?

   Intolerant 3 : 2 : 1 : 0 : 1 : 2 : 3 Tolerant

8. How easy is it likely to be to care for a patient like Mrs Reid?

   Easy 3 : 2 : 1 : 0 : 1 : 2 : 3 Difficult

9. How confident are you that your expected behaviors will be accurate?

   Not confident 3 : 2 : 1 : 0 : 1 : 2 : 3 Very confident

First Impressions Questionnaire

Circle the number that best represents your first impressions of Mrs Reid. She is:

1. Honest	3 : 2 : 1 : 0 : 1 : 2 : 3	Dishonest
2. Insecure	3 : 2 : 1 : 0 : 1 : 2 : 3	Secure
3. Family-oriented	3 : 2 : 1 : 0 : 1 : 2 : 3	Not family-oriented
4. Incompetent	3 : 2 : 1 : 0 : 1 : 2 : 3	Competent
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7. Predictable	3 : 2 : 1 : 0 : 1 : 2 : 3	Unpredictable
8. Unloving	3 : 2 : 1 : 0 : 1 : 2 : 3	Loving
9. Successful	3 : 2 : 1 : 0 : 1 : 2 : 3	Unsuccessful
10. Fortunate	3 : 2 : 1 : 0 : 1 : 2 : 3	Unfortunate
11. Disrespectful	3 : 2 : 1 : 0 : 1 : 2 : 3	Respectful
12. Lonely	3 : 2 : 1 : 0 : 1 : 2 : 3	Not Lonely
13. Responsib'e	3 : 2 : 1 : 0 : 1 : 2 : 3	Irresponsible
14. Sick	3 : 2 : 1 : 0 : 1 : 2 : 3	Healthy
15. Satisfied	3 : 2 : 1 : 0 : 1 : 2 : 3	Dissatisfied
16. Cruel	3 : 2 : 1 : 0 : 1 : 2 : 3	Kind
17. Happy	3 : 2 : 1 : 0 : 1 : 2 : 3	Sad
18. Disagreeable	3 : 2 : 1 : 0 : 1 : 2 : 3	Agreeable
19. Fair	3 : 2 : 1 : 0 : 1 : 2 : 3	Unfair
20. Intelligent	3 : 2 : 1 : 0 : 1 : 2 : 3	Not Intelligent

First Impressions Questionnaire (cont)

21. Understandable	3 : 2 : 1 : 0 : 1 : 2 : 3	Mysterious
22. Impulsive	3 : 2 : 1 : 0 : 1 : 2 : 3	Deliberate
23. Approving	3 : 2 : 1 : 0 : 1 : 2 : 3	Disapproving
24. Aggressive	3 : 2 : 1 : 0 : 1 : 2 : 3	Defensive
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26. Sexy	3 : 2 : 1 : 0 : 1 : 2 : 3	Not sexy
27. Wholesome	3 : 2 : 1 : 0 : 1 : 2 : 3	Unwholesome
28. Active	3 : 2 : 1 : 0 : 1 : 2 : 3	Passive
29. Insensitive	3 : 2 : 1 : 0 : 1 : 2 : 3	Sensitive
30. Changeable	3 : 2 : 1 : 0 : 1 : 2 : 3	Stable
31. Eager	3 : 2 : 1 : 0 : 1 : 2 : 3	Indifferent
32. Immoral	3 : 2 : 1 : 0 : 1 : 2 : 3	Moral
33. Sophisticated	3 : 2 : 1 : 0 : 1 : 2 : 3	Naive
34. Reputable	3 : 2 : 1 : 0 : 1 : 2 : 3	Disreputable
35. Ungrateful	3 : 2 : 1 : 0 : 1 : 2 : 3	Grateful
36. Good	3 : 2 : 1 : 0 : 1 : 2 : 3	Bad
37. Rude	3 : 2 : 1 : 0 : 1 : 2 : 3	Friendly
38. Poor	3 : 2 : 1 : 0 : 1 : 2 : 3	Rich
39. Independent	3 : 2 : 1 : 0 : 1 : 2 : 3	Dependent
40. Aimless	3 : 2 : 1 : 0 : 1 : 2 : 3	Motivated

41. How confident are you that your first impressions will be accurate?

Not confident	3 : 2 : 1 : 0 : 1 : 2 : 3	Very confident

Appendix E

Initial Reliability FIQ F1 (Independence) (study 2)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F2
2. F4
3. F12
4. F13
5. F20
6. F22
7. F28
8. F30
9. F31
10. F33
11. F39
12. F40

Correlation Matrix

	F2	F4	F12	F13	F20
F2	1.0000				
F4	.7109	1.0000			
F12	.4838	.4430	1.0000		
F13	.4591	.6078	.3177	1.0000	
F20	.5428	.6179	.3995	.4253	1.0000
F22	.0281	.1280	.0147	.3439	.0634
F28	.4681	.3691	.3600	.0630	.4726
F30	.2000	.1730	.0131	.2477	-.0650
F31	.3814	.2156	.3378	.1208	.3399
F33	.5971	.4869	.4326	.3234	.5625
F39	.4948	.4451	.2316	.1953	.4759
F40	.5333	.5741	.4469	.3360	.5403

	F22	F28	F30	F31	F33
F22	1.0000				
F28	-.2251	1.0000			
F30	.3954	-.0180	1.0000		
F31	-.2071	.5243	-.1153	1.0000	
F33	-.0422	.4832	.1567	.3714	1.0000
F39	-.1460	.5223	-.0449	.3082	.5613
F40	-.0611	.6154	.0472	.6065	.5151

	F39	F40
F39	1.0000	
F40	.5910	1.0000

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

N of Cases = 112.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	54.8661	103.5765	10.1773	12

Item-total Statistics

	Scale	Scale	Corrected

	Mean if Item Deleted	Variance if Item Deleted	Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F2	50.1161	81.3828	.7494	.6452	.8182
F4	49.7857	84.6203	.7249	.6975	.8223
F12	50.3304	88.9439	.5170	.3516	.8366
F13	49.9554	88.9439	.4986	.4882	.8379
F20	50.1518	84.1119	.6608	.5634	.8256
F22	**50.4107**	**101.1631**	**.0346**	**.3193**	**.8663**
F28	50.4464	86.1593	.5482	.5371	.8343
F30	**50.1607**	**98.0460**	**.1302**	**.3250**	**.8633**
F31	50.7589	89.3738	.4274	.5047	.8435
F33	50.7857	84.3320	.6785	.5451	.8246
F39	50.2857	87.1068	.5461	.5263	.8344
F40	50.3393	84.6226	.7304	.6787	.8220

Reliability Coefficients 12 items

Alpha = .8482 Standardized item alpha = .8467

Final Reliability FIQ F1 (Independence) (study 2)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F2
2. F4
3. F12
4. F13
5. F20
6. F28
7. F31
8. F33
9. F39
10. F40

Correlation Matrix

	F2	F4	F12	F13	F20
F2	1.0000				
F4	.7138	1.0000			
F12	.4382	.4041	1.0000		
F13	.4465	.5944	.3141	1.0000	
F20	.5455	.6197	.3677	.4227	1.0000
F28	.4618	.3649	.3439	.0810	.4734
F31	.3895	.2244	.2938	.1200	.3467
F33	.5897	.4818	.4191	.3326	.5617
F39	.4652	.4199	.2416	.2244	.4627
F40	.5233	.5644	.4285	.3509	.5389

	F28	F31	F33	F39	F40
F28	1.0000				
F31	.5219	1.0000			
F33	.4894	.3698	1.0000		
F39	.5312	.2940	.5638	1.0000	
F40	.6232	.6006	.5214	.6011	1.0000

N of Cases = 114.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	45.7105	96.7208	9.8347	10

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F2	40.9386	75.8458	.7274	.6294	.8653
F4	40.6140	79.1240	.6945	.6892	.8687
F12	41.2193	82.5798	.5012	.2927	.8817
F13	40.8070	83.9801	.4356	.4140	.8862
F20	40.9825	77.4156	.6868	.5148	.8686
F28	41.2895	78.2783	.6139	.5301	.8741
F31	41.5789	81.4141	.4891	.4721	.8834
F33	41.6316	77.9693	.6891	.5224	.8686

F39	41.1491	79.2077	.5963	.5024	.8753
F40	41.1842	77.6383	.7653	.6798	.8639

Reliability Coefficients 10 items

Alpha = .8850 Standardized item alpha = .8861

Initial & Final Reliability FIQ F2 (Agreeable) (study 2)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F5
2. F6
3. F8
4. F11
5. F16
6. F18
7. F19
8. F35
9. F37

