



## COVER SHEET

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The Role of Self-Efficacy in Predicting Rule-Following Behaviors in Shelters for Homeless Youth: A Test of the

Theory of Planned Behavior

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**ABSTRACT.** Through a prospective study of 70 youths staying at homeless-youth shelters, the authors tested the utility of I. Ajzen's (1991) theory of planned behavior (TPB), by comparing the constructs of self-efficacy with perceived behavioral control (PBC), in predicting people's rule-following behavior during shelter stays. We performed the first wave of data collection through a questionnaire assessing the standard TPB components of attitudes, subjective norms, perceived behavioral control, and behavioral intentions in relation to following the set rules at youth shelters. Further, we distinguished between items assessing perceived behavioral control (or perceived control) and those reflecting self-efficacy (or perceived difficulty). At the completion of each youth's stay at the shelter, shelter staff rated the rule adherence for that participant. Regression analyses revealed some support for the theory of planned behavior in that subjective norm was a significant predictor of intentions. However, self-efficacy emerged as the strongest predictor of intentions and was the only significant predictor of rule-following behavior. Thus, the results of the present study indicate the possibility that self-efficacy is integral to predicting rule adherence within this context and reaffirm the importance of incorporating notions of people's perceived ease or difficulty in performing actions in models of attitude-behavior prediction.

**Key words:** attitude-behavior relations, homeless youth, rule adherence, self-efficacy, theory of planned behavior

HOMELESSNESS in general and child and adolescent homelessness in particular are societal issues of great concern and have inspired much research since the early 1980s (e.g., Cauce, Paradise, Ginzler, & Embry, 2000; Christian & Armitage, 2002; Dekel, Peled, & Spiro, 2003). Researchers consider homeless youths—both among adolescents (Kipke, Montgomery, Simon, & Iverson, 1997) and among homeless people in general (Rotheram-Borus, 1991)—as one of the most understudied groups of people. There are many factors that may contribute to youth homelessness (Cauce et al.; Thompson, Safyer, & Pollio, 2001). General family dysfunction, physical and/or sexual abuse, mental-

health problems, substance abuse, disruptive behavior, failure at school, and criminality are all factors that researchers consider to be possible contributors to youth homelessness. Homeless youths as a very vulnerable group in society and their plight have been the focus of researchers assessing various interventions (Dekel et al.). One of the more intensive forms of intervention for youth homelessness is the homeless-youth shelter. Intervention researchers have focused on different methods of improving the lives of homeless youths and assessed such factors as determinants of family reunification (Thompson et al.), homeless youths' adjustment to shelter living (Dalton & Pakenham, 2002), and treatment implementation in youth shelters (Teare & Peterson, 1994).

Administrators of homeless-youth shelters aim to fulfill a number of goals, the main goal being to provide a safe environment for youths who cannot obtain such an environment in more conventional settings (Dalton & Pakenham, 2002; Teare & Peterson, 1994). Many youths who seek refuge at homeless-youth shelters have come from very adverse environments and rely on the shelters to provide a less chaotic environment, so as not to exacerbate any existing problems. To prevent such a chaotic environment from developing, shelter administrators often rely on strict rules to ensure stability and safety for all residents.

When enforced in youth shelters, rules can serve a variety of purposes. Common rules in youth shelters include requiring that residents be home by certain times, go to bed at certain times, not swear or steal and not verbally or physically abuse other youths (residents) or the staff. Rules enable staff at youth shelters to provide a safe and stable environment for the residents and encourage the development of socially acceptable behavior that can be used by the youths in other settings (Dalton & Pakenham, 2002; Teare & Peterson, 1994). The process of rule-following can assist youths in learning valuable skills such as negotiating, problem-solving, accepting criticism, being patient, following instructions, and being respectful (Kivett & Warren, 2002), which they can then use when seeking other kinds of assistance (e.g., government benefits, long-term accommodation, employment).

