Running Head: Romantic Partner Behaviours as Social Context

Romantic Partner Behaviours as Social Context:

Measuring Six Dimensions of Relationships

Wendy H. Ducat and Melanie J. Zimmer-Gembeck

Griffith University, School of Psychology and Institute of Health and Medical Research,

Behavioural Basis of Health

Contact:
    Dr Wendy Ducat
    School of Psychology
    Griffith University
    Gold Coast Campus, QLD 4222
    AUSTRALIA
    Email: w.ducat@griffith.edu.au
    Tel: +61755528196

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Abstract

A new measure, Partner Behaviours as Social Context (PBSC), was developed and tested in two studies ($N = 215$, $N = 316$) and tested as a correlate of psychological well-being in a third ($N = 157$). Self-Determination Theory (Deci & Ryan, 2000) and related research has suggested that there are six important dimensions of partner behaviours, which should be associated with individual psychological need fulfillment, well-being and development. Three of these dimensions are positive including *warmth*, or provision of love/affection; *autonomy support*, or supporting a partner's decisions; and *structure*, or being consistent and reliable. Three of these dimensions are negative, namely *rejection*, or ignoring/being hostile to a partner; *coercion*, or being controlling/demanding; and *chaos*, or unpredictability. Factor analysis supported the six-dimensional construct. The six PBSC dimensions, positive and negative subscales and total score had good distributional properties, high internal consistency, related as expected to other relationship quality measures, and diverged from most personality constructs. All PBSC scales were related to well-being with some behaviours more related than others. For example, coercion was strongly associated with compromised well-being while warmth showed weak, positive associations with positive functioning. The PBSC is expected to have utility in both research and clinical settings.

Romantic Partner Behaviours as Social Context:

Measuring Six Dimensions of Relationships

It is well established that interactions with a romantic partner, the behaviour of each partner within a romantic dyad, and the general quality of a committed romantic relationship are important for good individual functioning and psychological well-being (Berscheid & Regan, 2005; Lucas & Dyrenforth, 2006; Reis, Collins & Berscheid, 2000). A recent meta-analysis of 93 studies investigating marital quality and well-being demonstrated that the average weighted effect was .37 for cross-sectional studies and .25 for longitudinal studies, demonstrating consistent and moderate associations between relationship function and psychological health for committed couples (Proulx, Helms & Buehler, 2007). In contrast, in adolescent and early adult relationships others have not found such associations or have found a higher incidence of depression among young people who are involved in romance (see Davila, 2008 for a review).

Potential reasons for these findings are numerous. It may be that developmental immaturity predisposes adolescents to vulnerabilities in romantic involvements (Davila, 2008). Another possibility is that behaviours in early romances are less supportive compared to mature relationships, thus leading to poorer psychological adjustment (Daley & Hammen, 2002; Williams, Connolly & Segal, 2001). However, before these issues can be addressed, a new measure of romantic experiences is needed that is applicable to romantic relationships of younger and older participants and 1) simultaneously captures a variety of dimensions of specific romantic interactions including both healthy and maladaptive and 2) is founded on theory regarding how social contexts promote or undermine psychological well-being.

There is some evidence that while some aspects of romantic involvement may naturally enhance well-being, others may undermine it, thus making measurement a salient issue and highlighting the need to measure positive and negative aspects of romantic relationship

functioning. For example, one longitudinal study found that 16-year-olds who reported more closeness and satisfaction (i.e. relationship quality) with romantic partners had higher self-esteem and better social competence (Zimmer-Gembeck, Seibenbruner & Collins, 2001), though no association between relationship quality and emotional health was found. In this same study, overinvolvement in dating, defined by number of dating partners in the past year, was associated with declines in emotional health and increases in internalising and externalising symptoms between ages 12 and 16. In a second study also focused on multiple indicators of romantic involvement, serious romantic relationships (defined by length, being in love, and having serious rather than casual relationships) but not casual involvement (i.e., relationships that were on and off), was associated with greater life satisfaction (Furman & Winkles, in press).

The Measurement of Romantic Relationship Quality

Romantic relationship quality has been broadly described as the extent to which a relationship provides or withholds beneficial experiences and interactions (Collins, 2003). It can be challenging to identify measures that capture a range of these experiences and interactions when subjective views are desired but participants vary in their experience within social relationships in general and romantic relationships more specifically. It may be especially challenging when participants are younger, normatively forming new relationships and most are fairly inexperienced at being in couple relationships (Furman & Flanagan, 1997; Furman & Wehner, 1997).

The difficulty finding a subjective measure can make the use of observations more desirable as a gauge of romantic quality. This is often done with laboratory tasks but they may be artificial or novel (e.g., participants may have never discussed a disagreement previously). Moreover, the existing questionnaire measures that are most commonly used either… or … In the current studies, we developed a measure that would allow individuals to report what they

observed in their interactions or what they perceived their partners to contribute to the relationship. All items were designed to tap social experiences that have been theoretically linked to well-being. The measure was tested with adolescents and young adults because we were most interested in developing a measure that would be useful for research with this age group. We founded this measure in some of the behaviours that are often included in observational assessments of romantic quality, such as positive and negative affect displayed by partners (e.g. Furman & Simon, 2006, Shulman, Mayes, Cohen, Swain & Leckman, 2008; Roisman, Clausell, Holland, Fortuna & Elieff, 2008), dominance and validation behaviours (Roisman et al., 2008) and partner support of disclosure and intimacy (Shulman et al., 2008). Our new measure was designed to be useful for assessing quality via an inventory of multiple *social contextual features* of romantic partner behaviours. The term "social context" broadly applies to all experiences within an interaction or ongoing interactions with one or many other humans and is used to refer to proximal contexts, such as interactions with close social partners, as well as more distal contexts, such as societal influences or an individual's culture or broader environment (Connell & Wellborn, 1991; Deci & Ryan, 2000). In developing this measure, we considered aspects of couple relationships that may be important for promoting well-being, and also those that may undermine well-being.

