

**STALKING IN DOMESTIC RELATIONSHIPS:
PRELIMINARY ANALYSES OF THE
INTRUSIVENESS SCALE**

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The Intrusiveness Scale is a self-report survey specifically designed to measure the incidence/frequency of intrusive behaviour that may occur within the context of interpersonal relationships. Scale instructions ask respondents to indicate on 5 point scales how often they have engaged in 15 intrusive acts over the past year. The scale measures the frequency of acts and the severity of acts by a systematic process of weighting individual items before the summation of ratings. All items were derived from the psychological and psychiatric literature dedicated to jealousy-related and stalking behaviours (ABS, 1996; Coleman, 1997; Dziegielewski & Roberts, 1995; Kienlen, Birmingham, Solberg, Oregon & Meloy, 1997; Kurt, 1995; McKenna, 1984; Mullen, 1990, 1997; Mullen & Martin, 1994; Mullen & Pathe, 1994; Pathe & Mullen, 1997; Romans, Hays & White, 1996; Shepherd, 1961; TARRIER, Beckett, Harwood & Bishay, 1990; Wallace & Silverman, 1996; Wright, Burgess, Burgess, Laszlo, McCrary & Douglas, 1996). This measure was created as there were no known scales aimed at specifically measuring intrusiveness, especially within the context of general domestic relationships, with the only similar measure known (Coleman's (1997) *Stalking Behaviour Checklist*) appearing to confound intrusive and physically abusive behaviours. It is important that intrusiveness is delineated from physically abusive behaviours and stalking behaviours committed by strangers from both a functional and an empirical measurement perspective.

Data collected on the occurrence of intrusive behaviours within general populations is invaluable in ascertaining a normative base for comparison with interest populations. Therefore, for normative measurement purposes, a clear continuum of intrusive acts, ranging from subtle curiosity to severe instances of stalking, were included in this scale. In the first instance, a pilot study was conducted (in two parts). Firstly, the scale was administered to ascertain internal consistency, dimensionality (construct validity) and test re-test reliability. Secondly, data was collected from a second sample of respondents who were asked to rate how emotionally distressing each intrusive act may appear to the average person. This data was used to weight the perceived social severity of each item for scoring purposes. Following pilot work, a larger study was conducted to further verify the internal consistency of the scale and to provide some insight into the concurrent validity. All three samples consisted of undergraduate students, however, the main study was conducted across an entire university campus consisting of a wide array of business students, the majority already working in skilled positions in the community.

Pilot Study - Part 1

Method

One hundred and sixty questionnaires containing *The Intrusiveness Scale* were distributed to University of South Australia undergraduates in current heterosexual relationships. Eighty-five students responded (53 % response rate), including 69 females and 16 males. Ages ranged from 17 to 58 years with a mean age of 28.74 years ($SD = 12.07$). Sixty questionnaires were distributed twice, approximately 4 week apart, to measure test re-test reliability. Thirty-eight students responded both times (63 % response rate), including 31 females and 7 males. Ages ranged from 17 to 57 years with a mean age of 25.97 years ($SD = 10.75$).

The scale was administered as *The Partner Curiosity Scale* to avoid the possible negative impact of the words 'stalking' or 'intrusiveness'. Respondents were asked to read through 15 items and indicate on 5 point scales ranging from "never" (0) to "all the time" (5) how often they engaged in the each act over the last year. Participants were asked to think of the questions in reference to their current partner. Included were statements such as "*I read my partner's personal mail without them knowing*". A demographic section collecting information about the age and sex of respondents was included, in addition to a section where participants could provide comments about the questionnaire in general. Identification codes were used to match retests (specifically, the last four digits of the respondent's telephone number).

Pilot Study - Part 2

As some of *The Intrusiveness Scale* items may be considered more distressing than others, further data were collected for weighting purposes. For example, looking through a partner's personal mail is likely to be less distressing to the average "victim" of this act than being followed by a private detective employed by their partner. This process of systematically weighting items before scoring (summation) was aimed at providing some form of severity measurement (emotional impact) in line with Marshall's (1992a, 1992b) research on violence. As Marshall (1992a) suggests, although normative impact weights may either under or over-estimate the consequences of an act for an individual's specific experience, this form of severity rating is more appropriate than idiosyncratic ratings for research purposes (p. 112).

Method

One hundred questionnaires aimed at collecting average emotional distress ratings for each item from *The Intrusiveness Scale* were distributed to University of South Australia undergraduates. Eighty-seven students responded (87 % response rate), including 64 females and 23 males. Ages ranged from 17 to 52 years with a mean age of 24.37 years ($SD = 7.49$).