Correlation Matrix

	F5	F6	F8	F11	F16
F5	1.0000				
F6	.4137	1.0000			
F8	.6317	.5136	1.0000		
F11	.5156	.7094	.6244	1.0000	
F16	.6519	.4582	.6420	.5624	1.0000
F18	.4878	.6397	.4932	.7078	.5891
F19	.3654	.4622	.4807	.5508	.5287
F35	.4814	.6696	.5969	.7255	.5342
F37	.4753	.5912	.5364	.6833	.5519

	F18	F19	F35	F37
F18	1.0000			
F19	.5514	1.0000		
F35	.6295	.4744	1.0000	
F37	.6920	.4654	.7214	1.0000

N of Cases = 115.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	46.5304	66.1460	8.1330	9

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F5	41.6000	55.2246	.6238	.5151	.9176
F6	41.2783	52.5886	.7082	.5776	.9124
F8	41.4174	54.0523	.7124	.5853	.9123
F11	41.1739	51.2502	.8191	.7038	.9050
F16	41.3913	53.6613	.7127	.5937	.9122
F18	41.2087	51.8683	.7688	.6434	.9083
F19	41.5478	53.0920	.6053	.4086	.9203
F35	41.4522	52.0043	.7743	.6603	.9080
F37	41.1739	51.2853	.7526	.6300	.9094

Reliability Coefficients 9 items

Alpha = .9208 Standardized item alpha = .9218

Initial Reliability FIQ F3 (Moral) (study 2)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F3
2. F25
3. F27
4. F32
5. F34
6. F38

Correlation Matrix

	F3	F25	F27	F32	F34
F3	1.0000				
F25	.1604	1.0000			
F27	.1869	.4774	1.0000		
F32	-.0626	.2051	.0774	1.0000	
F34	.3287	.3188	.3401	.2272	1.0000
F38	.1162	-.0526	.0000	.1882	.2032

	F38
F38	1.0000

N of Cases = 114.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	28.5175	31.1192	5.5785	6

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F3	24.0351	27.6625	.1146	.1443	.3918
F25	23.4737	25.4197	.3483	.2900	.2980
F27	23.8509	27.1900	.2844	.2729	.3382
F32	23.2018	11.5961	.1952	.1276	.5652
F34	23.7193	25.2833	.4436	.2723	.2760
F38	24.3070	28.1438	.1930	.0920	.3682

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Reliability Coefficients 6 items

Alpha = .3972 Standardized item alpha = .5700

Final Reliability FIQ F3 Moral (study 2)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F25
2. F27
3. F34

Correlation Matrix

	F25	F27	F34
F25	1.0000		
F27	.4589	1.0000	
F34	.3192	.3331	1.0000

N of Cases = 115.0

Statistics for Scale	Mean	Variance	Std Dev	N of Variables
	14.5043	6.1820	2.4864	3

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F25	9.4522	2.8113	.4743	.2417	.4992
F27	9.9522	3.3727	.4922	.2493	.4806
F34	9.7043	3.5609	.3805	.1460	.6216

Reliability Coefficients 3 items

Alpha = .6355 Standardized item alpha = .6383

FIQ study 2 initial Factor analysis based on 3 factors (22 items) (study 2)

- - - - - - - - - - - FACTOR ANALYSIS - - - - - - - - - - -

Analysis number 1 Listwise deletion of cases with missing values

Correlation Matrix:

	F2	F4	F12	F13	F20	F28	F31
F2	1.00000						
F4	.74986	1.00000					
F12	.43316	.41285	1.00000				
F13	.44104	.60781	.30322	1.00000			
F20	.56861	.62872	.38452	.44726	1.00000		
F28	.47988	.36265	.34929	.08520	.47640	1.00000	
F31	.39175	.22580	.28701	.10762	.36344	.52591	1.00000
F33	.58184	.49835	.41075	.32009	.58434	.50002	.36465
F39	.46583	.42735	.24047	.22407	.46721	.53438	.29526
F40	.54340	.56285	.43400	.35736	.54380	.62237	.60432
F5	.32894	.26737	.48658	.27819	.26113	.22009	.28575
F6	.33596	.38434	.20053	.51877	.23721	-.05006	.03088
F8	.41137	.32916	.42981	.47327	.34271	.30881	.33345
F11	.40848	.44205	.31950	.56279	.28295	.09553	.17643
F16	.35911	.39894	.27976	.37171	.40871	.10601	.28626
F18	.27161	.28068	.25332	.39035	.19937	.00595	.15116
F19	.32487	.23761	.22291	.32551	.45662	.13962	.16520
F35	.44785	.42832	.30716	.54801	.29779	.15659	.21258
F37	.41693	.47894	.31684	.51802	.36128	.17812	.30415
F25	.24482	.31333	.02994	.50506	.21042	-.10927	-.14359
F27	.12974	.18769	.16315	.38264	.22101	.15066	.17545
F34	.38877	.38959	.32717	.49506	.36763	.25446	.24881

	F33	F39	F40	F5	F6	F8	F11
F33	1.00000						
F39	.56518	1.00000					
F40	.53220	.60492	1.00000				
F5	.20734	.07521	.27901	1.00000			
F6	.09046	-.05520	.10691	.42778	1.00000		
F8	.21512	.14156	.38019	.62297	.53410	1.00000	
F11	.14051	.00560	.25168	.52017	.70894	.63301	1.00000
F16	.23600	.10741	.32144	.64799	.47643	.63833	.56951
F18	.13920	-.02423	.15891	.49914	.63139	.50985	.70843
F19	.18236	.06495	.21119	.36577	.45505	.48540	.54712
F35	.15297	.02098	.24118	.47506	.67672	.59327	.72655
F37	.12546	.04184	.32615	.47247	.59972	.53524	.68485
F25	-.00264	-.06516	.00781	.33227	.68936	.38546	.64498

- - - - - - - - - - - FACTOR ANALYSIS - - - - - - - - - - -

	F33	F39	F40	F5	F6	F8	F11
F27	.06400	.08929	.29344	.35705	.44325	.56930	.49973
F34	.35876	.22935	.29798	.43701	.41973	.48565	.35169

	F16	F18	F19	F35	F37	F25	F27
F16	1.00000						
F18	.60822	1.00000					
F19	.53808	.54408	1.00000				

F35	.53463	.63416	.46997	1.00000			
F37	.55060	.70305	.46656	.72144	1.00000		
F25	.46636	.51018	.37341	.58960	.48297	1.00000	
F27	.38730	.40116	.39201	.40925	.37460	.45545	1.00000
F34	.45562	.37409	.29036	.46984	.49277	.31615	.33292

	F34
F34	1.00000

Extraction 1 for analysis 1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F2	1.00000	*	1	8.83265	40.1	40.1
F4	1.00000	*	2	3.57251	16.2	56.4
F12	1.00000	*	3	1.42484	6.5	62.9
F13	1.00000	*	4	.95525	4.3	67.2
F20	1.00000	*	5	.85678	3.9	71.1
F28	1.00000	*	6	.83192	3.8	74.9
F31	1.00000	*	7	.69629	3.2	78.0
F33	1.00000	*	8	.59286	2.7	80.7
F39	1.00000	*	9	.56284	2.6	83.3
F40	1.00000	*	10	.51738	2.4	85.7
F5	1.00000	*	11	.44931	2.0	87.7
F6	1.00000	*	12	.40735	1.9	89.5
F8	1.00000	*	13	.34206	1.6	91.1
F11	1.00000	*	14	.32234	1.5	92.6
F16	1.00000	*	15	.29047	1.3	93.9

- - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - -

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F18	1.00000	*	16	.27126	1.2	95.1
F19	1.00000	*	17	.24760	1.1	96.2
F35	1.00000	*	18	.22902	1.0	97.3
F37	1.00000	*	19	.18746	.9	98.1
F25	1.00000	*	20	.17012	.8	98.9
F27	1.00000	*	21	.13858	.6	99.5
F34	1.00000	*	22	.10112	.5	100.0

- - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - -

PC extracted 3 factors.

Factor Matrix:

	Factor 1	Factor 2	Factor 3
F11	.78790	-.38174	
F37	.76978		
F8	.76823		.32091
F35	.76677	-.32602	
F16	.73126		

F13	.69118		-.43527
F18	.68891	-.42067	
F4	.68879	.31747	-.45729
F6	.68788	-.47329	
F2	.68579	.40259	
F5	.65606		.42560
F34	.63928		
F20	.62635	.44066	
F19	.61689		
F25	.56868	-.53087	-.33311
F27	.55138		
F12	.53262		
F39	.32981	.68573	
F28	.40231	.66528	
F33	.47636	.61526	
F40	.58114	.60285	
F31	.42175	.46393	.47894

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F2	.69464	*	1	8.93265	40.1	40.1
F4	.78434	*	2	3.57251	16.2	56.4
F12	.40169	*	3	1.42484	6.5	62.9
F13	.67229	*				
F20	.62528	*				
F28	.65507	*				
F31	.62249	*				
F33	.63230	*				

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F39	.60716	*				
F40	.71210	*				
F5	.62738	*				
F6	.73154	*				
F8	.70897	*				
F11	.76731	*				
F16	.61858	*				
F18	.66483	*				
F19	.43300	*				
F35	.69539	*				
F37	.65392	*				
F25	.71618	*				
F27	.39593	*				
F34	.40962	*				

VARIMAX rotation 1 for extraction 1 in analysis 1 - Kaiser Normalization.

