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Predicting Participation in Group Parenting Education in an Australian sample:  
The Role of Attitudes, Norms, and Control Factors

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### Abstract

We examined the theory of planned behavior (TPB) in predicting intentions to participate in group parenting education. One hundred and seventy-six parents (138 mothers and 38 fathers) with a child under 12 years completed TPB items assessing attitude, subjective norms, perceived behavioral control (PBC), and two additional social influence variables (self-identity and group norm). Regression analyses supported the TPB predictors of participation intentions with self-identity and group norm also significantly predicting intentions. These findings offer preliminary support for the TPB, along with additional sources of social influence, as a useful predictive model of participation in parenting education.

Keywords: parenting programs, group parenting education, participation, theory of planned behavior

Predicting Participation in Group Parenting Education in an Australian sample:  
The Role of Attitudes, Norms, and Control Factors

Over the past decade, there has been increasing attention given to the value of supporting parents in their child-rearing role. Research indicating that disruptive behavior disorders and emotional problems are increasing in young children has highlighted the critical importance of providing parenting education to support parents (Sanders & Markie-Dadds, 1996). Ample evidence has shown that teaching parents specific strategies to support their children's development can be effective in decreasing problem behavior (Kaiser & Hancock, 2003; Sanders et al., 1999). Consequently, there is growing recognition of parenting education for its potential to address issues such as child abuse, adolescent social problems, and child behavioral problems (Goddard et al., 2004) yet poor program participation rates continue to diminish the promise of parenting education (Sanders & Ralph, 2004). A survey conducted in Australia ( $N = 1,218$ ) found that only 10% of parents had participated in any form of formal parent education (Sanders et al., 1999). Despite these findings, there is limited research investigating the psychological factors that influence participation in parenting education.

*Parenting Education*

Parenting education is a generic term for a diverse range of learning opportunities for parents (Einzig, 1999). Terms such as parent training, parenting programs or groups and parent support are often used interchangeably with parent education. Barlow et al. (2005) define parenting programs as “focused short-term interventions, which are typically aimed at helping parents to deal with their children's emotional and behavioral development” (p. 34). Parenting programs include, among others, Systematic Training for Effective Parents (Dinkmeyer & McKay, 1976), Parent Effectiveness Training (Gordon, 1975) and the Triple P-Positive Parenting Program developed in Australia (e.g., Sanders & Markie-Dadds, 1996). The general aim of these programs is to assist parents to develop self-awareness and self-confidence and

improve their capacity to support and nurture their children (Smith & Pugh, 1996). Delivery of parenting programs in a group format is generally preferred by parents and instructors (Einzig, 1999; Goddard et al., 2004) as it has been found to be more cost effective than individual parent training, potentially meeting the needs of large numbers of parents (Barlow et al., 2005).

Studies have also found that group-based parent programs are more successful in the long term in improving the behavior of children aged 3 to 10 years (Barlow & Stewart-Brown, 2000) compared with individual programs (e.g., Barlow et al., 2005).

Limited research has been conducted on parents' participation behavior in parenting education (e.g., Johnson et al., 2003). In these studies, several factors have been found to influence participation, including socio-demographic variables, particularly parents' level of education and previous parenting education behavior (Haggerty et al., 2002; Johnson et al., 2003; Spoth & Redmond, 2000), parents' perceived need for the intervention (Perrino et al., 2001), perceived barriers to participation, such as time demands, scheduling conflicts, and availability of child care (Perrino et al., 2001; Spoth et al., 1997), parental intentions to participate (Perrino et al., 2001; Spoth et al., 1997) and family factors, such as communication style (Perrino et al., 2001).

Two factors in particular, socio-demographics and intentions, have received considerable attention in participation studies (e.g., Haggerty et al., 2002; Spoth & Redmond, 1995).

Intention has frequently been used in research as an appropriate measure of program uptake and has served as a strong predictor for explaining participation behavior (Perrino et al., 2001; Spoth et al., 1997). For instance, in a study of 1,121 families' involvement in a parenting skills intervention, Spoth et al. (1997) found that inclination to participate (i.e., intention) in the intervention predicted subsequent enrollment. Similarly, in an example of 451 mothers of preschoolers, Dumas et al. (2007) found that intent to enroll was the best predictor of enrollment in a program promoting effective parenting. A number of studies suggest the

importance of socio-demographic factors in decisions to participate in parenting education (e.g., Perrino et al., 2001; Spoth & Redmond, 2000). For example, Johnson et al. (2003) found a relationship between deterrents to parenting education participation and socio-demographic variables including gender, education level, employment status, and income level. Lower levels of family income and education level, as well as employment status (i.e., unemployed), were associated with higher perceived importance of deterrence factors. Other studies, however, have produced inconclusive findings (e.g., Frankel & Simmons, 1992).