Because of the serious consequences of not providing youths with a protective environment within youth shelters, shelter administrators often penalize youths who do not obey the rules and, in extreme cases, remove them from the shelter (Kivett & Warren, 2002). Exclusion from treatment facilities and shelters has the potential to incur serious consequences for a youth. The excluded youth may be accepted into another shelter, although shelters often require references from previous accommodation services before accepting a new resident. Alternatively, the youth may return to less-than-ideal family or street life.

The consequences of evicting a youth from a youth shelter are known to youth workers and taken into consideration in the decision-making process regarding whether to evict. Youth workers use eviction only as a last resort when serious or repeated infractions of the rules have occurred and pose threats to safety (Kivett & Warren, 2002; Sung, Belenko, & Feng, 2001). In their assessment of treatment compliance among mandated clients, Sung et al. noted that understanding treatment noncompliance (i.e., rule violations) can assist in identifying and engaging those clients who are likely to break the rules. The same approach may be beneficial if applied to homeless-youth shelters. A social-psychological model of behavior prediction that represents decision making as a rational and logical process; incorporates personal factors, such as attitudes and control factors; and may be useful in the context of homeless-youth shelters is Ajzen's (1985, 1991; Ajzen & Madden, 1986) theory of planned behavior.

#### The Theory of Planned Behavior

The TPB is a further development of Fishbein and Ajzen's (1975) theory of reasoned action (TRA). The TRA states that intention is the best predictor of behavior and that intentions are influenced by attitudes and subjective norms. According to Fishbein and Ajzen, attitudes toward a behavior comprise individuals' appraisals of how positive or negative performing the behavior would be, and subjective norms reflect individuals' perceptions of the social pressure to either perform or not perform the behavior. Fishbein and Ajzen considered both attitudes and subjective norms to be based on beliefs and their effects on actual behavior to be mediated by intentions.

Many researchers have demonstrated the success of the TRA in enabling researchers to predict both intention and behavior (see Farley, Lehmann, & Ryan, 1981, for a meta-analytic review). The TRA performs well when enabling researchers to predict behaviors that are under a person's volitional control but has less success otherwise, thus limiting its applicability (Ajzen, 1985, 1991; Ajzen & Madden, 1986). Ajzen developed the TPB to account for the limitations of the TRA and incorporated the concept of perceived behavioral control (PBC) to enable prediction of behaviors that are not under volitional control. Ajzen thought that PBC results from underlying control beliefs regarding resources, opportunities, past experiences, and information about others' experiences. He also thought that these beliefs affect PBC and alter the perceived ease or difficulty of performing a behavior. In Ajzen's model, PBC—like attitude and subjective norm—is based on belief.

Ajzen (1985) stated that PBC can be affected by both internal and external factors. Internal factors can include characteristics of the individual, their skills and abilities, their willpower and their emotions at the time of concern. Ajzen thought that external factors comprised two main factors: a) time and opportunity and b) dependence

on others. Both internal and external factors that are not under the individual's control might impede the performance of a behavior. A measure of PBC gives individuals an opportunity to gauge the impact that these factors may have on their ability to carry out a behavior and thus may affect their intention to perform the behavior (Ajzen, 1991). Ajzen argued that the addition of PBC improves predictive accuracy when behaviors that are not under volitional control are studied because it allows these measures to adjust what may otherwise be an overly optimistic perception of ability or intention to perform a behavior.

Researchers have often used the TPB to predict people's performance of or intention to perform a wide range of behaviors, including dietary behavior (Povey, Conner, Sparks, James, & Shepherd, 2000), safer-sex behavior (White, Terry, & Hogg, 1994), and physical activity (Hagger, Chatzisarantis, & Biddle, 2002). The theory has proven successful in its predictive ability (see Armitage & Conner, 2001, for a meta-analytic review) and has become one of the most influential and popular theories for studying human behavior (Ajzen, 2002). In their assessment of 185 different studies using the TPB, Armitage and Conner found that, on average, TPB variables accounted for 39% of the variance in intentions and 27% of the variance in behaviors. Supporting that finding, Armitage and Conner also found that PBC accounted for significantly more variance in both intentions and behavior, over and above the variance accounted for by TRA variables. In his meta-analytic review, Ajzen (1991) also reported significant average multiple correlations of attitude, subjective norm, and PBC with intention ( $R = .71$ ) and such correlations of intention and PBC with behavior ( $R = .51$ ).