VARIMAX converged in 11 iterations.

Rotated Factor Matrix:

	Factor 1	Factor 2	Factor 3

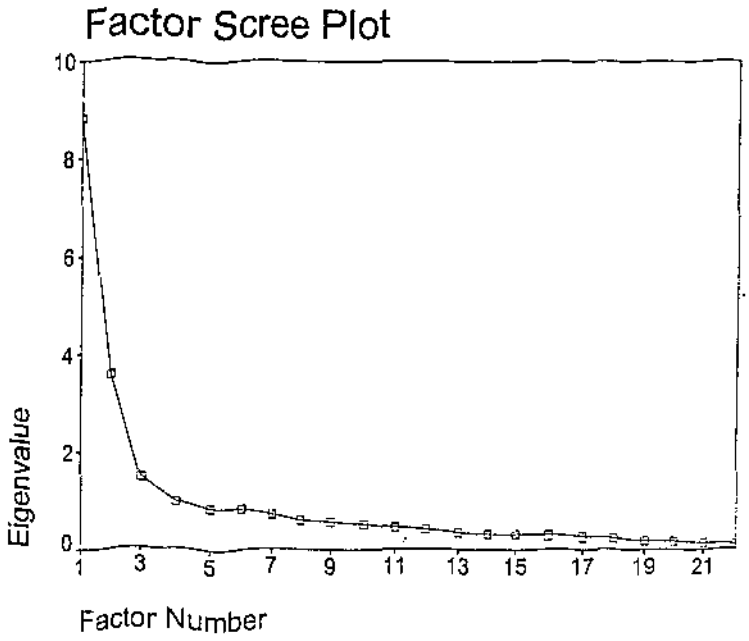
F11	.86260		
F6	.82453		
F35	.81328		
F18	.81067		
F37	.77351		
F25	.75188		-.38389
F8	.71860		.40132
F16	.71813		
F5	.63182		.47213
F19	.62500		
F27	.59635		
F13	.58623	.50306	
F34	.50824	.36519	
F4	.36216	.79477	
F33		.77219	
F2	.32184	.76540	
F39		.74747	
F20		.73888	

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

	Factor 1	Factor 2	Factor 3
F40		.70278	.44565
F28		.60127	.54057
F12		.41113	.39021
F31		.35507	.69640

Factor Transformation Matrix:

	Factor 1	Factor 2	Factor 3
Factor 1	.82129	.53095	.20877
Factor 2	-.56827	.72889	.38182
Factor 3	.05056	-.43222	.90035


Factor Scree Plot
Eigenvalue
10
8
6
4
2
0
1
3
5
7
9
11
13
15
17
19
21
Factor Number

Factor FIQ forced 3 factors with items exceeding loading cut of .45 deleted (study 2)

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

Analysis number 1 Listwise deletion of cases with missing values

Correlation Matrix:

	F2	F4	F20	F31	F33	F39	F6
F2	1.00000						
F4	.72473	1.00000					
F20	.54246	.63068	1.00000				
F31	.39743	.21992	.35495	1.00000			
F33	.59200	.48290	.56421	.37034	1.00000		
F39	.46459	.42376	.46211	.29692	.56424	1.00000	
F6	.33386	.38222	.23473	.03214	.09216	-.05448	1.00000
F8	.38967	.33260	.34710	.32581	.20112	.13818	.53091
F11	.41886	.43137	.27103	.18282	.15367	.00950	.70665
F16	.37987	.37936	.38480	.29400	.25563	.11217	.47171
F18	.27148	.27841	.19655	.15246	.14116	-.02333	.63154
F19	.31938	.23722	.45513	.16462	.18023	.06484	.45494
F35	.44190	.42695	.23636	.21249	.15235	.02120	.67671
F37	.40124	.48053	.36367	.29945	.11715	.04000	.59802
F27	.15384	.17471	.20419	.18422	.08478	.09381	.44062
F34	.37916	.38993	.36785	.24671	.35234	.22847	.41923
F13	.45375	.59241	.43038	.11606	.33290	.22676	.51654
F12	.44251	.40283	.37211	.29230	.41921	.24280	.20133

	F8	F11	F16	F18	F19	F35	F37
F8	1.00000						
F11	.61882	1.00000					
F16	.61128	.57644	1.00000				
F18	.50624	.70666	.60219	1.00000			
F19	.48405	.54368	.52866	.54388	1.00000		
F35	.59090	.72296	.52681	.63412	.46995	1.00000	
F37	.53677	.67475	.53183	.70086	.46610	.72026	1.00000
F27	.54829	.50763	.40466	.39986	.38688	.40523	.36197
F34	.48556	.34748	.44438	.37346	.29034	.46962	.49302
F13	.45720	.58862	.38647	.38997	.32237	.54401	.50639
F12	.41792	.32721	.29266	.25437	.22148	.30615	.30965

	F27	F34	F13	F12
F27	1.00000			
F34	.32578	1.00000		

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

	F27	F34	F13	F12
F13	.39535	.48805	1.00000	
F12	.17661	.32332	.31277	1.00000

Extraction 1 for analysis 1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
		*				
F2	1.00000	*	1	7.60826	42.3	42.3
F4	1.00000	*	2	2.61789	14.5	56.8
F20	1.00000	*	3	1.09460	6.1	62.9
F31	1.00000	*	4	.85477	4.7	67.6
F33	1.00000	*	5	.83415	4.6	72.3
F39	1.00000	*	6	.70625	3.9	76.2
F6	1.00000	*	7	.65931	3.7	79.9
F8	1.00000	*	8	.56097	3.1	83.0
F11	1.00000	*	9	.47363	2.6	85.6
F16	1.00000	*	10	.44644	2.5	88.1
F18	1.00000	*	11	.43013	2.4	90.5
F19	1.00000	*	12	.36940	2.1	92.5
F35	1.00000	*	13	.32532	1.8	94.3
F37	1.00000	*	14	.26307	1.5	95.8
F27	1.00000	*	15	.25246	1.4	97.2
F34	1.00000	*	16	.18844	1.0	98.3
F13	1.00000	*	17	.16279	.9	99.2
F12	1.00000	*	18	.15210	.8	100.0

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

PC extracted 3 factors.

Factor Matrix:

	Factor 1	Factor 2	Factor 3
F11	.80248	-.35122	
F35	.78127	-.31056	
F37	.77984		
F8	.75414		
F16	.72526		
F18	.71137	-.41347	
F13	.71084		-.39437
F6	.71005	-.40470	
F4	.67915	.40985	-.41704
F2	.67639	.47390	
F34	.64083		
F19	.63408		
F20	.60619	.50419	
F27	.54859		
F12	.52108		
F39		.71093	
F33	.46379	.68279	
F31	.39783	.35334	.59346

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
		*				
F2	.70665	*	1	7.60826	42.3	42.3
F4	.80314	*	2	2.61789	14.5	56.8

F20	.62199	*	3	1.09460	6.1	62.9
F31	.63531	*				
F33	.68220	*				
F39	.59615	*				
F6	.72977	*				
F8	.67810	*				
F11	.77455	*				
F16	.61519	*				
F18	.67957	*				
F19	.49385	*				

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F35	.72341	*				
F37	.67728	*				
F27	.45170	*				
F34	.41659	*				
F13	.66219	*				
F12	.37312	*				

VARIMAX rotation 1 for extraction 1 in analysis 1 - Kaiser Normalization.

VARIMAX converged in 7 iterations.