Relationships are complex and multidimensional in form, and the perceptions of the quality of a relationship should reflect this. Therefore, a unidimensional scale of relationship quality is not often the most useful when researchers are interested in understanding how close relationships have an impact on development, mental health and well-being. Individuals may be satisfied with a relationship but the more proximal features of this relationship might be important correlates of their well-being. For example, Fletcher, Simpson and Thomas (2000) found that items assessing well-established dimensions of perceived relationship quality, namely,

satisfaction, intimacy, trust, commitment, passion and love loaded as expected on these factors, while also loading on a second order factor of total perceived relationship quality. People who reported higher quality relationships tended to report higher quality on all six dimensions, but there was also variability. To illustrate this, a person may report a highly committed relationship that is also low on passion. Findings show that it is valuable to measure specific partner behaviours and ground the identification of dimensions of behaviours in contextual theory. Whereas measures of satisfaction may suffice for some research purposes, global measures including relationship satisfaction are more likely to tap an underlying confound such as general life satisfaction making it useful to also have dimensional measures for research and assessment purposes (Lucas & Dyrenforth, 2006).

Our primary aim was to provide a measure of multiple dimensions of relationship quality in terms of specific types of partner behaviours that feature and can often be observed in couple relationships regardless of partner age and relationship length. In addition, we wanted the measure to inform couple interventions in the future by providing information that could support specific advice to couples to promote positive relationship behaviours and interactions, and aid individual well-being. Hence, the measure was designed to focus on positive and negative partner behaviours rather than the thoughts and actions of the reporter. Finally, the identification of the partner behavioural dimensions was grounded in Self-Determination Theory (SDT; Deci & Ryan, 1991, 2000). SDT identifies six-dimensions of social contexts that are supportive or undermining of relatedness, autonomy and competence. These six dimensions of warmth, autonomy support, structure, rejection, coercion and chaos were incorporated into the new measure developed in the current studies (see Table 1).

Self-Determination Theory, Romantic Relationships and Well-Being

Keeping in mind developmental appropriateness and our desire to create a measure that would be useful in practical and applied settings, the propositions of SDT helped to identify multiple dimensions of the romantic social context that are theoretically important for individual well-being and positive development. SDT is a motivational theory that describes how personal growth, integrity, self-organisation and regulation, intrinsic motivation and well-being occur through fulfillment of the fundamental psychological needs for autonomy, competence and relatedness (Deci & Ryan, 1991, 2000). Within SDT, the psychological needs have been clearly defined. Autonomy refers to organised, integrated and volitional action or "the experience of one's actions as self-endorsed" (Ryan, La Guardia, Solky-Butzel, Chirkov, & Kim, 2005, p.146). Competence is defined as feeling effective in interactions within the surrounding environment (Deci & Ryan, 2000; White, 1959). Finally, relatedness refers to a sense of belonging, security and connectedness to others (Baumeister & Leary, 1995; Bowlby, 1969, 1973; Deci & Ryan, 2000; Ryan, et al., 2005).

Social contexts are expected to facilitate psychological need fulfillment, with specific types of experiences linked to the meeting of each of the psychological needs (LaGuardia, Ryan, Couchman & Deci, 2000). For example, if a relationship partner demonstrates more acceptance and warmth, the need for relatedness should be more satisfied. Similarly, autonomy supportive behaviour such as providing assistance with decision-making without undo influence (e.g., coercion) would satisfy the need for autonomy.

Extensive evidence supports the SDT proposition that social contexts are important for need fulfillment and well-being across multiple contexts, including facilitating academic motivation and achievement (e.g. Roeser & Lau, 2002; Skinner, Zimmer-Gembeck, & Connell, 1998; Zimmer-Gembeck, Chipuer, Hanisch, Creed, & McGregor, 2006), sporting achievements and satisfaction (e.g. Reinboth, Duda & Ntoumanis, 2004), occupational motivation and

satisfaction (e.g. Ilardi, Leone, Kasser, & Ryan, 1993), successful adoption of health behaviours (e.g., Williams et al., 2006; Williams, McGregor, Zeldman, Freedman, & Deci, 2004) and attachment and satisfaction in close relationship domains (e.g. family, friendship, romantic partner; La Guardia, Ryan, Couchman & Deci, 2000). SDT offers an empirically grounded framework to assist in identifying multiple, specific factors involved in relationship experiences and individual well-being and thus provided the foundation for the development of a new measure of dimensions of the romantic partner context.

A New Measure of Partner Behaviours as Social Context (PBSC)

Dimensions of the romantic social context based on SDT have not been clearly specified in previous literature. Nevertheless, there is literature on other important social relationships that guided the development of our new measure. Focusing on children and adolescents, Deci and Ryan (1985, 1991) originally proposed three bipolar dimensions within the parent social context of *Involvement*, or provision of warmth and affection supporting the need for relatedness; *Autonomy Support*, or allowing the young person to develop increasing choice and responsibility supporting the psychological need for autonomy; and *Structure* or being consistent and reliable, thus supporting the development of competence. However, after an extensive review of important contextual qualities of parenting behaviours towards children and adolescents, Skinner, Johnson and Snyder (2005) proposed and found that these three dimensions were more accurately conceived of as six unipolar dimensions. These six dimensions of the parent context included the three proposed by Deci and Ryan, as well as three negative dimensions of *Rejection*, *Coercion* and *Chaos* (see Table 1 for descriptions).

Our measure was designed to assess these six dimensions within the context of romantic relationships to form a new measure of romantic social context called Partner Behaviours as Social Context (PBSC). Items were developed and tested in Study 1. In Study 2, PBSC subscale

scores were validated with a range of existing measures of romantic relationship qualities and, in

a third study, the PBSC subscales scales were correlated with measures of individual well-being.

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Insert Table 1 Here

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Study 1 Method

Participants

Participants were 215 adolescents and emerging adults (aged 16 to 27, $M = 20.22$,

$SD = 2.39$) in steady romantic partner relationships of one month or longer (Range 1 to 90

months, $M = 20$ months, $SD = 19.1$). Of the original 218 participants, three were excluded due to

excessive missing data ($n = 2$) or an odd pattern of responses ($n = 1$). Participants were balanced

by sex, with almost half female (47%). Participants were a mix of nonstudents (38%) and

university students (62%), and most were dating and not living with their partner (67%) with only

3% of the sample married. The sample was primarily White/Caucasian (87%); 6.3% were of

Asian descent, 1.4% was Australian Aboriginal and/or Torres Strait Islander, and 5.3% reported a

range of other race/ethnicities.

Measures

Partner Behaviours as Social Context (PBSC). A 36 item measure of the quality of

romantic partner behaviours was developed. These 36 items were expected to tap six dimensions

of partner behaviours including warmth, autonomy support, structure, rejection, coercion and

chaos. Six items were generated for each of the six expected subscales. Response options ranged

from 1 (*not at all true*) to 6 (*very true*).