Respondents were asked to read the 15-scale items and rate how emotionally distressing they believed each of the acts would be to the average person if their partner directed these acts toward them. Respondents were asked to use the provided 10-point scale ranging from "not distressing at all" (1) to "devastating" (10).

Procedure

A score for Intrusiveness was gained by multiplying each separate item rating (as collected in Part 1) by the mean "distress" score for that item (as collected in Part 2) of the pilot work. Although measured on scales ranging from 1 to 10, mean distress scores were converted to more useful weighting figures by adding a decimal place (Marshall, 1992a). Therefore, if the mean distress rating for hiring a private detective was 8 out of 10, all scores for this item were multiplied by .8. Weighted item ratings were then summed to provide a final score on Intrusiveness. Scores could range from 0 to 43.40 (higher scores depicting greater degrees of intrusiveness).

Results

Reliability

According to the current research, the internal reliability of *The Intrusiveness Scale* is moderately high (Cronbach's alpha = .84). Similarly, the test-retest reliability for the scale was high. The correlation between the matched scores of respondents who filled in the scale twice was .95.

Descriptive Statistics

Table 1 provides the descriptive statistics for *The Intrusiveness Scale*. The distribution of the weighted intrusiveness scores was unimodal and highly positively skewed.

Table 1

Descriptive Statistics for *The Intrusiveness Scale* (Pilot Study)

	N	Mean	SD	Min	Max	Mode	Media n
Intrusiveness	84	3.04	3.54	0	21.84	.70	1.80

Dimensionality

To test the dimensionality of *The Intrusiveness Scale*, individual item scores were analysed using the principal components procedure with iteration and oblim rotation, as any multiple constructs identified were expected to be correlated rather than orthogonal. Note that items 13 and 14 ("*I hired someone to follow my partner to see what they were doing or who they were with*" and "*I have 'bugged' telephones or used surveillance equipment in rooms to check up on my partner's movements or conversations*"), were excluded from the analysis as they were not endorsed by any of the respondents. The internal consistency of the scale without these items was calculated at .82 (alpha).

The three-factor solution (see Table 2) obtained via this method extracted 60% of the total variance, with the eigenvalue of all three factors above 1.0. Factor 1 explained 69% of the extracted variance and consisted of 7 items where intrusiveness appears to function as an act of finding evidence. This factor was therefore named *Evidence Seeking* and had an internal reliability of .79 (alpha). Factor 2 explained 17% of the extracted variance and was named *Surveillance* based on the highest loading factors as the theme appeared unclear when taking into account all 5 items. The internal reliability of this second factor was .78 (alpha). Factor 3 consisted of a single item ("*I asked my partner where they had been and what they had been doing*") and accounted for 15% of the extracted variance. The majority of respondents endorsed this item at least once (91%), probably explaining the extraction of this single-item factor. This is the only item in the scale that may be perceived as a "socially positive" act, therefore the high endorsement of this item is warranted. Although three factors were identified via this procedure, factor 1 (*Evidence Seeking*) and factor 2 (*Surveillance*) were highly correlated ($r(136) = .75, p < .001$) suggesting the scale was more likely to be representing a unidimensional construct.

Table 2
Principal Components Analysis of the Intrusiveness Scale

Factor	No	Item	Loading
1 Evidence Seeking	3	I looked through my partner's personal diary or journal without them knowing	.79
	11	I broke into my partner's property, such as their car or house, to look around. <i>*only endorsed by one respondent</i>	.77
	12	I checked my partner's underwear or bed linen for signs of lovemaking.	.70
	5	I pressed the re-dial button on my partner's telephone to see who they had recently called.	.61
	6	I secretly listened in on my partner's phone calls either on another phone or by listening in the next room.	.59
	2	I checked through my partner's belongings such as their wallet/purse, bags or pockets.	.57
	15	I have purposefully stayed in the room with my partner when they have been entertaining guests to keep an eye on what they are saying and doing.	.55
2 Surveillance	9	I secretly watched my partner from a distance to see what they were doing.	.79
	8	I arrived at places unexpectedly to see where my partner was and what they were doing.	.72
	10	I secretly followed my partner to see where they were going and what they were doing.	.71
	4	I read my partner's personal mail without them knowing.	.69
	7	I telephoned my partner when they were away from me to check up on where they were.	.50
3	1	I asked my partner where they had been and what they had been doing.	.76

Main Study Method

All University of South Australia undergraduates attending a core subject in an entire division/campus were approached to fill in a survey containing jealousy/relationship related questionnaires (approximately 2000 students). In total, 670 surveys were distributed with 165 surveys returned in completed form (25% response rate). Respondents included 49 males and 116 females. Ages ranged from 17 to 58 years with a mean age of 23.82 years ($SD = 7.51$). Twenty-eight respondents were separated from their partner at the time of the survey, so they were excluded from these current analyses. This group of 137 students, consisting of 41 males and 96 females, ranged in age from 17 to 51 with a mean age of 24.06 ($SD = 7.29$).