Rotated Factor Matrix:

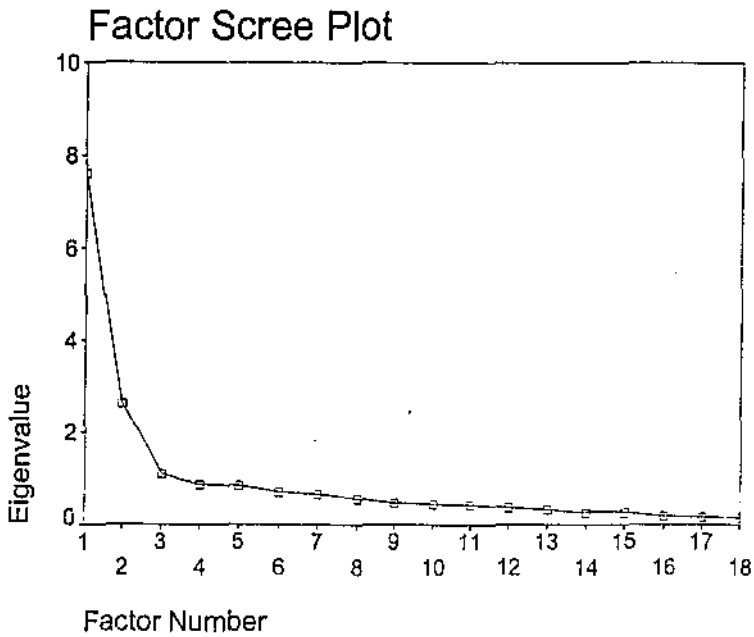
	Factor 1	Factor 2	Factor 3
F11	.86473		
F35	.82581		
F6	.82209		
F18	.81952		
F37	.79197		
F8	.71062		.35845
F16	.67627		.33111
F19	.63011		
F27	.59743		.30738
F13	.58234	.49338	
F34	.49115	.40855	
F33		.80140	
F4	.35011	.78603	
F2	.30493	.78325	
F20		.73428	
F39		.73406	
F12		.50144	
F31		.38030	.69039

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

Factor Transformation Matrix:

	Factor 1	Factor 2	Factor 3

Factor	1	.83220	.53716	.13749
Factor	2	-.55375	.81788	.15633
Factor	3	-.02847	-.20623	.97809



Initial forced 2 Factor solution (FIQ study 2)

Notes

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Resources Used	Elapsed Time	0:00:00.28

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

Analysis number 1 Listwise deletion of cases with missing values

Correlation Matrix:

	F2	F4	F20	F31	F33	F39	F6
F2	1.00000						
F4	.72473	1.00000					
F20	.54246	.63068	1.00000				
F31	.39743	.21992	.35495	1.00000			
F33	.59200	.48290	.56421	.37034	1.00000		
F39	.46459	.42376	.46211	.29692	.56424	1.00000	
F6	.33386	.38222	.23473	.03214	.09216	-.05448	1.00000
F8	.38967	.33260	.34710	.32581	.20112	.13818	.53091
F11	.41886	.43137	.27103	.18282	.15367	.00950	.70665
F16	.37987	.37936	.38480	.29400	.25563	.11217	.47171
F18	.27148	.27841	.19655	.15246	.14116	-.02333	.63154
F19	.31938	.23722	.45513	.16462	.18023	.06484	.45494
F35	.44190	.42695	.23636	.21249	.15235	.02120	.67671
F37	.40124	.48053	.36367	.29945	.11715	.04000	.59802
F27	.15384	.17471	.20419	.18422	.08478	.09381	.44062
F34	.37916	.38993	.36785	.24671	.35234	.22847	.41923
F13	.45375	.59241	.43038	.11606	.33290	.22676	.51654
F12	.44251	.40283	.37211	.29230	.41921	.24280	.20133

	F8	F11	F16	F18	F19	F35	F37
F8	1.00000						
F11	.61882	1.00000					

F16	.61128	.57644	1.00000				
F18	.50624	.70666	.60219	1.00000			
F19	.48405	.54368	.52866	.54388	1.00000		
F35	.59090	.72296	.52681	.63412	.46995	1.00000	
F37	.53677	.67475	.53183	.70086	.46610	.72026	1.00000
F27	.54829	.50763	.40466	.39986	.38688	.40523	.36197
F34	.48556	.34748	.44438	.37346	.29034	.46962	.49302
F13	.45720	.58862	.38647	.38997	.32237	.54401	.50639
F12	.41792	.32721	.29266	.25437	.22148	.30615	.30965

	F27	F34	F13	F12
F27	1.00000			
F34	.32578	1.00000		

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

	F27	F34	F13	F12
F13	.39535	.48805	1.00000	
F12	.17661	.32332	.31277	1.00000

Extraction 1 for analysis 1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F2	1.00000	*	1	7.60826	42.3	42.3
F4	1.00000	*	2	2.61789	14.5	56.8
F20	1.00000	*	3	1.09460	6.1	62.9
F31	1.00000	*	4	.85477	4.7	67.6
F33	1.00000	*	5	.83415	4.6	72.3
F39	1.00000	*	6	.70625	3.9	76.2
F6	1.00000	*	7	.65931	3.7	79.9
F8	1.00000	*	8	.56097	3.1	83.0
F11	1.00000	*	9	.47363	2.6	85.6
F16	1.00000	*	10	.44644	2.5	88.1
F18	1.00000	*	11	.43013	2.4	90.5
F19	1.00000	*	12	.36940	2.1	92.5
F35	1.00000	*	13	.32532	1.8	94.3
F37	1.00000	*	14	.26307	1.5	95.8
F27	1.00000	*	15	.25246	1.4	97.2
F34	1.00000	*	16	.18844	1.0	98.3
F13	1.00000	*	17	.16279	.9	99.2
F12	1.00000	*	18	.15210	.8	100.0

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

PC extracted 2 factors.

Factor Matrix:

	Factor 1	Factor 2
F11	.80248	-.35122
F35	.78127	-.31056

F37	.77984	
F8	.75414	
F16	.72626	
F18	.71137	-.41347
F13	.71084	
F6	.71005	-.40470
F4	.67915	.40985
F2	.67639	.47390
F34	.64083	
F19	.63408	
F20	.60619	.50419
F27	.54659	
F12	.52108	
F31	.39783	.35334
F39		.71093
F33	.46379	.68279

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F2	.68208	*	1	7.60826	42.3	42.3
F4	.62922	*	2	2.61789	14.5	56.8
F20	.62166	*				
F31	.28311	*				
F33	.68130	*				
F39	.59469	*				
F6	.66796	*				
F8	.59585	*				
F11	.76734	*				
F16	.54794	*				
F18	.67701	*				
F19	.44079	*				
F35	.70683	*				

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F37	.67313	*				
F27	.37323	*				
F34	.41653	*				
F13	.50666	*				
F12	.36082	*				

VARIMAX rotation 1 for extraction 1 in analysis 1 - Kaiser Normalization.

VARIMAX converged in 3 iterations.

Rotated Factor Matrix:

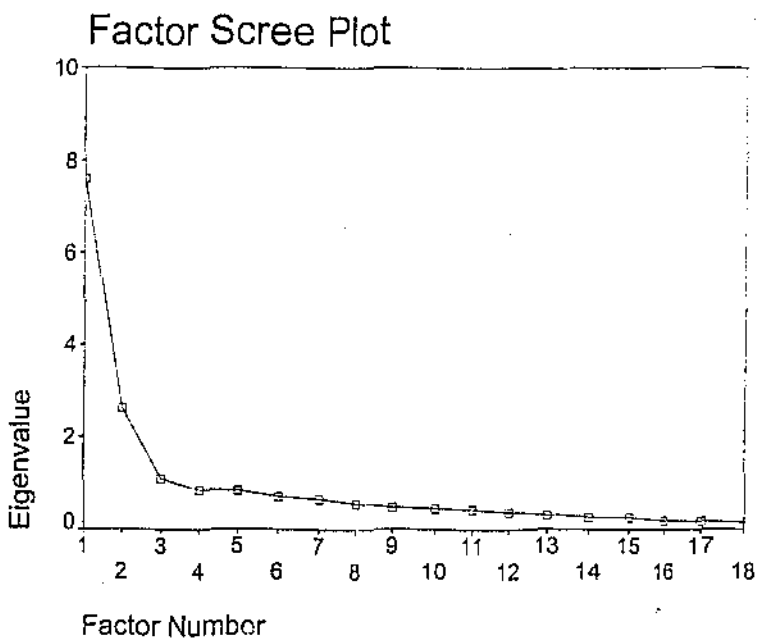
	Factor 1	Factor 2
F11	.86400	
F35	.82401	
F18	.82171	
F6	.81581	
F37	.79240	

F8	.72157		
F16	.68646		
F19	.63858		
F27	.60635		
F13	.57514	.41938	
F34	.49486	.41429	delete
F33		.82527	
F2	.30750	.76650	
F39		.75867	
F20		.75350	
F4	.34481	.71437	
F12		.53501	
F31		.51331	

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

Factor Transformation Matrix:

	Factor 1	Factor 2
Factor 1	.83749	.54646
Factor 2	-.54646	.83749



Factor FIQ forced 2 factors final solution (study 2)