Procedure

A preliminary set of items was developed to parallel items on the Parents as Social Context Measure (Skinner et al, 2005). For example, "My parents let me know they love me," which assesses parenting warmth, was adapted to "My partner lets me know he/she loves me". To modify items and develop new items, 10 small groups of 15 psychology students facilitated by researchers discussed SDT, the dimensions of partner behaviours of interest, and brainstormed items that would tap behaviours that were warm, rejecting, structured, chaotic, autonomy supportive or coercive. Items were examined for clarity, appropriateness and overall quality, and six items were selected for each subscale (see Table 2 for original list of items).

Students in a psychology research methods course recruited one male and one female who met study criteria to complete the pen and paper survey, which took approximately 20 minutes to complete. Participants gave informed consent and data were collected in accordance with ethical guidelines.

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Study 1 Results

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Inter-item correlations of items on the PBSC were examined and an item was removed from further analyses if it did not correlate at least .30 with one other variable in the matrix. All items met this criterion, however, so no items were discarded prior to factor analysis. The Kaiser-Meyer-Olkin value was .91, exceeding the recommended value of .60 and the Bartlett's Test of Sphericity reached statistical significance, $\chi^2 = 4122.87$ ($df = 630$) $p < .01$, supporting the factorability of the correlation matrix.

Factor Analysis

Principle axis factoring (PAF) was conducted to establish the suitability of items and the factor structure. Since factors were expected to be interrelated and not orthogonal, oblique

rotation was used. The number of factors to extract was determined using the criteria of an eigenvalue > 1 and examining the scree plot. In the initial PAF, which included all items, six factors were extracted, explaining 34.57, 10.01, 5.48, 4.41, 3.74, 3.09 percent of the variance, respectively (61.30 % total). Inspecting communalities demonstrated that the percentage of variance explained in items was acceptable with only three items below 30% (17.4%, 19.7% and 26.2%) with between 40.8% - 72.3% of variance explained for each of the other 33 items. The three weakest items, "When my partner makes a promise, I don't know if he/she will keep It"; "I can usually predict how my partner will respond to a problem"; and "My partner picks on me" respectively, were flagged as potentially poorer items. The rotated solution is shown in Table 2.

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Insert Table 2 Here

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The factor structure showed good convergence with expectations. In particular, the factors showed good separation of items designed to measure warmth (factor 1), coercion (factor 2), chaos (factor 3), autonomy support (factor 4), rejection (factor 5), and structure (with loadings indicating lack of structure, factor 6). However, some cross loadings items were found and some items did not load highly on any factor. As shown in Table 2, 25 of the items loaded highly on one factor only, whereas eight items showed a pattern of cross loading on at least two factors and three items did not load highly (> .30) on any factor.

Factor 1 was labelled *Warmth*. Ignoring the cross loading items, three items loaded positively (warmth items) and one item loaded negatively (rejection item) on this factor (34.57% of the variance). Items described partners who showed affection, liking, and expressed love and enjoyment. Factor 2 was labelled *Coercion* and contained seven items with positive loadings and no cross loadings (10.01% of the variance). Six of the items were those designed to assess

coercion. One item expected to load on rejection had a low loading on this factor.

Factor 3 was labelled *Chaos* and had four items with positive loadings and no cross loadings (5.47% of the variance). These items were designed to assess chaos. Factor 4 was labelled *Autonomy Support* and four items designed to assess autonomy support loaded positively on this factor and had no cross loadings (4.41% of the variance).

Factor 5 was labelled *Rejection* and consisted of two items that were designed to assess rejection, which had no cross loadings (3.74% of the variance). Factor 6 was labelled *Lack of Structure*. Three items designed to measure structure had negative loadings on this factor, and one chaos item had a positive loading (3.08% of the variance). These loaded identified a factor that reflected lack of partner reliability, dependability and support.

In summary, the initial pool of PBSC items revealed a multi-dimensional scale that closely matched the original proposed PBSC dimensions. However, because 11 of the 36 items either had cross loadings (8 items) or did not load above .30 on any factor (3 items) some revision of items and further testing was needed in order to improve the factor solution and reduce the number of cross loading items.

Study 2 Method

Participants

The 316 participants (50% females) were in steady romantic partner relationships of one month or longer (range 1-126 months, $M = 22.3$ months, $SD = 22.9$). Participants were between 17 to 30 years of age ($M = 21.2$ years, $SD = 3.6$). Most participants were dating and not living with their partner (65%) with only 5% of the sample married. A small proportion of the sample (3.5%) reported a same sex partner who was female ($n = 6$) or male ($n = 5$). Participants were nonstudents (15%) or university students (85%), and were ethnically diverse with 78%

White/Caucasian, 8% Asian, 2% Aboriginal and/or Torres Strait Islander, and the remaining 12%

a range of other race/ethnicities.

Measures

The questionnaire completed by each participant consisted of the revised PBSC and

measures to assess convergent and divergent validity. These included widely used measures of

romantic relationship quality or partner behaviours in a romantic relationship (convergent) and a

measure of personality (divergent).

Relationship satisfaction. The Relationship Assessment Scale (RAS; Hendrick, 1988)

was used to measure general satisfaction with the romantic relationship. The RAS is a widely

used, brief measure consisting of seven items (e.g., "I love my partner"). Responses to each item

ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) and items were averaged to form the

overall score. In the current study, the inter-item correlation was Cronbach's $\alpha = .87$.

Autonomy and relatedness relationship dimensions. The Autonomy and Relatedness

Inventory (ARI; Schaefer & Burnett, 1987) was used to assess six dimensions of relationship

quality through 24 items measuring partner behaviours in marital relationships. Four subscales of

the ARI were used in the present study to assess convergent validity. These subscales were

Relatedness (e.g. "Talks over his/her problems with me"); Hostile Detachment (e.g. "Acts as

though I'm in the way"); Autonomy (e.g. "Gives me as much freedom as I want"), and Hostile

Control (e.g. "Is always trying to change me"). These subscales were expected to converge with

the PBSC subscales of Warmth, Rejection, Autonomy Support and Coercion, respectively.

Responses ranged from 1 (*not at all like*) to 5 (*very much like*) with four items on each dimension

and items were averaged to form total scores. Inter-item correlations in the current study were $\alpha =$

.65 for Relatedness, α = .69 for Hostile Detachment, α = .79 for Autonomy, and α = .80 for

Hostile Control.