#### Distinction Between Control Constructs in the Theory of Planned Behavior

Despite the success of PBC in improving the prediction of behaviors that are not under the person's volitional control in a variety of different settings, many researchers have questioned the suitability of the TPB constructs to all behaviors (e.g., Povey et al., 2000). Some researchers have found that, for some behaviors, Bandura's (1977) concept of self-efficacy can predict intention or behavior better than can PBC (e.g., Povey et al.; Terry & O'Leary, 1995; White et al., 1994). Ajzen (2002) and Terry and O'Leary have thought that self-efficacy measures individuals' perceptions of how easy or difficult performing a behavior is likely to be and how much confidence they have in their ability to perform that behavior, whereas those researchers have thought that measures of controllability (i.e., PBC) assess individuals' perceptions of how much the behavior is under their control. Thus, several authors (e.g., Armitage & Conner, 1999; Trafimow, Sheeran, Conner, & Finlay, 2002) have argued that these PBC measures assess two distinct constructs: *perceived control*, the individual's perception of external factors that

may inhibit performance; and *perceived difficulty*, the individual's belief about how easy or difficult it would be to perform the behavior. In addition, many researchers have found a separation of the two measures in factor analytic results (e.g., Armitage, Conner, Loach, & Willetts, 1999; Manstead & van Eekelen, 1998; Norman & Hoyle, 2004; Povey et al., 2000; Terry & O'Leary, 1995; White et al., 1994), and Trafimow et al. conducted a series of experiments whose results have supported the distinction.

Research has revealed benefits of assessing self-efficacy in addition to PBC. In some studies, the self-efficacy items have been more reliable than the PBC items (e.g., Povey et al., 2000), and there remains much debate about which concept is the more efficacious predictor of intention and behavior (e.g., Ajzen, 2002). Some researchers (e.g., Armitage & Conner, 1999; Manstead & van Eekelen, 1998; Povey et al.; Terry & O'Leary, 1995; White et al., 1994) have indicated the ability of self-efficacy to account for more variance in the prediction of intentions than that of PBC. In a meta-analysis of TPB studies, Trafimow et al. (2002) compared the predictive validity of perceived difficulty with that of perceived control, indicating that measures of perceived difficulty may be stronger predictors of intention and behavior than are those of perceived control, particularly for behaviors over which individuals perceive a high level of volitional control.

Ajzen (2002) acknowledged the issues that other TPB researchers have raised, and he argued for a unitary control construct that supersedes separate control factors. Ajzen suggested that individuals are likely to consider both internal and external factors that might impede performance when deciding on the perceived ease or difficulty of performing a behavior and hence when evaluating their ability to perform that behavior. Thus, the distinction between internal (i.e., self-efficacy) and external (i.e., controllability) measures is not crucial to predicting behavior because the concept of PBC ultimately encompasses both. Despite this conclusion, Ajzen proposed a place for both self-efficacy and controllability in answering different research questions. Because of the ambiguity of previous results and the lack of agreement among TPB researchers, in the present study we included items assessing self-efficacy (perceived difficulty) and PBC (perceived control) separately.

#### The TRA-TPB Models and Homeless People

Researchers have used the TRA and TPB in several studies of the attitudes and intentions of homeless people (e.g., Christian & Armitage, 2002; Wright, 1998). Wright used the TRA to assess homeless people's intentions to leave the streets for conventional housing. Wright examined intentions and behavior only and did not

measure homeless people's attitudes or subjective norms. Wright found that homeless people's plans (i.e., intentions) to find housing predicted their likelihood of obtaining conventional housing (i.e., behavior).