Notes

Output Created		10 Sep 97 17:37:39
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Resources Used	Elapsed Time	0:00:00.39

- - - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - - -

Analysis number 1 Listwise deletion of cases with missing values

Correlation Matrix:

	F2	F4	F20	F31	F33	F39	F6
F2	1.00000						
F4	.72684	1.00000					
F20	.54373	.63173	1.00000				
F31	.39594	.21992	.35496	1.00000			
F33	.58891	.48176	.56383	.37037	1.00000		
F39	.47368	.42984	.46311	.29440	.55757	1.00000	
F6	.31296	.36603	.22559	.03057	.09050	-.07598	1.00000
F8	.39653	.33795	.34970	.32503	.20064	.15212	.50887
F11	.40972	.42508	.26783	.18208	.15316	.00068	.70617
F16	.38642	.38408	.38711	.29350	.25497	.12571	.45162
F18	.25186	.26379	.18796	.14977	.13907	-.04525	.63863
F19	.30820	.22981	.44985	.16349	.17933	.05165	.45964
F35	.43987	.42609	.23640	.21253	.15238	.02198	.66916
F37	.40164	.43099	.36442	.29959	.11725	.04391	.58811
F27	.13757	.16259	.19636	.18160	.08342	.07122	.45046
F12	.44890	.40767	.37457	.29165	.41753	.25507	.18389

	F8	F11	F16	F18	F19	F35	F37
F8	1.00000						
F11	.60938	1.00000					
F16	.61503	.56790	1.00000				
F18	.48490	.70626	.58058	1.00000			

F19	.47268	.54537	.51767	.54746	1.00000		
F35	.58852	.72157	.52502	.62716	.46814	1.00000	
F37	.53659	.67208	.53181	.69014	.46259	.72015	1.00000
F27	.52831	.50958	.38752	.41030	.39214	.40115	.35547
F12	.42399	.31951	.29961	.23639	.21200	.30518	.31071

	F27	F12
F27	1.00000	
F12	.16122	1.00000

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

Extraction 1 for analysis 1, Principal Components Analysis (PC)

Initial Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F2	1.00000	*	1	6.71780	42.0	42.0
F4	1.00000	*	2	2.64904	16.6	58.5
F20	1.00000	*	3	1.00238	6.3	64.8
F31	1.00000	*	4	.83954	5.2	70.1
F33	1.00000	*	5	.73561	4.6	74.7
F39	1.00000	*	6	.68869	4.3	79.0
F6	1.00000	*	7	.54867	3.4	82.4
F8	1.00000	*	8	.51379	3.2	85.6
F11	1.00000	*	9	.44747	2.8	88.4
F16	1.00000	*	10	.42406	2.7	91.0
F18	1.00000	*	11	.34145	2.1	93.2
F19	1.00000	*	12	.28755	1.8	95.0
F35	1.00000	*	13	.25185	1.6	96.5
F37	1.00000	*	14	.23098	1.4	98.0
F27	1.00000	*	15	.16698	1.0	99.0
F12	1.00000	*	16	.15414	1.0	100.0

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

PC extracted 2 factors.

Factor Matrix:

	Factor 1	Factor 2
F11	.81091	-.34380
F37	.78209	
F35	.78158	
F8	.75585	
F16	.73697	
F18	.72027	-.41735
F6	.69892	-.41432
F2	.67567	.49329
F4	.66370	.42331
F19	.65470	
F20	.60315	.51123
F27	.54113	
F12	.52294	.32104

F31	.41570	.35997
F39		.71907
F33	.45304	.67638

Final Statistics:

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
		*				
F2	.69986	*	1	6.71780	42.0	42.0
F4	.61969	*	2	2.64904	16.6	58.5
F20	.62515	*				
F31	.30238	*				
F33	.66274	*				
F39	.59927	*				
F6	.66014	*				
F8	.58923	*				
F11	.77578	*				
F16	.55570	*				
F18	.69297	*				
F19	.46707	*				
F35	.69915	*				
F37	.66843	*				
F27	.37274	*				

- - - - - - - - - - - F A C T O R A N A L Y S I S - - - - - - - - - - -

Variable	Communality	*	Factor	Eigenvalue	Pct of Var	Cum Pct
F12	.37653	*				

VARIMAX rotation 1 for extraction 1 in analysis 1 - Kaiser Normalization.

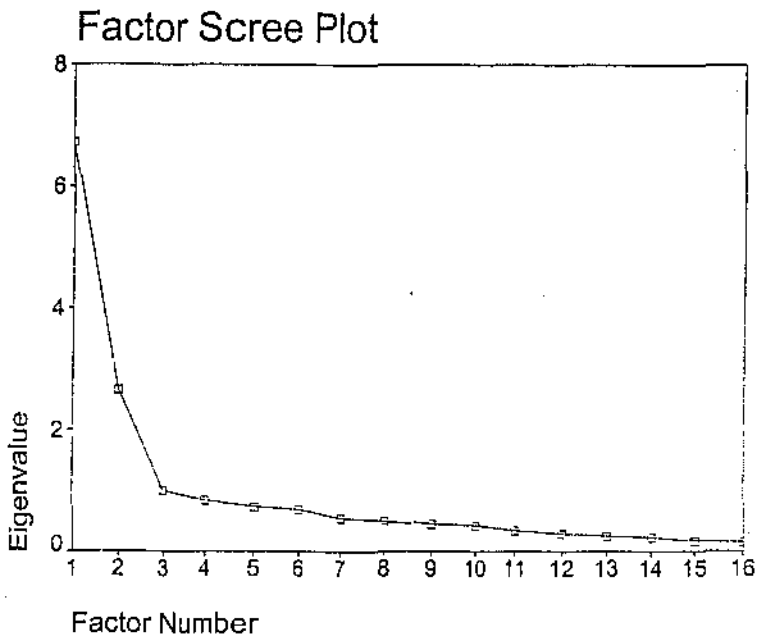
VARIMAX converged in 3 iterations.

Rotated Factor Matrix:

	Factor 1	Factor 2
F11	.86717	
F18	.83132	
F35	.81712	
F6	.81178	
F37	.78543	
F8	.70650	.30015
F16	.67882	.30806
F19	.65564	
F27	.60774	
F33		.81402
F2		.78203
F39		.75906
F20		.75750
F4	.32529	.71685
F12		.55435
F31		.52847

Factor Transformation Matrix:

	Factor 1	Factor 2
Factor 1	.83807	.54556
Factor 2	-.54556	.83807



Initial Reliability FIQ F1 (Agreeable) forced 2 factor solution (study 2)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F11
2. F18
3. F35
4. F6
5. F37
6. F8
7. F16
8. F19
9. F27

Correlation Matrix

	F11	F18	F35	F6	F37
F11	1.0000				
F18	.7059	1.0000			
F35	.7225	.6298	1.0000		
F6	.7071	.6397	.6706	1.0000	
F37	.6729	.6895	.7209	.5893	1.0000
F8	.6108	.4895	.5909	.5111	.5381
F16	.5695	.5838	.5277	.4540	.5333
F19	.5470	.5509	.4711	.4620	.4643
F27	.5047	.3975	.3947	.4452	.3514

	F8	F16	F19	F27
F8	1.0000			
F16	.6173	1.0000		
F19	.4757	.5203	1.0000	
F27	.5209	.3811	.3858	1.0000

N of Cases = 115.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	46.2695	63.9530	7.9971	9

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F11	40.9217	49.1254	.8269	.7026	.8970
F18	40.9478	49.9622	.7660	.6404	.9013
F35	41.1826	50.1506	.7713	.6614	.9010
F6	41.0174	50.3857	.7241	.5837	.9042
F37	40.9043	49.5259	.7402	.6258	.9031
F8	41.1391	52.2963	.6971	.5527	.9063
F16	41.1478	52.0744	.6709	.5104	.9078
F19	41.2783	50.9745	.6157	.4025	.9127
F27	41.6174	55.0979	.5289	.3456	.9163

Reliability Coefficients 9 items

Alpha = .9153 Standardized item alpha = .9153

Final Reliability FIQ F1 (Agreeable) forced 2 factor solution (study 2)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F11
2. F18
3. F35
4. F6
5. F37
6. F8
7. F16
8. F19

Correlation Matrix

	F11	F18	F35	F6	F37
F11	1.0000				
F18	.7061	1.0000			
F35	.7219	.6294	1.0000		
F6	.7072	.6399	.6696	1.0000	
F37	.6732	.6897	.7202	.5895	1.0000
F8	.6103	.4895	.5945	.5104	.5379
F16	.5695	.5838	.5265	.4541	.5334
F19	.5474	.5512	.4744	.4621	.4650