Approximately 53% of this sample classified themselves as "dating", 25% were married, 16% were defacto, 4% were engaged, 2% were having a long-distance relationship (1 respondent did not answer this question). The average relationship length was 4.12 years ($SD = 5.40$) ranging from .17 to 29 years in duration. Forty-seven percent classified themselves as students while the remainder of the sample had unskilled (12%) or skilled (39%) occupations (1 respondent chose "unemployed" as their occupational classification).

Standardised questionnaires administered in conjunction with *The Intrusiveness Scale* included White's Relationship and Chronic Jealousy Scales (in White & Mullen, 1989), Spielberger's (1979) Anger Expression Inventory and Trait Anger Scale and the Conflict Tactics Scales (Straus, 1979) (a widely standardised set of scales aimed at measuring an individual's degree of reasoning ability, verbal aggression and violence during conflict situations with their partner). A short version of the Marlowe-Crowne Social Desirability Scale (M-C 1(10)) (Strahan & Gerbasi, 1972) and the EMBU - a measurement of the perceptions of parental rearing behaviour - (Winefield, Goldney, Tiggemann, & Winefield, 1989) were also administered.

Participants were also asked to respond to a revised version of the Morbid Jealousy Questionnaire (MJQ)(Dolan, 1992) referred to as *The Private Thoughts Questionnaire*. Respondents were asked to rate 25 statements depicting private thoughts on 5-point scales ranging from "not at all" (0) to "almost all the time" (4). This questionnaire was designed to measure how often respondents had singular thoughts related to cognitive schemas found to be associated with jealousy problems, including sexual behaviour schema, attractiveness schema, danger/fear related schema and anger schema (Dolan, 1992; Dolan & Bishay, 1996a; Dolan & Bishay, 1996b). Thoughts to be rated included "My partner will leave me" and "My partner thinks they can keep secrets from me". Furthermore, based on Dolan's (1992) research, respondents were also asked to rate how emotionally distressing they found each of the 25 thoughts on a 5-point scale ranging from "not distressing at all" (0) to "devastating" (5). The MJQ was revised as it was originally designed for administration to morbidly jealous individuals and only included 1 item to measure anger-related thoughts and included no items associated with fear of a rival existing (Dolan, 1992). Factor analyses on the current *Private Thoughts Questionnaire* evidenced 6 clear factors termed *Trust-related Schema* (similar to anger-related schema), *Attractiveness Schema*, *Abandonment Schema*, *Danger/Fear-related Schema*, *Sexual Behaviour Schema* and *Projection* with the internal reliability (alpha) for the whole scale measuring .91.

In addition to general parent/sibling questions included as part of the EMBU (Winefield et al, 1989), a demographic section was included to ascertain basic relationship and personal information.

Results

Reliability

The internal reliability of *The Intrusiveness Scale* appears to be stable when compared to pilot study results with a moderately high alpha of .87.

Descriptive Statistics

Table 3 provides the descriptive statistics for *The Intrusiveness Scale*. The distribution of the weighted intrusiveness scores was unimodal and highly positively skewed as expected with a negative behaviour in a general population. Sex differences were evident with females ($M = 3.85$, $SD = 4.44$) reporting to have engaged in significantly more intrusive acts than males ($M = 1.39$, $SD = 1.18$), $t(120) = -4.99$, $p < .001$.

Table 3

Descriptive Statistics for the Intrusiveness Scale (Main Study)

	N	Mean	SD	Min	Max	Mode	Median
Intrusiveness	137	3.11	3.93	0	28.36	.70	1.61

Correlations

Table 4 gives the results of correlations between intrusiveness scores and other variables of interest measured by standardised and non-standardised scales (outlined above). Results are also presented with Social Desirability Responding (Lie) held constant. Significant associations are plentiful with perhaps the most noteworthy being the relationship between intrusiveness and negative patterns of thoughts about sexual relationships (specifically, trust-related and abandonment schema). Other prominent associations include those with trait anger and jealousy, and other behavioural variables (anger expression, verbal aggression and violence).

Table 4

Correlations Between Intrusiveness Scores and Other Variables (Main Study) Including Results with Social Desirability Responding Held Constant (Lie).