Reliable alliance. One subscale of the Networks of Relationships Inventory (NRI;

Furman & Buhrmester, 1985), Reliable Alliance, was used to assess convergent validity of the

proposed PBSC dimensions of Structure and Chaos. Three items assessed Reliable Alliance (e.g.

"How sure are you that this relationship with your current partner will last no matter what?") and

responses ranged from 1 (*very little or never*) to 5 (*extremely often*). Items were averaged to form

the overall scale and the inter-item correlation in the current study was Cronbach's α = .93.

Trust. The Trust subscale of the Perceived Relationship Quality Component Inventory

(PRQC; Fletcher et al., 2000) was used to assess convergent validity of PBSC Structure and

Chaos subscales. Responses ranged from 0 (*Not at all*) to 7 (*Extremely*). Example items are

"How much do your trust your partner?" and "How dependable is your partner?" Items were

averaged to form total scores. The inter-item correlation in current study was Cronbach's α = .84.

Positive and negative quality in marriage. The Positive and Negative Quality in

Marriage Scale (PANQUIMS; Fincham & Linfield, 1997) is a brief measure of negative and

positive marital relationship quality. It was used to assess convergent validity of positive and

negative subscales of PBSC. Three items assess positive qualities (e.g. "Considering only the

positive qualities of your spouse, and ignoring the negative ones, evaluate how positive these

qualities are") and three items assess negative qualities, (e.g. "Considering only the negative

qualities of your spouse, and ignoring the positive ones, evaluate how negative these qualities

are"). Items were slightly revised to be applicable to romantic partners in general and the three

items were averaged to form total scores for each subscale. In the current study, the inter-item

correlations were Cronbach's α = .87 for positive qualities and Cronbach's α = .94 for negative

qualities.

Personality. The Big-Five Inventory (BFI; John, 1991 cited in John & Srivastava, 1999)

was used to measure personality traits and to assess divergent validity. The BFI assessed

Extraversion (8 items), described as an "energetic approach" to the social world (p.121);

Neuroticism (8 items), or negative emotionality such as feeling anxious; Conscientiousness (9

items) described as the ability to regulate behaviour and control impulses; Openness (10 items) or

the depth and breadth of an individual's experiential and mental life; and Agreeableness (9 items)

or pro-social orientations to the social world. Responses ranged from 1 (*disagree strongly*) to 5

(*agree strongly*). Negative items were reversed and summing responses formed subscale scores,

with higher scores indicating higher levels of that personality trait. Inter-item correlations in

current study were Cronbach's α = .83 for Extraversion, α = .76 for Agreeableness, α = .79 for

Conscientiousness, α = .84 for Neuroticism, and α = .71 for Openness.

Procedure

Following ethical approval, a convenience sample of university students and nonstudents

that were in the required age, sex and relationship status parameters were recruited. Participants

were recruited during university open and orientation days (days when young people can visit the

university to gather information) and via word-of-mouth snowballing of participants. All

participants received an information sheet and gave informed consent. Survey administration was

pen and paper based and took approximately 20 minutes. Participants received a prize draw entry

for two cinema tickets and some also received course credit or a chocolate bar.

Study 2 Results

Inspection of the correlation matrix showed that each item had a correlation of .30 or above with at least one other item suggesting that all items should be included in the analysis. The Kaiser-Meyer Olkin measure of sampling adequacy demonstrated that adequacy was extremely good (.94) and Bartlett's Test of Sphericity was significant showing that there were multiple significant correlations between the items ($df = 1128$; $\chi^2 = 7572.53$; $p < .01$).

Factor Analysis

Initial. Multiple factor analyses were conducted to investigate the factor structure of the PBSC inventory. Principal axis factoring (PAF) with an oblique rotation was used. Factors were extracted based on eigenvalues > 1 and review of the scree plot. An initial solution of seven factors was extracted. Inspecting communalities demonstrated that the percentage of variance accounted for in each item was acceptable (27.8% to 70.01%) with only two items below 30%. This initial PAF accounted for 59.13% of the variance. As in Study 1, the differentiation of items conformed to expectations with one factor each containing items designed to tap each of the PBSC dimensions. However, autonomy support items loaded onto two separate factors with one more closely aligned with *encouragement* of autonomy and the other including items that demonstrated *respect* of autonomy. Overall, 30 items loaded highly on only one of the seven factors. Thirteen items showed cross loadings across at most 2 factors, and all loadings were under .50. Another five items did not load above .30 on any factor.

Factor analysis of the remaining 30 items. To improve the factor structure, cross loading items and items with no high loadings were removed prior to conducting a second factor analysis. Six factors were extracted and rotated. Inspecting communalities of the solution demonstrated that the percentage of variance explained in each item ranged from 25.5% to 67%

with only two items below 30%. This analysis provided a satisfactory 6-factor solution

accounting for 61.22% of the variance, and the factors generally conformed to the expected

dimensions (see Table 3).

The five items loading highly on factor 1 tapped *Autonomy Support* (eigenvalue = 10.4,

variance explained 34.9%; see Table 3). The five items loadings on factor 2 tapped *Warmth*

(eigenvalue = 2.9, variance explained 9.7%). Five items designed to measure structure loaded on

the third factor and this was labelled *Structure* (eigenvalue = 1.5, variance explained 4.9%).

While one item had a relatively small loading (.3), it was retained as it enhanced reliability of the

scale and was consistent with theoretical conceptualisation of structure. Five items, which were

designed to assess chaos, loaded on the fourth factor and this was labelled *Chaos* (eigenvalue =

1.4, variance explained 4.5%). One item cross loaded with factor 3, however was retained on

factor 4 as removing it reduced the reliability of the chaos subscale (from .80 to .75). Factor 5,

Rejection, had the anticipated five items with high loadings (eigenvalue = 1.2, variance explained

3.9%). Finally, five items designed to assess coercive behaviours loaded on the sixth factor and

this was labelled *Coercion* (eigenvalue = 1.0, variance explained 3.4%).