	F8	F16	F19
F8	1.0000		
F16	.6152	1.0000	
F19	.4793	.5197	1.0000

N of Cases = 116.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	41.5776	54.8026	7.4029	8

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F11	36.2328	41.2410	.8217	.6942	.8974
F18	36.2586	41.8282	.7736	.6404	.9014
F35	36.5000	41.9391	.7805	.6603	.9009
F6	36.3276	42.3787	.7191	.5776	.9060
F37	36.2155	41.3358	.7536	.6241	.9031
F8	36.4569	44.2503	.6780	.5168	.9093
F16	36.4569	43.8503	.6713	.5080	.9097
F19	36.5948	42.8518	.6121	.3992	.9160

Reliability Coefficients 8 items

Alpha = .9164 Standardized item alpha = .9173

Initial Reliability FIQ F2 (Independence) forced 2 F solution (study 2)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F33
2. F2
3. F39
4. F20
5. F4
6. F12
7. F31

Correlation Matrix

	F33	F2	F39	F20	F4
F33	1.0000				
F2	.5866	1.0000			
F39	.5572	.4743	1.0000		
F20	.5614	.5468	.4638	1.0000	
F4	.4807	.7160	.4259	.6208	1.0000
F12	.4175	.4446	.2538	.3702	.4088
F31	.3698	.3880	.2914	.3467	.2244

	F12	F31
F12	1.0000	
F31	.2931	1.0000

N of Cases = 115.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	31.7913	50.5175	7.1076	7

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F33	27.7130	37.0134	.6925	.5097	.8099
F2	27.0348	35.3847	.7361	.6221	.8017
F39	27.2522	38.2604	.5580	.3667	.8304
F20	27.0696	36.8899	.6707	.4998	.8128
F4	26.7043	38.2627	.6649	.6060	.8152
F12	27.3130	40.3222	.4868	.2628	.8399
F31	27.6609	40.3840	.4231	.2277	.8510

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

Reliability Coefficients 7 items

Alpha = .8450 Standardized item alpha = .8462

Final Reliability FIQ F2 (Independence) forced 2F (study 2)

****** Method 2 (covariance matrix) will be used for this analysis ******

R E L I A B I L I T Y A N A L Y S I S - S C A L E (A L P H A)

1. F33
2. F2
3. F39
4. F4
5. F20

Correlation Matrix

	F33	F2	F39	F4	F20
F33	1.0000				
F2	.5866	1.0000			
F39	.5572	.4743	1.0000		
F4	.4807	.7160	.4259	1.0000	
F20	.5614	.5468	.4638	.6208	1.0000

N of Cases = 115.0

Statistics for	Mean	Variance	Std Dev	N of Variables
Scale	23.1826	31.3611	5.6001	5

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
F33	19.1043	20.9188	.6782	.4890	.8223
F2	18.4261	19.7028	.7217	.5946	.8103
F39	18.6435	21.3718	.5792	.3622	.8486
F4	18.0957	21.3855	.6981	.5893	.8186
F20	18.4609	20.6191	.6740	.4851	.8233

Reliability Coefficients 5 items

Alpha = .8548 Standardized item alpha = .8561

```
GLM
  agritm  BY title info
  /METHOD = SSTYPE(3)
  /INTERCEPT = INCLUDE
  /POSTHOC = info ( TUKEY )
  /PLOT = PROFILE( title*info )
  /EMMEANS = TABLES(title) /EMMEANS = TABLES(info)
  /PRINT = DESCRIPTIVE ETASQ HOMOGENEITY
  /CRITERIA = ALPHA(.05)
  /DESIGN .
```

FIQ General Linear Model Factor 1 Agreeable (study 2)

Warnings

The DESIGN subcommand is empty, so a saturated design will be generated.

Between-Subjects Factors

		Value Label
title of address	1	Ms
	2	Mrs
level of info	1	basic
	2	transcript
	3	audio

Descriptive Statistics

	title of address	level of info	Mean	Std. Deviation	N
FIQ Agreeable total / no of items	Ms	basic	4.4688	.8028	20
		transcript	5.4402	.9444	23
		audio	5.3063	.8395	20
		Total	5.0893	.9566	63
	Mrs	basic	4.7500	.8787	18
		transcript	5.8162	.5948	17
		audio	5.4375	.8070	18
		Total	5.3255	.8785	53
	Total	basic	4.6020	.8402	38
		transcript	5.6000	.8268	40
		audio	5.3684	.8158	38
		Total	5.1972	.9254	116

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
FIQ Agreeable total / no of items	.411	5	110	.840

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+TITLE+INFO+TITLE * INFO

Tests of Between-Subjects Effects

Dependent Variable: FIQ Agreeable total / no of items

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	23.361[b]	5	4.672	6.842	.000	.237	34.212	.998
Intercept	3109.698	1	3109.698	4554.083	.000	.976	4554.083	1.000
TITLE	1.984	1	1.984	2.905	.091	.026	2.905	.394
INFO	21.501	2	10.751	15.744	.000	.223	31.488	.999
TITLE * INFO	.292	2	.146	.214	.808	.004	.428	.083
Error	75.112	110	.683					
Total	3231.734	116						
Corrected Total	98.473	115						

a. Computed using alpha = .05

b. R Squared = .237 (Adjusted R Squared = .203)

Estimated Marginal Means

title of address

Dependent Variable: FIQ Agreeable total / no of items

title of	Mean	Std. Error
Ms	5.0717	.104
Mrs	5.3346	.114

level of info

Dependent Variable: FIQ Agreeable total / no of items

level of	Mean	Std. Error
basic	4.6094	.134
transcript	5.6282	.132
audio	5.3719	.134

Post Hoc Tests

level of info

Multiple Comparisons

Dependent Variable: FIQ Agreeable total / no of items

Tukey HSD

(I) level of info	(J) level of info	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
basic	transcript	-.9980*	.187	.000	-1.4428	-.5533
	audio	-.7664*	.190	.000	-1.2169	-.3160
transcript	basic	.9980*	.187	.000	.5533	1.4428
	audio	.2316	.187	.434	-.2132	.6763
audio	basic	.7664*	.190	.000	.3160	1.2169
	transcript	-.2316	.187	.434	-.6763	.2132

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

FIQ Agreeable total / no of items

Tukey HSD[a,b]

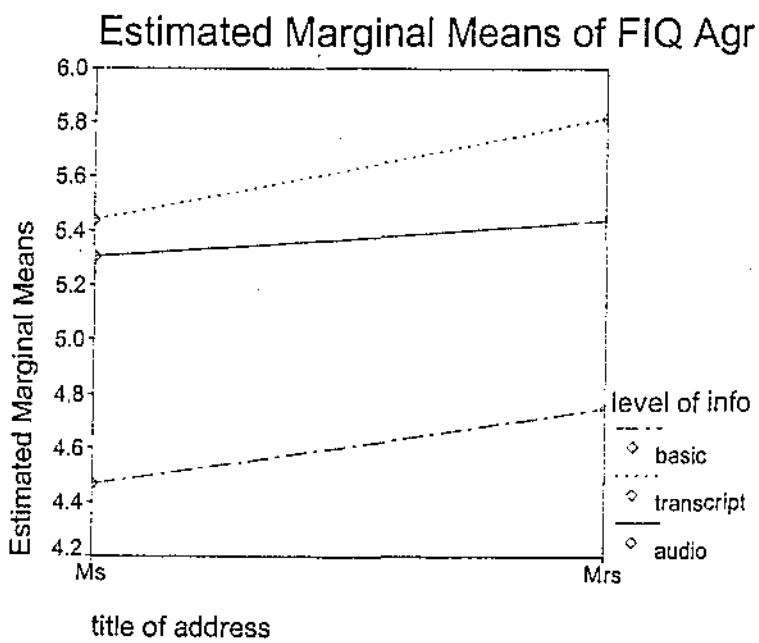
level of info	N	Subset 1
basic	38	
audio	38	5.3684
transcript	40	5.6000
Sig.		.437

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares

a. Uses Harmonic Mean Sample Size = 38.644.

b. Alpha = .05.

Profile Plots



```
GLM
  inditm  BY title info
  /METHOD = SSTYPE(3)
  /INTERCEPT = INCLUDE
  /POSTHOC = info ( TUKEY )
  /PLOT = PROFILE( title*info )
  /EMMEANS = TABLES(title) /EMMEANS = TABLES(info)
  /PRINT = DESCRIPTIVE ETASQ HOMOGENEITY
  /CRITERIA = ALPHA(.05)
  /DESIGN .
```

General Linear Model FIQ (F2) Independence (study 2)

Warnings

The DESIGN subcommand is empty, so a saturated design will be generated.