		Intrusiveness	
	N	Coefficient	Control for Lie (N = 109)
Private Thoughts (sum)	136	.61**	.59**
Trust-related Schema	134	.57**	.55**
Attractiveness Schema	135	.34**	.35**
Abandonment Schema	135	.47**	.53**
Danger/Fear-related Schema	136	.41**	.33**
Sexual Behaviour Schema	130	.42**	.41**
Projection	135	.27**	.25*
Emotional Distress of Private Thoughts			
Trust-related Schema	129	.26**	.12
Attractiveness Schema	133	.20*	.19
Abandonment Schema	134	.15	.08
Danger/Fear-related Schema	131	.32**	.29*
Sexual Behaviour Schema	124	.41**	.43**
Projection	129	.24**	.19
Perceptions of Parental Rearing			
Mother Supportive	129	-.01	.01
Father Supportive	129	-.06	-.02
Mother Rejecting	127	.20*	.17
Father Rejecting	128	.28**	.29*
Mother Overinvolved	129	.16	.09
Father Overinvolved	130	.14	.10
Anger			
Trait Anger	136	.50**	.43**
<i>Angry Temperament</i>	136	.45**	.38**
<i>Angry Reaction</i>	136	.31**	.24*
Anger Expression	136	.55**	.47**
<i>Anger-In</i>	136	.29**	.20*
<i>Anger-Out</i>	136	.52**	.45**
<i>Anger-Control</i>	136	-.40**	.32**
Jealousy			
Chronic Jealousy (trait)	136	.47**	.38**
Relationship Jealousy (current situation)	133	.46**	.40**
Conflict Tactics			
Reasoning Ability	135	.30**	.28*
Verbal Aggression	135	.50**	.49**
Violence	135	.55**	.56**
Age	136	-.12	-.04
Relationship Length	136	-.05	.01
Relationship Satisfaction	136	-.16	-.16
Social Desirability	136	-.32**	

* p. < .05

** p. < .001

Discussion

Preliminary analyses of *The Intrusiveness Scale* are promising. The internal consistency of the scale is moderately high and appears stable. Test re-test analyses suggest the scale can predict scores over time. The initial factor analysis provides some evidence of multi-dimensionality, however the obvious difference in constructs is unclear at this stage. It is anticipated that further analyses with larger samples may provide clearer factors with possible separation of items due to the severity of acts. Regardless, the main factors (*Evidence Seeking* and *Surveillance*) are highly correlated providing a strong basis for the summation of items to produce total scale scores.

Of particular interest are the associations between intrusiveness scores and other variables. The strongest correlation appeared between intrusiveness and general negative thoughts about sexual relationships (as measured by *The Private Thoughts Questionnaire*). More specifically, the association between intrusiveness and the frequency of thoughts related to trust and abandonment were highest in this group. This is an expected association between stalking behaviour and obsessive thinking/faulty cognitions, providing good concurrent validation (for instance see Meloy, 1996; Walker & Meloy, 1998). Other highly significant associations providing concurrent validity appear between intrusiveness, jealousy and other behavioural variables such as anger expression and verbal aggression (Coleman, 1997; Harmon, Rosner & Owens, 1995; Kienlen et al, 1997; Mullen, 1997). However, the strong association between intrusiveness and violence provides an especially interesting basis for further research. Advanced analyses should provide further insight into possible indirect associations that may explain this correlation more clearly (ie, the mediating factor of anger expression in this association). However, several researchers have suggested that prior intimates or current intimates who enforce extreme isolation via stalking acts are the most likely batterers (for instance see Coleman, 1997; McCann, 1998; Schwartz-Watts & Morgan, 1998; Walker & Meloy, 1998).

Some cautionary notes; the distribution of gender in the main sample was not balanced therefore the significant sex differences (females appearing more intrusive than males) should not be generalised. Again, further investigation is needed. In addition, although researchers expect non-normal distributions when measuring negative or socially undesirable behaviours in the general population, correlational analyses of these data should also be viewed with caution. Although data transformations to help correct skewness and kurtosis were examined for the purpose of these analyses, there was little improvement to warrant manipulating the data.

In conclusion, based on the growing literary interest in the area of stalking, there is a clear need for the development of standardised measures for conducting empirical research. The competent psychometric properties of *The Intrusiveness Scale*, as presented in these preliminary analyses, clearly warrants further investigation into this particular measure. The internal consistency, test re-test reliability, construct validity and concurrent validity are promising with these initial samples of undergraduates with reasonably broad backgrounds. However, further analyses of the scale with alternative samples is necessary, including more extensive methods of collecting and standardising the impact weightings.

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