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Insert Table 3 Here

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Internal Consistency

Satisfactory inter-item correlations for each of the six subscales were found with

Cronbach's α ranging from .80 to .83 (see Table 4). Satisfactory inter-item correlations were also

found when examined among males only and among females only. Subscale scores were

calculated by averaging the five items that loaded highly on each of the six factors. As would be

expected, there were some intercorrelations between subscales (see Table 4). In addition, a high

inter-item correlation was found among the 15 positive items and among the 15 negative items,

Cronbach's α = .90 for each. Hence, averaging the scores for Warmth, Autonomy Support and

Structure formed a positive partner behaviours score; while averaging scores for Rejection,

Coercion, and Chaos formed a negative partner behaviours score. In addition, a total PBSC score

was calculated by reversing negative subscale scores and averaging the six subscale scores

(Cronbach's α = .93). Correlations between these global measures also are shown in Table 4.

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Insert Table 4 Here

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Distributions of Scores

Similar to other measures of relationship quality, the PBSC distribution had weak

negative skew. The ratio of skew to standard error of skew was -10.43 for Warmth, 4.47 for

Rejection, -9.03 for Autonomy, 3.51 for Coercion, -6.98 for Structure, 4.37 for Chaos, -9.09 for

positive PBSC, 4.32 for negative PBSC and -4.92 for the total PBSC. Skew was comparable to

existing relationship quality measures, namely: ARI subscale of Relatedness (-7.67); ARI

subscale of Hostile Detachment (10.5); ARI subscale of Autonomy (-5.25); ARI subscale of

Hostile Control (8.87); NRI subscale of Reliable Alliance (-3.31); PRQC Trust subscale (-10.91);

PANQUIMS positive (-11.68) and negative (6.18) marital quality scales and RAS (relationship

satisfaction) scale (-10.4). While these existing measures of relationship quality tended to have

less skew on positive dimensions compared to the PBSC, the PBSC had comparatively less skew

on negative dimensions of partner behaviours and the total PBSC score.

Validity

The PBSC subscales and global scores were expected to converge with widely used, existing measures of relationship quality. To examine this, Pearson's correlations were calculated (see Table 5). Each of the PBSC subscales did converge with multiple existing relationship quality measures. Warmth was positively associated with the ARI subscale of Relatedness. Rejection was positively associated with the ARI subscale of Hostile Detachment. Autonomy Support was positively associated with the ARI subscale of Autonomy, while Coercion was positively associated the ARI subscale of Hostile Control. As there were no known existing measures of Structure and Chaos in romantic relationships, similar constructs were sought in existing relationship quality measures and two positively valanced measures were chosen: Reliable Alliance (NRI subscale) and Trust (PRQC subscale). Structure demonstrated positive associations with both constructs while Chaos was negatively associated with these. The negative PBSC subscale positively correlated with the PANQUIMS general measure of negative relationship quality and the positive PBSC subscale positively correlated with PANQUIMS positive relationship quality. The PBSC total score was strongly associated with all assessments of relationship quality in expected directions.

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Insert Table 5 Here

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To examine divergent validity of the PBSC subscales, Pearson's correlations with the five personality traits were calculated and are shown in Table 6. The PBSC subscales were only intermittently and weakly associated with Extraversion, and there were few associations between the PBSC subscales and the personality trait of Openness. In particular, the negative PBSC dimensions and the total PBSC scores were not associated with Extraversion, and there were only two small correlations between PBSC subscales and Openness.

All PBSC subscales were correlated with Neuroticism, Agreeableness and Conscientiousness (see Table 6). Correlations between PBSC subscales and Neuroticism were modest. Correlations between PBSC subscales and Conscientiousness and between PBSC and Agreeableness were slightly larger.

Overall, results demonstrate that positively valenced aspects of personality (Agreeableness and Conscientiousness) and the negatively valenced personality trait of Neuroticism shared some variance with both positive and negative dimensions of perceived partner behaviour (in expected directions). Nevertheless, non-significant correlations between the PBSC subscales and the personality dimensions of Extraversion and Openness supported divergence between PBSC scales and these dimensions of personality.

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Insert Table 6 Here

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Study 3

The PBSC was expected to be associated with psychological well-being. In particular, the positive dimensions of warmth, autonomy support and structure were expected to be positively associated with well-being, whereas rejecting, coercive and chaotic partner behaviours were expected to be negatively associated with well-being. The aim of Study 3 was to examine these expected associations, including testing associations of PBSC dimensions with two different aspects of aspects of well-being, namely general psychological well-being and life fulfillment.

Study 3 Method

Participants

Participants were 157 individuals between 17 and 30 years of age ($M = 20.9$, $SD = 3.3$). All participants were in relationships of one month or longer (range 1-114 months, $M = 18$

months, $SD = 17.7$), with 18% nonstudents and 82% university students. Most participants were dating and not living with partners (59%); 4% were married. A small proportion of the sample (3%) reported a same sex partner. Participants were of diverse racial/ethnic background with 76% White/Caucasian, 13% Asian, 2% Aboriginal and/or Torres Strait Islander, and the remaining 9% a range of other race/ethnicities.

Measures

In addition to completing the PBSC, participants completed measures of well-being. Two forms of well-being were assessed including general psychological well-being (hedonic well-being) and life fulfillment (eudaimonic well-being).

General psychological well-being (hedonic well-being). Dupuy's (1984) General Well-Being Schedule (GWB) was used to measure hedonic well-being. Hedonic well-being is defined as optimal psychological health in terms of positive mood and functioning in conjunction with a lack of psychological and physical pain or suffering (Ryan & Deci, 2001). The GWB is an 18-item self-report measure of current feelings of general psychological well-being. The GWB includes subscales that assess anxiety, depressed mood, positive well-being, self-control, general health and vitality and the composite GWB score. Participants are asked to answer each question in relation to the "past month" and check one of the responses provided. A sample question is "How happy, satisfied, or pleased have you been with your personal life in the past month?" with possible responses ranging from "extremely happy" to "very dissatisfied". As some items are scored on 6-point scales and some items on 10-point scales, raw scores were converted to standardised scores, subscale scores were formed, and anxiety and depression subscales were reversed before averaging scores on the six subscales to form a total general well-being score. Higher total scores were indicative of higher levels of general well-being. The inter-item correlation in the present study was $\alpha = .92$.