More recently, Christian and Armitage (2002) stated that theirs was the first study to utilize the TPB to assess attitudes and intentions among a population of homeless people. Christian and Armitage recruited the participants from a variety of different services, including accommodation services, street outreach services, and drop-in centers. Their study furthered the work of Wright (1998) in assessing the full TPB model within the context of homelessness. Christian and Armitage interviewed 104 homeless people about their attitudes and intentions toward outreach service programs. Christian and Armitage found unexpected results regarding the prediction of both intention and behavior. Contrary to previous TPB researchers, Christian and Armitage found attitude and prior behavior to be the only significant predictors of homeless people's intention to use outreach service programs. Those researchers also found that intention, PBC, and subjective norm were significant predictors of behavior. Although most researchers (Armitage & Conner, 2001; Terry & Hogg, 1996) have viewed subjective norm as the weakest predictor of intention and have not expected it to directly predict behavior, Christian and Armitage suggested that homeless people represent a minority group and—as such—may place more importance on identifying with their in-group and behaving in ways that strengthen their social relationships. In their study, Christian and Armitage also recommended ways to encourage service use among homeless people. The researchers found that attitude mediated the effects of past behavior (i.e., previous use of outreach programs) and demographic variables (e.g., age and gender) and concluded that, if the benefits of using outreach service programs are made clear to homeless people, their intentions to use these services may increase. Thus, it appears that social-psychological models, such as the TRA and TPB, are beneficial in predicting relevant and important behaviors among homeless people. To the date of this publication, researchers have not examined the utility of TPB within the population of homeless youth specifically. The TPB may prove particularly useful in understand youth's decision making about the crucial behavior of adhering to the rules of short-term shelters.

#### The Present Study

Thus, in the present study, we examined the utility of the TPB within the context of youth homelessness and aimed to provide practical implications for youth shelters regarding rule adherence. We examined rule-following behavior at homeless-youth shelters by using TPB variables and further assessed self-efficacy for its impact on the TPB variables and the intention-behavior relationship. We thought that, because of the challenging backgrounds of

many of the youths who stay at these shelters, following the rules at youth shelters may prove quite difficult for some of them. Therefore, we included, in addition to measures of PBC, measures of self-efficacy to increase the predictive accuracy of the control variables in the TPB.

We hypothesized the following:

*Hypothesis 1:* Attitude, subjective norm, and PBC will predict residents' intentions to follow the rules at youth shelters.

*Hypothesis 2:* In addition to the control construct of PBC, self-efficacy will contribute to the prediction of intentions to follow the rules at youth shelters.

*Hypothesis 3:* Intention and PBC (but not attitude or subjective norm) will predict rule-following behavior at youth shelters.

*Hypothesis 4:* Self-efficacy will also significantly predict rule-following behavior at youth shelters.

## Method

### *Participants*

We delivered questionnaires to 10 youth accommodation services—including short-term crisis care shelters, medium-to-long-term shelters, and independent supported housing services—in a large Australian city. Some of the services were church affiliated, and some provided mixed, rather than same-sex, accommodation services. We tried to ensure that a representative sample of accommodation services were included. Of the 200 questionnaires that we distributed, participants completed and returned 70 (35%).

Therefore, participants were 70 residents of youth accommodation services (40 male adolescents, 30 female adolescents;  $M_{\text{age}} = 16.47$  years ( $SD_{\text{age}} = 1.87$  years; age range = 13–21 years). The mean level of education was 9.90 years ( $SD = 1.40$  years; range = 7–12 years). The majority of respondents (67.1%) had previously stayed in youth shelters, and the mean number of shelters that residents had stayed at before was 2.53 shelters ( $SD = 3.00$  shelters; range = 0–10 shelters).

### *Design*

We used a prospective design, with two phases of data collection. The questionnaire in Phase 1 assessed standard measures of the TPB variables (i.e., attitude, subjective norm, perceived behavioral control, and intentions) and measures of self-efficacy. Collection of written staff evaluations of each youth's rule-following behavior while at the shelter made up Phase 2.