Some researchers have proposed systematic models of parental participation. Spoth and Redmond's (1995) model of parental participation includes health belief constructs from the Health Belief Model (HBM; Becker, 1974), a value-expectancy model of behavioral prediction that is focused upon protective health actions. Spoth and Redmond (1995) consider engaging in parenting education to be a protective health behavior as it reflects parents' motivation to take protective action of their children's mental health. The HBM draws from two domains of health behavior: threat perception and behavioral evaluation. Threat perception involves two key beliefs: the susceptibility to and the consequences (severity) of a health problem. Behavioral evaluation, also a dual belief system, refers to the benefits of performing health behaviors and the barriers which impede behavior performance. In addition, Spoth and Redmond included family context factors (e.g., previous parenting education behavior and educational attainment) in their model. Findings across a number of studies have supported the model's ability to predict intentions to participate in parenting interventions (Spoth & Redmond, 1995, 2000; Spoth et al., 1997). Of the HBM predictors, benefits and barriers have been shown to have a strong association with inclination to enroll in parenting education (e.g., Spoth & Redmond, 1995).

McCurdy and Daro (2001) developed an ecological and family systems framework theory of parental involvement that recognizes four factors at different levels of influence

which are proposed to impact upon parental involvement in family support programs. These four domains are: a) individual characteristics (e.g., previous parenting education behavior, readiness to change); b) provider attributes (e.g., cultural competence, service delivery style), c) program characteristics (e.g., timing of enrollment); and d) neighborhood context (e.g., social capital). At the individual level, the model also incorporates three constructs based on Fishbein and Ajzen's (1975) Theory of Reasoned Action: attitudes towards the service, cost-benefit perceptions, and subjective norms, which refers to one's perception of pressure from important others. McCurdy et al. (2006) recently found support for the framework by investigating maternal intentions to engage in home visitation services but recognized that future research should utilize a more parsimonious model to examine participation behaviors. One such parsimonious model which may prove useful in the current context given its inclusion of factors (e.g., attitudes/benefits, norms, and barriers) recognized in previous studies (e.g., McCurdy & Daro, 2001; Spoth & Redmond, 1995) as important in individual decision-making about participation in parenting education is the Theory of Planned Behavior (Ajzen, 1991).

#### *The Theory of Planned Behavior*

The Theory of Planned Behavior (TPB; Ajzen, 1991) is an extension of the widely applied Theory of Reasoned Action (Fishbein & Ajzen, 1975) that aims to predict and explain intentions and behavior. According to the TPB, behavioral intention, what a person plans or intends to do, is the most immediate determinant of their behavior. There are three determinants of intention: attitude (the person's evaluation of the behavior as favorable or unfavorable), subjective norm (an individual's perceptions of social pressure from important others to engage or not engage in the behavior), and perceived behavioral control (PBC; the level of control an individual believes he or she has over internal and external factors inhibiting performance, proposed to have an impact on both intentions and behavior).

The TPB is able to explain a significant proportion of variance in intentions and behavior

across a broad range of domains. In a meta-analysis of 185 TPB studies, Armitage and Conner (2001a) found strong support for the TPB, with the model explaining 39% of the variance in intentions and 27% of the variance in behavior. Although the TPB is well validated, a significant portion of the variance remains unexplained in most studies and has resulted in examinations of how to improve the predictive ability of the model. The TPB is, in principle, open to the inclusion of additional predictors as long as there is a strong theoretical justification for their inclusion and that they capture a significant portion of unique variance in intentions or behavior (Ajzen, 1991).