Between-Subjects Factors

		Value Label
title of address	1	Ms
	2	Mrs
level of info	1	basic
	2	transcript
	3	audio

Descriptive Statistics

	title of address	level of info	Mean	Std. Deviation	N
FIQ independence/no of items	Ms	basic	4.7300	.7901	20
		transcript	4.9870	1.2487	23
		audio	4.2600	1.1573	20
		Total	4.6381	1.1077	63
	Mrs	basic	4.4778	.9681	18
		transcript	5.0000	1.0630	17
		audio	4.3667	1.3499	18
		Total	4.6075	1.1516	53
	Total	basic	4.6105	.8760	38
		transcript	4.9350	1.1604	40
		audio	4.3105	1.2361	38
		Total	4.6241	1.1231	116

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
FIQ independence/no of items	1.563	5	110	.176

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+TITLE+INFO+TITLE * INFO

Tests of Between-Subjects Effects

Dependent Variable: FIQ independence/no of items

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	8.445[b]	5	1.689	1.360	.245	.058	6.800	.465
Intercept	2451.961	1	2451.961	1974.388	.000	.947	1974.388	1.000
TITLE	3.4E-03	1	3.4E-03	.003	.959	.000	.003	.050
INFO	7.663	2	3.832	3.085	.050	.053	6.171	.584
TITLE * INFO	.833	2	.416	.335	.716	.006	.671	.102
Error	136.607	110	1.242					
Total	2625.440	116						
Corrected Total	145.052	115						

a. Computed using alpha = .05

b. R Squared = .058 (Adjusted R Squared = .015)

Estimated Marginal Means

title of address

Dependent Variable: FIQ independence/no of items

title of	Mean	Std. Error
Ms	4.6257	.141
Mrs	4.6148	.153

level of info

Dependent Variable: FIQ independence/no of items

level of	Mean	Std. Error
basic	4.6039	.181
transcript	4.9435	.178
audio	4.3133	.181

Post Hoc Tests

level of info

Multiple Comparisons

Dependent Variable: FIQ independence/no of items

Tukey HSD

(I) level of info	(J) level of info	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
basic	transcript	-.3245	.252	.406	-.9242	.2753
	audio	.3000	.256	.472	-.3074	.9074
transcript	basic	.3245	.252	.406	-.2753	.9242
	audio	.6245*	.252	.039	2.5E-02	1.2242
audio	basic	-.3000	.256	.472	-.9074	.3074
	transcript	-.6245*	.252	.039	-1.2242	-2.E-02

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

FIQ independence/no of items

Tukey HSD[a,b]

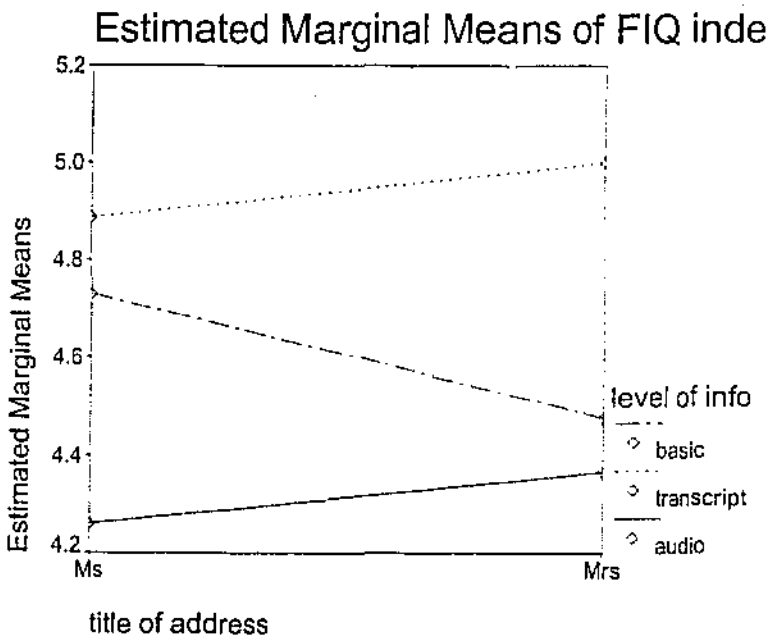
level of info	N	Subset 1	Subset 2
audio	38	4.3105	
basic	38	4.6105	4.6105
transcript	40		4.9350
Sig.		.466	.410

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares

a. Uses Harmonic Mean Sample Size = 38.644.

b. Alpha = .05.

Profile Plots



```
GLM
  pbhaqitm  BY title info
  /METHOD = SSTYPE(3)
  /INTERCEPT = INCLUDE
  /POSTHOC = info ( TUKEY )
  /PLOT = PROFILE( title*info )
  /EMMEANS = TABLES(title) /EMMEANS = TABLES(info)
  /PRINT = DESCRIPTIVE ETASQ HOMOGENEITY
  /CRITERIA = ALPHA(.05)
  /DESIGN .
```

PBHAQ General Linear Model 2x3 (title x info) study 2

Warnings

The DESIGN subcommand is empty, so a saturated design will be generated.

Between-Subjects Factors

		Value Label
title of address	1	Ms
	2	Mrs
level of info	1	basic
	2	transcript
	3	audio

Descriptive Statistics

	title of address	level of info	Mean	Std. Deviation	N
PBHAQITM	Ms	basic	5.3500	.9333	20
		transcript	5.9565	.6138	23
		audio	5.9333	.9341	20
		Total	5.7566	.8639	63
	Mrs	basic	5.0000	1.1827	18
		transcript	6.1176	.6002	17
		audio	5.7778	1.0541	18
		Total	5.6226	1.0742	53
	Total	basic	5.1842	1.0589	38
		transcript	6.0250	.6057	40
		audio	5.8596	.9822	38
		Total	5.6954	.9637	116

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
PBHAQITM	3.582	5	110	.005

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+TITLE+INFO+TITLE * INFO

Tests of Between-Subjects Effects

Dependent Variable: PBHAQITM

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	16.944[b]	5	3.389	4.149	.002	.159	20.744	.949
Intercept	3717.835	1	3717.835	4551.656	.000	.976	4551.656	1.000
TITLE	.379	1	.379	.463	.497	.004	.463	.104
INFO	15.799	2	7.899	9.671	.000	.150	19.342	.980
TITLE * INFO	1.284	2	.642	.786	.458	.014	1.572	.181
Error	89.849	110	.817					
Total	3869.556	116						
Corrected Total	106.793	115						

a. Computed using alpha = .05

b. R Squared = .159 (Adjusted R Squared = .120)

Estimated Marginal Means

title of address

Dependent Variable: PBHAQITM

title of	Mean	Std. Error
Ms	5.7466	.114
Mrs	5.6318	.124

level of info

Dependent Variable: PBHAQITM

level of	Mean	Std. Error
basic	5.1750	.147
transcript	6.0371	.145
audio	5.8556	.147

Post Hoc Tests

level of info

Multiple Comparisons

Dependent Variable: PBHAQITM

Tukey HSD

(I) level of info	(J) level of info	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
basic	transcript	-.8408*	.205	.000	-1.3272	-.3544
	audio	-.6754*	.207	.004	-1.1680	-.1828
transcript	basic	.8408*	.205	.000	.3544	1.3272
	audio	.1654	.205	.699	-.3211	.6518
audio	basic	.6754*	.207	.004	.1828	1.1680
	transcript	-.1654	.205	.699	-.6518	.3211

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

PBHAQITM

Tukey HSD[a,b]

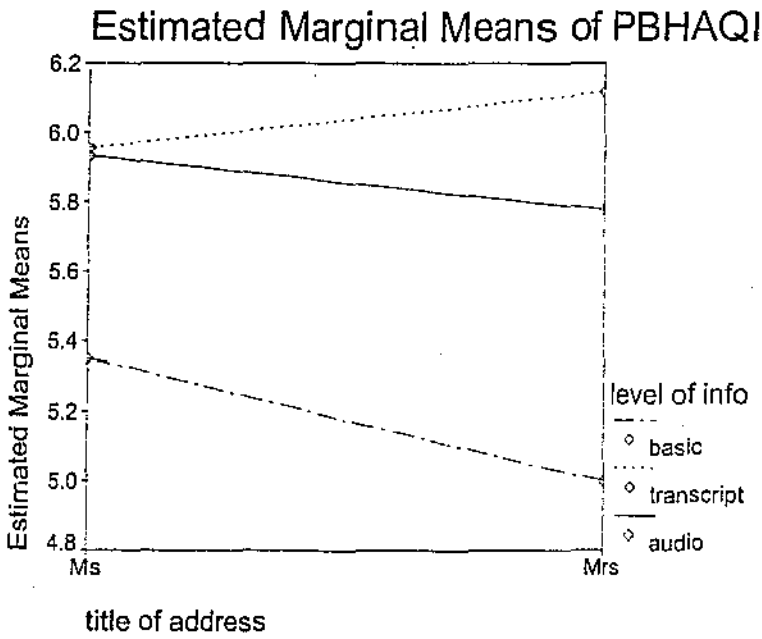
level of info	N	Subset 1
basic	38	
audio	38	5.8596
transcript	40	6.0250
Sig.		.701

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares

a. Uses Harmonic Mean Sample Size = 38.644.

b. Alpha = .05.