Life fulfillment (eudaimonic well-being). Life fulfillment is defined as the attainment of personal life meaning, self-realisation and inner strength, balance and connection with others during challenging times. Ryan and Deci (2001) refer to this construct as eudaimonic well-being. Items from Howden's Spirituality Assessment Scale (Howden, 1992) were used to assess life fulfillment. As described below, Howden's assessment of spirituality overlaps with eudaimonic well-being in terms of measuring optimal eudaimonic functioning, including fulfillment in life, balance and connection to others. Items with a mystical or religious connotation were not used. Thus, an abbreviated 10-item form of the original 28-item scale was used. The abbreviated measure consisted of an assessment of three subscales. The first subscale was purpose and meaning in life (4 items), defined as having a sense of worth, hope and or reason for living/existence. A sample item includes, "There is fulfillment in my life". The second subscale assessed perception of having inner strength and resources (3 items). This was defined as discovering wholeness, identity and a sense of empowerment (e.g. "I rely on an inner strength in hard times"). The third subscale was unifying interconnectedness (3 items) and defined as the feeling of connection to others and all of life (e.g. "I have a general sense of belonging"). Subscales were averaged to form the composite life fulfillment measure. The author reports high internal consistency of the overall scale ($\alpha = .92$). Cronbach's α was similar in the current study, $\alpha = .88$.

Procedure

Participants were recruited during university open and orientation days, via word-of-mouth snowballing and the psychology student research pool. Participants received an information sheet and gave informed consent in accordance with ethical approval. Survey administration was pen and paper based, taking approximately 30 minutes. All participants

received a prize draw entry for two cinema tickets and some also received course credit or a chocolate bar.

Correlations between PBSC, General Well-being and Life Fulfillment

Intercorrelations were calculated between PBSC subscales, general well-being, and life fulfillment (see Table 7). PBSC subscales were positively associated with all aspects of general well-being and life fulfillment, however there was also variability across subscales of behaviours and well-being. Negative dimensions of partner behaviour (rejection, chaos, and coercion) were most strongly associated with undermining each aspect of general well-being, whereas it was the positive dimensions of partner behaviours (warmth, structure, and autonomy support) that were most strongly associated with the measures of life fulfillment. The PBSC dimension of warmth had the weakest correlations with general well-being (r's = -.01 to .24), while coercion had the strongest associations (r's = -.17 to -.51). Autonomy Support was the strongest correlate of life fulfillment and its components (r's = .37 to .51), with positive PBSC dimensions particularly important for these aspects of the fully functioning person (r's = .35 to .46). Also of note, PBSC dimensions were more modestly associated with general well-being dimensions of general health and vitality (r's = -.01 to .26) when compared to correlations with depressive and anxious symptomatology (r's > .5). This difference was particularly pronounced for negative PBSC dimensions.

Insert Table 7 Here

General Discussion

Our primary aim in the current studies was to develop and evaluate a new self-report measure of observable romantic partner behaviours useful for assessment of relationship quality for all ages, but with a focus on relevance for adolescent and emerging adult romantic relationships. The Partner Behaviours as Social Context (PBSC) inventory was the result and two studies showed that the 30 item PBSC is a reliable and valid assessment of the quality of romantic partner behaviours. Grounded in SDT, the PBSC was found to have six subscales, as expected. Each subscale is assessed with five items. Three subscales are positive (Warmth, Autonomy Support, and Structure) and three are negative (Rejection, Coercion, and Chaos) dimensions of the romantic relationship context.

The development of the PBSC addresses a number of limitations with earlier measures of relationship functioning. First, the PBSC is theoretically grounded in the six elements of the social context that have been suggested as most important for psychological well-being in SDT (Deci & Ryan, 1991). In addition, the PBSC is 1) appropriate for early, emerging relationships 2) likely to be appropriate for younger and older age groups; 3) multidimensional, but also able to provide more global assessments of relationship quality; 4) suitable for measuring optimal and maltreating partner behaviours through assessing both positive and negative aspects of the romantic social context; 5) relatively short in length (30 items), and 6) novel in terms of measuring a relatively overlooked area of the romantic context, namely competence support by the partner which was recently identified as an significant gap in the SDT literature on close relationships (LaGuardia & Patrick, 2008). The development of the PBSC provides a self-report measure that can capture some of the behaviours that are typically included in observational assessment of romantic relationships (Furman & Simon, 2006; Roisman et al., 2008; Shulman et

al., 2008). In addition, the PBSC is theoretically grounded in the six elements of the social

context that have been suggested as most important for psychological well-being in SDT (Deci &

Ryan, 1985, 1991), and a particular strength of the PBSC is that it measures specific partner

behaviours (e.g. "My partner often hugs me") as opposed to assessing non-specific aspects of a

relationship, e.g. ("I am satisfied with my relationship") thus allowing the researcher or clinician

to understand the role of particular aspects of behaviour in healthy or maladaptive relationship

functioning.

   A diverse group of adolescents and emerging adults in romantic relationships were

sampled with almost equal numbers of men and women, a good distribution of ages (within the

limits of 30 years and under), a mix of university students and nonstudents, and a diverse

racial/ethnic background similar to the region where the study was conducted. However, the

measure should be tested with more diverse groups, and with both younger and older individuals

in couple relationships. Results demonstrated that the emerging adults generally reported their

relationship as positive, suggesting some positive bias in accordance with previous findings that

people generally report good quality romantic relationships (Fletcher et al., 2000; Spanier, 1976).

However, ceiling and floor effects were not apparent in the subscales and the overall PBSC score

more closely approximated a normal distribution.

   The PBSC scales were found to be reliable and valid through item analysis; exploratory

factor analysis, reliability analysis, and significant correlations with other measures of

relationship satisfaction and quality in expected directions. PBSC dimensions were moderately

associated with the brief assessment of relationship satisfaction (RAS) suggesting it may be

useful to supplement the PBSC with a short measure of satisfaction in both research and clinical

settings.

Moderate correlations were found between all PBSC subscales. This suggests some overlap between PBSC dimensions. Yet, we expect that it is useful to assess separate PBSC subscales in order to more clearly delineate behaviours that undermine healthy relationship functioning and individual well-being, and to provide information about specific targets for intervention. An important finding is that the three positive scales were only moderately negatively correlated with the three negative scales showing that negative and positive behaviours are largely distinct dimensions, in accordance with previous investigations of relationship quality (e.g. Fincham & Linfield, 1997; Skinner et al., 2005). This means that people can be positive towards their partner, (e.g. demonstrating warmth and affection), while also behaving in problematic ways, (e.g. by being coercive or trying to control their partner). An important contribution of the PBSC is the concurrent assessment of both healthy and maladaptive elements of relationship functioning, as opposed to an overemphasis on either element to the exclusion of the other.