Furthermore, stronger support has been found for some of the TPB links than others. For example, studies have generally found subjective norm to have less predictive power than attitude for most behaviors (e.g., Ajzen, 1991), leading some researchers to argue the subjective norm-intentions relationship as the weakest link in the TPB (Terry & Hogg, 1996; White et al., 1994). In addition to refining the TPB constructs, researchers have suggested the inclusion of additional predictors within the model to improve its predictive validity. Given that previous research suggests that social influence factors may play an important part in parents' participation intentions (McCurdy et al., 2006), the present study included an examination of additional social influence variables (self-identity and group norm) in testing the utility of the TPB to predict parents' intentions to participate in parenting education.

*Self-identity.* A number of studies have examined the role of self-identity in the TPB (e.g., Sparks & Shepherd, 1992; Terry et al., 1999). Conner and McMillan (1999) define self-identity as “the salient part of an actor's self which relates to a particular behavior” (p. 200).

Self-identity is considered to be an additional source of social influence that is independent of subjective norm whereby self-identity reflects the extent to which an individual perceives him- or herself as performing a particular social role (Armitage & Conner, 2001b). The concept of self-identity is based on identity theory, which suggests that the self is not a distinct



psychological entity but a social construct (Stryker, 1968, 1987). According to Stryker (1980), the self is conceived as a collection of identities that reflects the roles a person occupies in the social structure. From an identity theory perspective, people are motivated to engage in identity-related behaviors which serve to validate important components of the self-concept.

Self-identity has been shown to add to the prediction of behavioral intentions beyond the components of the TPB across a variety of behaviors (Armitage & Conner, 2001b; Sparks & Guthrie, 1998; Sparks & Shepherd, 1992). In the context of this study, the decision to participate in parenting education may be tied to a parent's self-identity, reflecting his or her values and motivations. Thus, the present study aims to explore the addition of self-identity within the TPB model in the prediction of parents' intentions to participate in parenting education. It is expected that self-identity will have an additive effect on intentions over and above the TPB variables, an expectation consistent with Ajzen's (1991) statement that the TPB is, in principle, open to the inclusion of additional predictors as long as there is a strong theoretical justification for their inclusion and that they capture a significant portion of unique variance in intentions or behavior. It is thus expected that the more an individual perceives him- or herself as a parent who considers participation in parenting education as important to their self-concept, the more likely it is that he or she will intend to participate in parenting education.

*Group norms.* Another social influence factor found to add to the predictive power of the TPB is group norms (e.g., Terry & Hogg, 1996; White et al., 1994). Group norms refer to the explicit or implicit prescriptions regarding one's appropriate attitudes and behaviors as a member of a specific group in a specific context (White et al., 2002). In consideration of the effects of group membership on behavior, social identity (Tajfel & Turner, 1979) and self-categorization (Turner, 1999) theories argue that a considerable portion of a person's self-concept derives from the group memberships that provide his or her social identity. Social

identity theory suggests that the self is socially constructed and that behaviors are regulated by context-specific group norms and stereotypic attitudes. Therefore, as people categorize themselves as a part of this social group (e.g., a sex, class or team) and learn the norms of the group, they ascribe these norms to themselves, resulting in their attitudes and behaviors aligning more with the group norm. Within the TPB model, the subjective norm construct is a social influence measure of the extent to which important others would approve or disapprove of an individual performing a particular behavior (Ajzen, 1991). Although this operationalization of subjective norm considers the impact of significant others on an individual's behavior, it has been argued to assess only a limited aspect of normative influence as it relates to perceived explicit pressure to perform a behavior (Terry & Hogg, 1996). Whereas subjective norm reflects explicit pressure from a range of significant others, group norms reflect the extent to which group members are actually performing the behavior themselves.

The inclusion of group norms in the TPB has added significantly to the explained variance in a number of different contexts (e.g., Johnston & White, 2003). Given that parents often rely on referent groups (e.g., family members, other parents) for guidance and a sense of appropriate action, the decision to participate in parenting education may be tied to the norms of these referent groups. Thus, the present study aims to explore the addition of group norm within the TPB model in the prediction of parent intentions to participate in parenting education. It is expected that group norm will have an additive effect on intentions over and above the TPB predictors, consistent with Ajzen's (1991) notion that adding other predictors to the model is justified only if any additions are based on a strong theoretical rationale and that the construct accounts for significant additional variance in the outcome measures. It is, then, expected that the more an individual perceives that participating in parenting education is normative of their behaviorally relevant reference group, the more likely he or she will intend to participate in

parenting education.