### Measures

*Target behavior.* The target behavior was rule-following behavior among homeless youth currently staying at youth shelters or accommodation services. The shelters and accommodation services all had specific rules which the resident youth had to abide by if they wanted to continue staying there (e.g., being home by 5:30 pm; going to bed at 9:30 pm; doing house chores as directed by staff; not stealing, swearing, or getting aggressive or violent with other residents or staff). On acceptance at a youth shelter, the shelter administrator required each youth to read, or have read to him or her, the rules as stipulated in their shelter's rulebook. We operationalized *rule-following behavior* as the extent to which youths obeyed the rules that the rulebook of the shelter in which they were currently residing stipulated.

*Questionnaires.* Participants completed a questionnaire assessing the standard TPB variables (as specified by Ajzen, 1991) and self-efficacy with item language that we simplified where necessary to ensure ease of understanding for the present participants. We included some negatively worded items (which we subsequently reverse-scored) to reduce response bias. We scored all questionnaire items on 7-point response scales (all Likert-type scales, with the exception of semantic differential scales for the attitude items). We attached an envelope to each questionnaire so that the participant who filled it out could then seal it. See the Appendix for a list of all items.

*Intention.* We used three items to assess the strength of participants' intention to perform the target behavior (e.g., "Do you intend to obey the rules of the youth shelter as set out in its rule book for the duration of your stay?"; ranging from 1 = *do intend* to 7 = *do not intend*).

*Attitude.* We used four 7-point evaluative semantic differential scales to assess attitudes toward following the rules at youth shelters (e.g., "For me to obey the rules of the youth shelter as set out its rule book for the duration of my stay would be:"; ranging from 1 = *unpleasant* to 7 = *pleasant*).

*Subjective norm.* We used two items to assess subjective norm (e.g., "Most people who are important to me think that me obeying the rules of the youth shelter as set out in its rule book for the duration of my stay would be:"; ranging from 1 = *desirable* to 7 = *undesirable*).

*PBC.* We used two items to assess the extent to which respondents felt they had control over their rule-following behavior (e.g., "I have complete control over whether I obey the rules of the youth shelter as set out in its rule book for the duration of my stay"; ranging from 1 = *strongly disagree* to 7 = *strongly agree*).

*Self-efficacy.* We included three self-efficacy items to assess the perceived ease of performing the behavior (e.g., “For me to obey the rules of the youth shelter as set out in its rule book for the duration of my stay would be:”); ranging from 1 = *very easy* to 7 = *very difficult*).

#### *Follow-Up Evaluation of Behavior*

We attached forms for the evaluation of rule-following behavior to each questionnaire and required them to be filled out by a staff member as each youth left a shelter. To encourage completion of the study by staff members at the shelters, we limited the evaluation of rule-following behavior to one item. We recorded evaluations of behavior on a four-point scale ranging from 1 (*No known violations of rules*), to 2 (*Violations of rules were minor and had no serious repercussions for the youth workers, the shelter, the youth or other residents*), to 3 (*Some violations of rules were serious enough to warrant consequences but did not result in the youth being asked to leave the shelter for any length of time*), to 4 (*Rule violations were frequent and/or serious enough to result in the removal of the youth from the shelter, either temporarily or permanently*). We recoded behavior ratings (i.e., reversed) so that higher scores reflected higher levels of rule-following behavior.

#### *Procedure*

Youth shelter staff distributed the questionnaires to the participants to fill out in their own time at a shelter. As part of an informed consent package prior to participants' involvement in the present study, were informed all of them that participation was voluntary and that they could refuse or stop participating at any stage without penalty from either the researcher or shelter staff. To ensure confidentiality of responses on the questionnaire, we gave participants an envelope to put their completed questionnaires into before handing them back to staff. The staff completed a form evaluating the in-shelter rule-following behavior of each youth who completed a questionnaire when he or she left the shelter. To ensure anonymity, we matched each questionnaire to its corresponding evaluation form via a code number written at the top of both forms. We offered participants access to the present results and gave them the opportunity for debriefing.

## Results

#### *Data Analysis Overview*

We then conducted analyses to determine the efficacy of TPB variables in predicting residents' intentions to follow the rules at youth shelters. Our focus on control issues led us to include measures of both self-efficacy and

PBC in the analyses. Further analyses assessed the ability of both TPB variables and the additional control measure of self-efficacy to predict rule-following behavior.