Emerging adults had better general psychological well-being and reported more life fulfillment when they reported that their partner displayed warmer, more structured and autonomy supportive behaviours, and when they were less rejecting, chaotic and coercive. Hence, late adolescents and emerging adults who report better general psychological well-being and life fulfillment have partners who, for example, behave in ways that suggest they will provide emotional support, who tend to listen and support individual choice, and who are relatively more predictable and dependable. On the other hand, lower life fulfillment and, especially, reduced general psychological well-being, are reported by individuals who have partners who behave in ways that are more critical, do not always do what they say, show other signs of being undependable, and/or are more difficult to predict.

There was also some difference in correlations between the PBSC scales and aspects of well-being. The largest difference was when the association of partner warmth and self-control (a subscale of general psychological well-being) was compared to the association between partner coercion and self control; partner warmth was not significantly related to control, but there was a strong negative correlation between coercion and self control. Previous studies have focused on associations between one particular aspect of romantic relationship quality and psychological well-being. These romantic qualities have included attachment (e.g. LaGuardia et al., 2000), emotional reliance (e.g. Ryan et al., 2005), and need fulfillment within the romantic relationship (e.g. Patrick et al., 2007). The current study shows that a number of dimensions of positive and negative partner behaviours and romantic experiences are important to consider, particularly because each shows somewhat different associations with a range of general well-being and life fulfillment subscales.

To conclude, the PBSC is a reliable and valid six-dimensional measure of relationship quality, which can also provide composite scores for positive and negative partner behaviours in romantic relationships. Assessment using the PBSC will allow identification of specific romantic behaviours that are warm or rejecting, autonomy supportive or coercive, and structured or chaotic. Such dimensions of relationships will assist with future research on how and why relationships may promote or undermine individual well-being, life satisfaction, work satisfaction or other markers of happiness, fulfillment and success. In the future, the PBSC could be used to assess relationships in clinical settings and to guide practical services to help individuals and couples engage in behaviours that build more satisfying relationships.

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Table 1

Six Core Dimensions of Partner Behaviours in a Romantic Relationship: Partner Behaviours as Social Context (PBSC) Scale

_____

PBSC Dimension	Description
Warmth	Expresses affection, love, nurturance and enjoyment
	Items assessed a partner's provision of affection and loving behaviours
Autonomy Support	Encourages genuine opinions, supports freedom of expression
	Items assessed encouraging a partner in decision-making, life choices and personal goals, and appreciating a partner's choices
Structure	Consistent responding, predictability, and unambiguous behaviour
	Items assessed consistent, reliable behaviour that facilitates a sense of predictability in the relationship
Rejection	Aversion, hostility and ignoring
	Items assessed hostile, detached and cold behaviours
Coercion	Over controlling, intrusive, demanding and high pressure
	Items assessed controlling and demanding partner behaviours
Chaos	Inconsistent, erratic, undependable actions
	Items assessed inconsistent, unreliable and unpredictable behaviours

Table 2

Study 1 Factor Loadings for the 36 Original Items on the Partner Behaviours as Social Context Scale (PBSC) (N = 215)

				Factor		
				4.		
	1.	2.	3.	Autonomy	5.	6.
Items	Warmth	Coercion	Chaos	Support	Rejection	Structure
My partner shows me affection	.61					
My partner lets me know he/she loves me	.61					
My partner enjoys being with me	.52					
Sometimes I wonder if my partner likes me	-.50					
My partner is very demanding in our relationship		.76				
My partner thinks there is only one right way to do things – their way		.75				
My partner always wants to get his/her way in our relationship		.74				
My partner tries to control me		.72				
My partner can be pushy with his/her opinions		.71				
My partner makes me feel like I can't disagree with him/her		.65				
My partner picks on me		.31				
I never know what my partner will do next			.81			
My partner is unpredictable			.79			
My partner's behaviour doesn't always match what he/she says			.45			
My partner always seems to be changing his/her mind			.34			
My partner encourages me to do the things I think are important				.63		
My partner doesn't ignore my opinion				.49		
My partner encourages me to decide things for myself				.46		
My partner appreciates my opinion				.44		
Sometimes when I'm upset my partner does not seem to care					-.62	
When I make plans for us, my partner does not seem interested					-.62	
I know my partner would be there for me if I needed him or her						-.82
I can rely on my partner						-.60
I don't know if I can depend on my partner in times of need						.55
My partner is always there to support me						-.47

	Factor					
Items	1. Warmth	2. Coercion	3. Chaos	4. Autonomy Support	5. Rejection	6. Structure
Cross loading items						
My partner can make me feel like I'm not wanted	-.43				-.32	
Sometimes, my partner does not seem to want to spend time with me.	-.32		.37		-.35	
My partner supports my interests		-.33		.43		
My partner respects my choices		-.38		.40		
My partner respects my space and privacy				.35		
My partner makes me feel I'm important	.38			.36	.40	
My partner shares his/her thoughts and feelings with me	.35				.37	
My partner keeps his/her promises					.35	-.33
Items with no loadings above .30						
I can usually predict how my partner will respond to a problem						
My partner listens to me						
When my partner makes a promise, I don't know if he/she will keep it						
Eigenvalue	12.45	3.60	1.97	1.59	1.35	1.11
% Variance explained	34.57	10.01	5.47	4.41	3.74	3.08

Note: Loadings between -.30 and .30 are suppressed.

Table 3

Study 2 Factor Loadings for Items on the Final 30 Item Partner Behaviours as Social Context Scale (PBSC) (N = 316)

	Factor					
Items	1. Autonomy Support	2. Warmth	3. Structure	4. Chaos	5. Rejection	6. Coercion
My partner seeks my opinion and values it	.70					
My partner supports my interests	.52					
My partner listens to me	.51					
My partner encourages me to do the things I think are important	.50					
My partner encourages me to decide things for myself	.45					
My partner often hugs me		.73				
My partner shows me affection		.73				
My partner lets me know he/she loves me		.58				
My partner is there for me if I need him/her		.54				
My partner shares his/her thoughts and feelings with me		.36				
My partner follows through on things			.81			
If my partner says something, he/she does it			.69			
My partner is reliable			.45			
My partner is dependable			.41			
My partner is honest with me			.30			
My partner is unpredictable				.85		
I never know what my partner will do next				.82		
My partner is not someone who I can always rely on				.37		
My partner always seems to be changing his/her mind				.34		
My partner says one thing, but does another			-.32	.33		
My partner can make me feel like I am not wanted					.66	
Sometimes my partner acts like she/he doesn't like me					.64	
My partner can say mean things to me now and then					.63	
Sometimes when I am upset, my partner does not seem to care					.56	
My partner criticizes me at times					.52	

Items	1. Autonomy Support	2. Warmth	3. Structure	4. Chaos	5. Rejection	6. Coercion
			Factor			
My partner tries to control me						.61
My partner is very demanding in our relationship						.61
My partner often wants to know where I'm going and with whom						.51
My partner can be pushy with his/her opinions						.36
My partner always wants to get his/her way in our relationship						.36
Eigenvalues	10.46	2.91	1.46	1.35	1.17	1.02
% Variance explained	34.88	9.70	4.85	4.51	3.89	3.39

Note: Loadings between -.30 and .30 are suppressed.