### *The Present Study*

The present study had a number of aims. First, the study aimed to test the validity of the standard TPB model to predict behavioral intentions to participate in parenting education. The second aim was to examine the role of two additional social influence variables (self-identity and group norm) on intentions within the TPB model. Finally, given that past research (e.g., Spoth & Redmond, 2000) has indicated a role for socio-demographic factors in this context, a range of socio-demographic variables was investigated to determine their influence in predicting behavioral intentions in addition to the TPB variables.

It was hypothesized that attitude, subjective norm, and PBC would predict intentions to participate in parenting education (Hypothesis 1). It was also predicted that the addition of self-identity and group norm to the TPB would improve prediction of intentions to participate in parenting education (Hypothesis 2). Finally, in an exploratory manner, the socio-demographic variables of income, age, gender, education level, marital status, work status, previous parenting education participation, child age, and number of children were assessed within the TPB model to examine their influence on intentions to participate in parenting education.

## Method

### *Participants*

The participants ( $N = 176$ ) were 138 mothers ( $M = 40.7$  years of age,  $SD = 5.43$  years) and 38 fathers ( $M = 39.0$  years,  $SD = 4.48$  years) aged between 25 and 56 years with at least one child under 12 years of age ( $M = 6.33$  years,  $SD = 2.93$  years). The average number of children per family was 2.04 children ( $SD = .83$ ). The average age for each child under 12 years per family (in order from eldest to youngest) was as follows: 1<sup>st</sup> child ( $M = 7.13$  years,  $SD = 3.19$  years), 2<sup>nd</sup> child ( $M = 5.56$  years,  $SD = 3.57$  years), 3<sup>rd</sup> child ( $M = 3.70$  years,  $SD = 3.32$  years),

4<sup>th</sup> child ( $M = 2.92$  years,  $SD = 1.65$  years), 5<sup>th</sup> child ( $M = 1.00$  years,  $SD = 0.00$  years). Of the 176 participants, 64 participants responded that they had previously attended a parenting program (as per the definition in the Measures section). Participants were recruited through a range of public and private kindergartens, childcare centers, and public and private primary schools in the metropolitan area of Brisbane, Australia. Approximately 1,000 questionnaire packs were distributed; however, due to the nature of the questionnaire dissemination process via teaching and administration staff, it is unclear the exact number of questionnaires distributed. One hundred and seventy-six questionnaires were returned (17.6% return rate). The demographic characteristics of the sample are presented in Table 1.

### *Procedure*

The researchers contacted kindergarten, preschool, and childcare directors, as well as school principals, to obtain consent for the study. A pack containing questionnaires and a reply paid envelope was distributed at each of the participating facilities. Packs either were sent home with children in the appropriate age range or enclosed in their center or school newsletter. Inside the pack was a letter explaining the study, a consent form to be signed, and two questionnaires (one for each parent, if applicable). Parents were asked to complete the questionnaires independently, seal their responses in the envelope provided along with the signed consent form, and return the completed surveys either to a specified box at the child's center or school or mail to the researchers' university address within a two-week period.

### *Measures*

*Target behavior.* The target behavior was participating in parenting education. Parenting education was defined as any course, workshop or training program offered by a school, church, hospital, child health center, hospital, community group or other organization, that is explicitly concerned with helping parents to improve parenting skills, uses a group work approach and is relatively structured and formalized (see Smith & Pugh, 1996). Drawing on methodology

adopted by Spoth and Redmond (1995), a measure of intentions related to generally participating in parenting education programs was used in the present study rather than intentions for a specifically identified parenting program. Reference to intentions across a 6-month time period was chosen to enable a reasonable time frame for parents to be exposed to, or seek out the availability of, parenting programs. The predictor and criterion variables were measured at the same level of specificity in relation to action, target, time, and context to maximize predictive power (Fishbein & Ajzen, 1975).

*Questionnaire.* Participants completed a questionnaire consisting of demographic items (e.g., age, gender) and 16 items assessing the standard TPB variables and additional social influence variables of self-identity and group norm. Standard TPB items as outlined by Ajzen (1991) were employed in the study. The TPB items were mostly positively worded, although some negatively worded items were included to reduce response bias. Most TPB items were scored on a 7-point Likert scale, with the exception of attitude, which was scored on a 7-point semantic differential scale.