Profile Plots



```
GLM
  f41  BY title info
  /METHOD = SSTYPE(3)
  /INTERCEPT = INCLUDE
  /POSTHOC = info ( TUKEY )
  /PLOT = PROFILE( title*info )
  /EMMEANS = TABLES(title) /EMMEANS = TABLES(info)
  /PRINT = DESCRIPTIVE ETASQ HOMOGENEITY
  /CRITERIA = ALPHA(.05)
  /DESIGN .
```

FIQ confidence General Linear Model (study 2)

Warnings

The DESIGN subcommand is empty, so a saturated design will be generated.

Between-Subjects Factors

		Value Label
title of address	1	Ms
	2	Mrs
level of info	1	basic
	2	transcript
	3	audio

Descriptive Statistics

	title of address	level of info	Mean	Std. Deviation	N
F41	Ms	basic	3.95	1.93	19
		transcript	5.09	1.54	22
		audio	4.42	1.77	19
		Total	4.62	1.78	60
	Mrs	basic	3.44	1.79	16
		transcript	4.73	1.28	15
		audio	4.29	2.39	17
		Total	4.15	1.94	48
	Total	basic	3.71	1.86	35
		transcript	4.95	1.43	37
		audio	4.36	2.06	36
		Total	4.35	1.85	108

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
F41	3.372	5	102	.007

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+TITLE+INFO+TITLE * INFO

Tests of Between-Subjects Effects

Dependent Variable: F41

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	30.832[b]	5	6.166	1.873	.106	.084	9.365	.616
Intercept	1984.212	1	1984.212	602.714	.000	.855	602.714	1.000
TITLE	2.919	1	2.919	.887	.349	.009	.887	.154
INFO	26.238	2	13.119	3.985	.022	.072	7.970	.702
TITLE * INFO	.658	2	.329	.100	.905	.002	.200	.065
Error	335.797	102	3.292					
Total	2412.000	108						
Corrected Total	366.630	107						

a. Computed using alpha = .05

b. R Squared = .084 (Adjusted R Squared = .039)

Estimated Marginal Means

title of address

Dependent Variable: F41

title of	Mean	Std. Error
Ms	4.49	.235
Mrs	4.15	.262

level of info

Dependent Variable: F41

level of	Mean	Std. Error
basic	3.69	.308
transcript	4.91	.304
audio	4.36	.303

Post Hoc Tests

level of info

Multiple Comparisons

Dependent Variable: F41

Tukey HSD

(I) level of info	(J) level of info	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
basic	transcript	-1.23*	.428	.013	-2.25	-.21
	audio	-.65	.431	.294	-1.67	.38
transcript	basic	1.23*	.428	.013	.21	2.25
	audio	.58	.425	.357	-.43	1.60
audio	basic	.65	.431	.294	-.38	1.67
	transcript	-.58	.425	.357	-1.60	.43

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

F41

Tukey HSD[a,b]

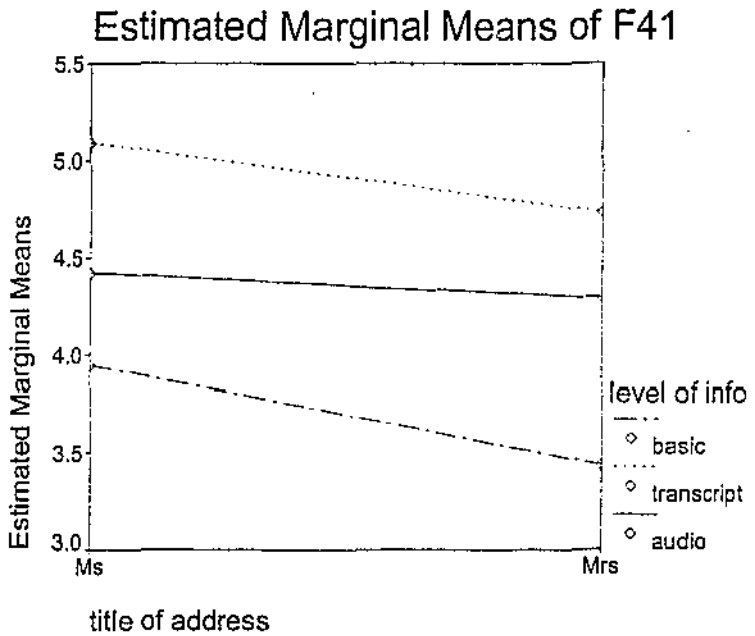
level of info	N	Subset 1	Subset 2
basic	35	3.71	
audio	36	4.36	4.36
transcript	37		4.95
Sig.		.290	.362

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares

a. Uses Harmonic Mean Sample Size = 35.981.

b. Alpha = .05.

Profile Plots



```
GLM
  eb9  BY title info
  /METHOD = SSTYPE(3)
  /INTERCEPT = INCLUDE
  /POSTHOC = info ( TUKEY )
  /PLOT = PROFILE( title*info )
  /EMMEANS = TABLES(title) /EMMEANS = TABLES(info)
  /PRINT = DESCRIPTIVE ETASQ HOMOGENEITY
  /CRITERIA = ALPHA(.05)
  /DESIGN .
```

PBHAQ confidence General Linear Model (study 2)

Warnings

The DESIGN subcommand is empty, so a saturated design will be generated.

Between-Subjects Factors

		Value Label
title of address	1	Ms
	2	Mrs
level of info	1	basic
	2	transcript
	3	audio

Descriptive Statistics

	title of address	level of info	Mean	Std. Deviation	N
EB9	Ms	basic	4.40	1.96	20
		transcript	4.91	1.73	23
		audio	5.30	1.75	20
		Total	4.87	1.82	63
	Mrs	basic	3.89	1.81	18
		transcript	5.24	1.35	17
		audio	5.39	1.58	18
		Total	4.83	1.71	53
	Total	basic	4.16	1.88	38
		transcript	5.05	1.57	40
		audio	5.34	1.65	38
		Total	4.85	1.76	116

Levene's Test of Equality of Error Variances[a]

	F	df1	df2	Sig.
EB9	.722	5	110	.608

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept+TITLE+INFO+TITLE * INFO

Tests of Between-Subjects Effects

Dependent Variable: EB9

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Eta Squared	Noncent. Parameter	Observed Power[a]
Corrected Model	32.568[b]	5	6.514	2.212	.058	.091	11.059	.703
Intercept	2706.751	1	2706.751	919.127	.000	.893	919.127	1.000
TITLE	3.2E-02	1	3.2E-02	.011	.917	.000	.011	.051
INFO	30.088	2	15.044	5.109	.008	.085	10.217	.813
TITLE * INFO	3.540	2	1.770	.601	.550	.011	1.202	.148
Error	323.940	110	2.945					
Total	3089.000	116						
Corrected Total	356.509	115						

a. Computed using alpha = .05

b. R Squared = .091 (Adjusted R Squared = .050)

Estimated Marginal Means

title of address

Dependent Variable: EB9

title of	Mean	Std. Error
Ms	4.87	.217
Mrs	4.84	.236

level of info

Dependent Variable: EB9

level of	Mean	Std. Error
basic	4.14	.279
transcript	5.07	.274
audio	5.34	.279

Post Hoc Tests

level of info

Multiple Comparisons

Dependent Variable: EB9

Tukey HSD

(I) level of info	(J) level of info	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
basic	transcript	-.89	.389	.061	-1.82	3.15E-02
	audio	-1.18*	.394	.009	-2.12	-.25
transcript	basic	.89	.389	.061	-3.1E-02	1.82
	audio	-.29	.389	.733	-1.22	.63
audio	basic	1.18*	.394	.009	.25	2.12
	transcript	.29	.389	.733	-.63	1.22

*. The mean difference is significant at the .05 level.

Homogeneous Subsets

EB9

Tukey HSD[a,b]

level of info	N	Subset 1	Subset 2
basic	38	4.16	
transcript	40	5.05	5.05
audio	38		5.34
Sig.		.062	.735

Means for groups in homogeneous subsets are displayed.
Based on Type III Sum of Squares

a. Uses Harmonic Mean Sample Size = 38.644.

b. Alpha = .05.

Profile Plots