Table 4

Study 2 Intercorrelations, Reliability and Descriptive Statistics for the Final 30 Item PBSC

| | | | | | | | | | Cronbach's α | | | | |
| | | | | | | | | | All (N = 316) | Males (n = 157) | Females (n = 159) | Observed Range | M (SD) |
PBSC Subscale	1.	2.	3.	4.	5.	6.	7.	8.					
1. Warmth	--								.81	.81	.81	1.8-6.0	5.24 (.77)
2. Autonomy Support	.59	--							.81	.80	.80	1.8-6.0	5.09 (.71)
3. Structure	.57	.62	--						.81	.78	.84	2.0-6.0	4.86 (.77)
4. Rejection	-.38	-.53	-.41	--					.83	.79	.83	1.0-5.6	2.52 (1.06)
5. Coercion	-.27	-.51	-.33	.68	--				.80	.75	.81	1.0-5.6	2.69 (1.07)
6. Chaos	-.42	-.54	-.54	.60	.56	--			.80	.79	.80	1.0-5.8	2.45 (1.05)
7. Positive PBSC	.85	.85	.86	-.51	-.43	-.58	--		.90	.89	.90	2.0-6.0	5.06 (.64)
8. Negative PBSC	-.41	-.61	-.50	.88	.87	.83	-.59	--	.90	.88	.90	1.0-5.5	2.55 (.91)
9. Total PBSC	.66	.80	.72	-.81	-.77	-.82	.85	-.93	.93	.92	.93	2.3-6.0	4.76 (.70)

Notes: All correlations were significant at *p* < .01. Response options on PBSC items ranged from 1 (*not at all true*) to 6 (*very true*).

Table 5

Study 2 Correlations among Scales on Partner Behaviours as Social Context (PBSC) and Convergent Validity Measures (N = 313)

					Relationship Quality Measures				
PBSC Subscale	Autonomy	Relatedness	Reliable Alliance	Trust	Hostile Detachment	Hostile Control	PANQUIMS Pos	PANQUIMS Neg	Relationship Satisfaction
Warmth	.34	.63	.39	.55	-.41	-.40	.36	-.38	.52
Autonomy Support	.54	.61	.45	.59	-.51	-.58	.45	-.48	.56
Structure	.32	.54	.49	.74	-.47	-.42	.40	-.46	.60
Rejection	-.43	-.29	-.36	-.40	.61	.68	-.34	.48	-.44
Coercion	-.58	-.24	-.38	-.39	.52	.74	-.39	.51	-.50
Chaos	-.31	-.35	-.43	-.55	.58	.57	-.46	.47	-.55
Positive PBSC	.46	.69	.52	.74	-.54	-.55	.47	-.51	.66
Negative PBSC	-.51	-.34	-.45	-.52	.66	.77	-.46	.56	-.58
Total PBSC	.55	.54	.54	.68	-.68	-.76	.52	-.61	.68

Note: All correlations were significant at *p* < .01.

Table 6

Study 2 Correlations among Scales on Partner Behaviours as Social Context (PBSC) and Personality Traits (N = 313)

PBSC Scale (Element)	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Warmth	.12*	.25**	.23**	-.20**	.13*
Autonomy Support	.13*	.39**	.30**	-.16**	.07
Structure	.09	.25**	.21**	-.15**	.09
Rejection	.01	-.35**	-.30**	.13*	.03
Coercion	-.05	-.35**	-.31**	.17**	-.02
Chaos	-.06	-.33**	-.28**	.15**	-.00
Positive PBSC	.13*	.35**	.29**	-.20**	.12*
Negative PBSC	-.04	-.40**	-.34**	.17**	.00
Total PBSC	.09	.42**	.36**	-.20**	.05

*p < .05. **p < .01.

Table 7

Study 3 Correlations of Partner Behaviours as Social Context (PBSC) Subscales with Measures of General Psychological Well-being (Hedonic) and Life Fulfillment (Eudaimonic) Well-being (N = 157)

PBSC Dimension	Total General Well-Being	GWB: Positive Well-being	GWB: Non Anxious	GWB: Self Control	GWB: Non Depressed	GWB: Vitality	GWB: General Health	Total Life Fulfillment	LF: Connection to Life	LF: Inner Strength	LF: Meaning in Life
Warmth	.20*	.24**	.15	.14	.26**	-.01	.15	.24**	.23**	.18*	.24**
Structure	.29**	.29**	.27**	.20*	.31**	.10	.17*	.39**	.35**	.28**	.39**
Autonomy Support	.36**	.37**	.33**	.27**	.41**	.22**	.11	.50**	.37**	.41**	.51**
Rejection	-.40**	-.40**	-.31**	-.34**	-.48**	-.18*	-.19*	-.35**	-.30**	-.27*	-.35**
Chaos	-.38**	-.32**	-.33**	-.29**	-.41**	-.18*	-.26**	-.29**	-.29**	-.20*	-.26**
Coercion	-.46**	-.46**	-.43**	-.43**	-.51**	-.18*	-.17*	-.30**	-.19*	-.25**	-.33**
Pos PBSC	.34**	.36**	.30**	.25**	.40**	.13	.17*	.46**	.38**	.35**	.46**
Neg PBSC	-.48**	-.46**	-.42**	-.41**	-.54**	-.20*	-.24**	-.36**	-.29**	-.28**	-.37**
Total PBSC	.47**	.47**	.41**	.38**	.54**	.19*	.23**	.44**	.36**	.34**	.45**

Notes: GWB = General Well-Being. LF = Life Fulfillment. Positive well-being, nonanxious, self control, nondepressed, vitality and general health are subscales of total general well-being. Connection to life, inner strength and meaning in life are subscales of total life fulfillment.

* p < .05. ** p < .01.