#### *Theory of Planned Behavior Variables*

*Intentions.* Two items were used to assess the strength of participants' intentions to perform the target behavior: "I *do not intend* [1] to *intend* [7] to participate in parenting education during the next 6 months" and "It is likely that I will participate in parenting education during the next 6 months"; *strongly disagree* [1] to *strongly agree* [7]. The measure was reliable with an alpha co-efficient of .87.

*Attitude.* Four 7-point evaluative semantic differential scales were used to assess attitude towards participating in parenting education (e.g., "My participating in parenting education during the next 6 months would be:" *unpleasant* [1] to *pleasant* [7]). The scale was reliable with an alpha co-efficient of .87.

*Subjective norm.* Two items were used to assess subjective norm (e.g., "Most people who

are important to me would approve if I participated in parenting education during the next 6 months”; *strongly disagree* [1] to *strongly agree* [7]). However, as the two-item subjective norm scale was found to have low reliability with an alpha coefficient of .57, only one item believed to best represent the construct (stated above) was used in the final analyses.

*Perceived behavioral control.* Four items were used to assess PBC (e.g., “I have complete control over whether I participate in parenting education during the next 6 months”; *strongly disagree* [1] to *strongly agree* [7]). The scale possessed adequate reliability with an alpha co-efficient of .69.

#### *Additional Social Influence Variables*

*Self-identity.* Self-identity was measured using two items adopted from Terry et al. (1999). An example item is “Being the type of person who participates in parenting education is an important part of who I am”, *strongly disagree* [1] to *strongly agree* [7]. The direct measure of self-identity was reliable with an alpha co-efficient of .73.

*Group norm.* The measurement of group norm was based on items used by Terry and Hogg (1996). Two items were used to assess participants’ perceptions of reference group norms (with the most relevant referent group, friends and peers, identified in pilot work) for participating in parenting education (e.g., “What percentage of your friends and peers would participate in parenting education during the next 6 months?”; 0% [1] to 100% [7]). However, as the two-item group norm scale was found to have low reliability with an alpha co-efficient of .60, only one item believed to best represent the construct (stated above) was used in the final analyses.

*Socio-demographic variables.* Measures for nine socio-demographic factors were included: sex, participant age, gross annual household income, level of education, marital status, work status, previous parenting education participation, number of children, and child mean age. Participant gender was coded [0] *male* and [1] *female*. Gross annual household income was

coded from 1 to 5, with [1] representing *incomes of less than \$20,000* and [5] representing *incomes of \$80,000 or more*. Level of education was coded from 1 to 5, with [1] representing *participants who had completed Year 10* and [5] representing *participants who had completed a postgraduate degree*. Marital status (Married, De-facto, Widowed, Separated, Divorced) was recoded into [0] *married* versus [1] *all other categories*. The work status category (full-time, part-time, full-time home duties, student, unemployed) was recoded into [0] *full-time* versus [1] *all other categories*. Previous parenting education participation behavior was assessed with one item (e.g., “Have you previously participated in a parenting education course?”) scored as [0] *yes* and [1] *no*.

## Results

### *Data Analyses Overview*

First, analyses examined the effect of standard TPB variables (attitude, subjective norm, and PBC), as well as the effect of the additional predictors (self-identity, group norm) on intentions to participate in parenting education. Second, analyses examined the influence of socio-demographic variables in predicting intentions to participate in parenting education. Prior to hypothesis testing, the data were examined for sex differences on the dependent variable (intentions) and the predictors. As there were no significant main or interaction effects of sex, the data were analyzed using the pooled sample of men and women.

### *Descriptive Analyses of the Data*

The means, standard deviations, correlations, and Cronbach’s (1951) alpha co-efficients for the TPB predictor and criterion variables, self-identity, and group norm are reported in Table 2. As shown in Table 2, low to moderate correlations were found among the standard and additional TPB predictors, with all of the predictor variables moderately correlated with the TPB criterion variable of intentions.

### *The Theory of Planned Behavior, Self-Identity and Group Norm in Predicting Participation*

### *Intentions*

In order to investigate any impact of the additional social influence variables after taking into account the effect of the standard TPB variables, a hierarchical regression was performed. The hierarchical regression analysis examined the effect of the standard TPB variables (attitude, subjective norm, and PBC) and the additional social influence variables (self-identity and group norm) on intentions to participate in parenting education. The standard TPB variables of attitude, subjective norm, and PBC were entered at step 1. Self-identity and group norm were entered at step 2 to examine their effect on intentions after controlling for the standard TPB variables. As shown in Table 3, the linear combination of standard TPB variables accounted for a significant 45% (44.1% adjusted) proportion of the variance in intentions to participate in parenting education,  $F(3, 162) = 44.36, p < .001$ . The inclusion of self-identity and group norm predictors accounted for a significant additional 9.2% of the variance in intentions to participate in parenting education,  $F(2, 160) = 16.04, p < .001$ . Once all variables were entered into the equation, all three standard TPB predictors independently contributed to the prediction of intentions. Of the standard TPB predictors, subjective norm ( $\beta = .31, p < .001$ ), attitude ( $\beta = .20, p < .01$ ), and PBC ( $\beta = .19, p < .01$ ) all significantly predicted intentions. The additional predictors of group norm ( $\beta = .22, p < .01$ ) and self-identity ( $\beta = .22, p < .01$ ) also independently contributed to the prediction of intentions.

### *The Role of Socio-demographic Variables in the Theory of Planned Behavior*

A hierarchical regression analysis examined the effect of socio-demographic variables (sex, participant age, household income, level of education, marital status, work status, previous parenting education participation, number of children, and mean child age) on intentions, within the TPB, to participate in parenting education. The socio-demographic variables were entered at step 1, the standard TPB variables of attitude, subjective norm, and PBC were entered at step 2 and self-identity and group norm were entered at step 3. In step 1,



the linear combination of socio-demographic variables accounted for a significant amount of variance (11%) in intentions,  $F(9,152) = 2.14, p < .05$ . When examined on the first step only, both marriage status ( $\beta = -.22, p < .05$ ) and mean age of children under 12 years ( $\beta = -.20, p < .05$ ) emerged as significant predictors of intentions, with those parents who were married and those parents with younger children more likely to report an intention to participate in parenting education. Once all of the variables, including the standard and additional TPB predictors, were entered into the equation, however, none of the socio-demographic variables emerged as significant predictors of intentions. A similar pattern of results emerged for the standard TPB and additional self-identity and group norm factors as for those found in the analysis described above.

### Discussion

This research had several aims. The first aim was to test the utility of the TPB as a model for understanding and predicting parents' intentions to participate in parenting education. The data provided preliminary support for the efficacy of the TPB in predicting intentions, in that attitude, subjective norm, and PBC significantly predicted parents' intentions to participate in parenting education. The second aim of this research was to explore the contribution of the additional social influence factors (self-identity and group norm) on participation intentions within the TPB. Support was found for self-identity and group norm in predicting intentions. Finally, socio-demographic variables were explored, in the context of the TPB, to determine their predictive ability in relation to intentions to participate. Although there was some evidence that marital status and average age of child were significant predictors of intentions, once all variables were entered into the equation, none of the socio-demographic variables significantly predicted parents' intentions to participate in parenting education, a finding that may have been unduly influenced by the limited variability for some of the demographic factors in the present study.

The present study offers preliminary support for the efficacy of the TPB in understanding and predicting participation in parenting education. These findings support the first hypothesis in that attitude, subjective norm, and PBC accounted for a substantial 45% of the variance in parents' intentions to participate in parenting education. Parents' positive attitude towards parenting education, their perception of perceived pressure from important others, and their perceived ability to perform or control the behavior predicted their intentions to participate in parenting education. These findings are consistent with the theoretical underpinnings of the TPB (Ajzen, 1991) and concur with previous research examining the application of the TPB to a range of behaviors. The findings in this study are also generally consistent with the findings in the parenting education domain (Spoth & Redmond, 1995, 2000; McCurdy et al., 2006). Of the standard TPB variables, subjective norm was found to have a larger beta weight than either attitude or PBC. This finding is inconsistent with previous TPB research (e.g., Armitage & Conner, 2001a) and suggests that, in this context, parents are particularly subject to the influence of others' opinions in the parenting domain.

The second aim of this research was to examine the role of the additional social influence factors (self-identity and group norm) as predictors of parents' intentions to participate in parenting education. Supporting Hypothesis 2, self-identity and group norm added significant variance in parents' intentions to participate in parenting education. The results of this study found self-identity to be an independent predictor of intentions; participants who regarded participating in parenting education as an important component of their self-concept were more likely to intend to participate than those who did not. This finding is consistent with previous research which has found self-identity predicts intentions across a number of behaviors (e.g., Armitage & Conner, 2001b; Sparks & Shepherd, 1992; Terry et al., 1999). In this context, it is reinforcing one's role as a parent and the behaviors associated with that role that impact on decision-making. In addition to self-identity, group norm also emerged as a significant

predictor of intentions to participate in parenting education. Participants who regarded participating in parenting education to be normative of a relevant reference group (i.e., friends) were more likely to intend to participate. These results are consistent with previous studies that have found group norm to be predictive of behavior over and above the standard TPB variables (e.g., Johnston & White, 2003) and support a social identity/self-categorization approach to the role of norms in the TPB (e.g., Terry & Hogg, 1996). The present study illustrates the importance of considering different forms of normative influence within the TPB model and highlights the importance of social and normative influences in the context of parents' education participation intentions.

Socio-demographic variables were included in this study to determine their influence on parents' intentions to participate in parenting education after taking into account the standard and additional social influence TPB factors. In contrast to previous research (e.g., Spoth & Redmond, 1995), but consistent with the TPB model, none of the socio-demographic variables significantly predicted intentions to participate in parenting education once all the standard and additional social influence TPB variables were entered into the equation. These findings are inconsistent with other studies that have recognized the role of socio-demographic variables on parenting education intentions. It should be noted, however, that some of the socio-demographic variables (e.g., household income, level of education) were highly skewed in the present study, with this restricted range potentially affecting the ability of these factors to emerge as significant predictors in the regression results.

Of particular note in the present study was the lack of significance found for previous parenting education participation and level of parent education, both of which have been found in previous studies to be direct predictors of behavioral intentions (e.g., Spoth & Redmond, 2000). It should be noted that, in the present research, parent education level was highly skewed, with 42% of the respondents in this study holding a postgraduate qualification. Generally

speaking, the results of the present study suggest that the inclusion of socio-demographics is not beneficial to behavioral prediction in this context. This finding is consistent with a TPB perspective given that Fishbein and Ajzen (1975) claim that any effects of socio-demographic or background variables upon behavior will be indirect and explained by the effects of the standard TPB constructs. Fishbein and Ajzen argue that demographic variables are indirectly incorporated in the TPB model by their influence on intentions and behavior by affecting underlying behavioral, normative, and/or control beliefs (see Ajzen, 2005). Socio-demographic variables were examined in the current study given past research suggesting their role (e.g., Spoth & Redmond, 2000) and to confirm that the TPB constructs were significant after taking into account any impact of the socio-demographic factors. The findings of the present study for sociodemographic variables should be interpreted with caution given that demographic factors may be more impactful when there is greater variability among participants.

Policy makers and parent educators might consider the findings of the present study in the development and implementation of programs aimed at increasing participation rates in parenting education. Specifically, as both subjective norm and group norm were influential determinants of intentions, this suggests that parents can be highly susceptible to normative pressures. Established parenting program organizations could focus on the perception that attending parenting programs is normative in advertising materials by reminding potential participants that other parents have attended these programs. In a similar vein, a community-based initiative could center on attendees encouraging their friends to attend local programs with them. In relation to attitude and PBC, the results suggest that designing interventions that convey that participating is a positive action to engage in and that barriers (e.g., time restraints, accessibility to childcare, costs) will be minimized may also be a useful strategy to increase participation. Community-based strategies aimed at increasing program attendance should seek to identify the most relevant barriers within a given local area (e.g., by

considering the employment status of the majority of local residents to enable the programs to be as accessible as possible). Government agencies should consider also subsidizing parenting programs to remove cost as a barrier to participation. Given that self identity emerged as a significant predictor of participation intentions, program organizers should emphasize that attending programs to improve parenting skills is an important aspect of a person's role as a parent (e.g., "Being a skilled parent is an important part of who I am").

There are limitations in this study which should be noted. Given that the respondents in the present study were primarily female (79%), future studies should include a larger sample of fathers. The study was conducted in a relatively affluent population (60% > AUD \$80,000 household income) and it is not clear whether the results are generalizable across a broader range of socio-economic groups. The results of this study are relevant, then, to generally well-educated, affluent, two-parent families, where one parent is often home full-time. Future research should verify the TPB model's predictive utility among parents from a broader range of backgrounds (including a consideration of ethnicity and parental education level) where socio-demographic variables may have a greater impact due to more variability among participants. Future tests of the model should include also a consideration of the extent to which the impact of the TPB predictors varies for families in different circumstances (including the contribution of the severity of the problem behaviors their children may be exhibiting at home and at school). Similar limitations are present in other predictive studies within this domain (e.g., Spoth et al., 1997, 2000). In addition, a relatively low response rate was obtained in the study, which raises questions about the representativeness of the views reported. Future research should employ strategies to increase the response rate including extending the time frame for questionnaire return, sending reminders to parents, and/or using incentives such as a small payment/thank you gift for each participant. Furthermore, some of the study's measures were comprised of only a small number of items, and single-item measures were used for two of

the study's components (subjective norm and group norm) as the original scales for these constructs did not possess adequate reliability. An additional limitation relates to the method of data collection. Sending questionnaires home with school children is a cost-effective and efficient way of disseminating questionnaires to parents. However, there is no certainty about how many questionnaires were delivered. Future research studies could utilize interviews or deliver questionnaires directly to parents via a research team. Finally, future research should consider tightening the definition of parent education to include some additional criteria such as a minimum length of time of the program and minimum qualifications for the parent educator/trainer. Acknowledging the impact of external factors such as the parent educator, setting, and cost on participation may prove to be particularly important for decision-making in this context.

In summary, the present study offered preliminary support for the utility of the TPB in predicting intentions to participate in parenting education. The emergence of the additional social influence variables (self-identity and group norm) in augmenting the predictions of the theory highlights the importance of social influences on parents' intentions. The strong predictive ability of the TPB, along with additional social influence factors, provides a platform for future research to examine the combination of attitudinal and a broad range of social influence variables that impact on parenting participation intentions and behavior. An understanding of the determinants of parenting education intentions is vital to the employment of strategies to encourage involvement in such programs, leading to more effective parenting skills.

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Table 1

*Demographic Characteristics of the Sample*

Variable	Frequency		
	(N = 176)	Percentage	
Relationship status	Married/ De facto	149	84.6
	Separated/Divorced/Widowed	25	14.2
Education Level	Year 10	9	5.1
	Year 12	22	12.5
	Apprenticeship/Trade	20	11.3
	Undergraduate degree	52	29.5
	Post-graduate degree	73	41.4
Work Status	Full-time	70	39.7
	Part-time	63	35.8
	Full-time home duties	70	39.7
	Student	6	3.4
	Unemployed	6	3.4
Household Income	\$20,000 or less	8	4.5
	\$20,001 - \$40,000	8	4.5
	\$40,001 - \$60,000	21	11.9
	\$60,001 - \$80,000	23	13.0
	Over \$80,001	106	60.2

Table 2

*Means, Standard Deviations, Bivariate Correlations and Alpha Co-efficients for the TPB Variables, Self-Identity and Group Norm.*

Variable name	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Attitude	5.28	1.17	(.87)	.35***	.14*	.48***	.21**	.49***
2. Subjective norm	3.42	1.78		a	-.01	.40***	.40***	.55***
3. PBC	4.92	1.11			(.69)	.14*	.06	.26***
4. Self-Identity	4.44	1.54				(.73)	.37***	.55***
5. Group Norm	2.88	1.56					a	.48***
6. Intentions	3.59	1.67						(.87)

*Note.* Mean scores in the present study are based on 7-point scales (1-7)

a: Single item scale – Cronbach's alpha not computed

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 3

*Hierarchical Multiple Regression Analyses of TPB Variables and Additional Variables of Self-identity and Group Norm Predicting Intentions*

Variable	<i>R</i>	<i>R</i> <sup>2</sup>	<i>F</i>	<i>df</i>	$\beta$
Prediction of Intentions					
Step 1	.67	.45	44.36	3, 162	
Attitude					.20**
Subjective Norm					.31***
PBC					.19**
Step 2	.74	.54	16.04	2, 160	
Self-Identity					.22**
Group Norm					.22**

*Note.* Weights provided are those in the final step of the analysis \*\* $p < .01$ , \*\*\* $p < .001$