Reliability assessments of the TPB variables revealed satisfactory Cronbach's (1951) alpha coefficients of .76 for intention, .88 for attitude, .74 for subjective norm, and .70 for self-efficacy. We obtained a lower reliability coefficient for PBC (.65). We examined the data for errors and missing values. The pattern of missing values was random, so that cases with minimal missing data were retained. Approximately 12 cases had sufficient levels of missing data to be automatically removed from some analyses.

#### *Descriptive Analysis of Rule-Following Behavior*

Table 1 shows means, standard deviations, correlations, and alpha coefficients of variables in the regression analyses. All of the correlations appeared in the expected directions and proportionate strengths. The levels of intercorrelations that were revealed did not suggest an interdependence of predictors. As we expected, we found all TPB variables to be positively correlated with intention—as was self-efficacy. The present study revealed low levels of intercorrelations between the TPB variables and behavior. Self-efficacy was the only predictor variable that we found to be significantly correlated with behavior.

#### *Analysis Predicting Behavioral Intentions*

We used a standard multiple regression analysis to test the efficacy of the original TPB variables and self-efficacy in predicting residents' intentions to follow the rules at youth shelters. We entered attitude, subjective norm, PBC, and self-efficacy into the equation. As a block, the variables accounted for 71.4% (69.2% adjusted) of the variance in intention,  $F(4, 53) = 33.02, p < .001$ . See Table 2. Two of the variables were significant predictors of intention. Self-efficacy,  $\beta = .47, p < .001$ , emerged as the strongest predictor of intention to follow the shelter rules; and subjective norm,  $\beta = .34, p < .001$ , emerged as another such significant predictor,  $p < .001$ . The results of the regression partially supported Hypothesis 1—which stated that attitude, subjective norm, and PBC would predict intention—in that subjective norm was a significant predictor. The results also supported Hypothesis 2, because self-efficacy predicted intentions. These results indicated that youths who perceive following the rules at youth shelters to be easy and feel pressure from others to follow the rules are more likely to intend to follow the rules. Neither their attitudes toward following the rules nor their perceptions of control over performing the behavior appeared to influence youths' intentions to follow the rules.

#### *Analysis Predicting Rule-Following Behavior*

We conducted a hierarchical multiple regression to assess the various contributions of the TPB variables and self-efficacy on actual rule-following behavior. To test Hypothesis 3, we entered intentions and PBC in Step 1 with behavior as the dependent variable. We also entered self-efficacy in Step 1 to examine Hypothesis 4. We entered attitude and subjective norm in Step 2 and did not expect them to predict behavior directly. Step 1 of the equation accounted for a significant proportion of variance in rule-following behavior,  $R^2 = .17$ ,  $\text{Adj. } R^2 = .12$ ,  $F(3, 53) = 3.49$ ,  $p < .05$ . As expected, the entry of variables in Step 2 of the equation did not account for a significant proportion of variance in rule-following behavior,  $\Delta R^2 = .00$ ,  $F(2, 51) = .00$ ,  $p = .99$ .

After we entered all of the variables into the equation, the only significant predictor of rule-following behavior was self-efficacy, with a beta weight of  $\beta = .53$ ,  $p < .05$ . See Table 3. Surprisingly, neither intentions nor PBC predicted rule-following behavior. But, as expected, attitude and subjective norm did not emerge as significant predictors of rule-following behavior. We also conducted analyses to examine any possible moderating effects of measures of PBC and self-efficacy on behavior. However, neither of the control variables (i.e., self-efficacy or PBC) interacted with intention so as to predict rule-following behavior.

#### Discussion

In the present study, we had two aims. The first aim was to apply the TPB in a homeless-youth shelter setting to assess its efficacy in such an environment. The present results support somewhat—but not unequivocally—the utility of the TPB in predicting rule-following behavior among homeless youth. The TPB variable of subjective norm—but neither attitude nor PBC—was a significant predictor of intentions to follow the rules at youth shelters. Also, neither intention nor PBC predicted rule-following behavior. The second aim was to assess the contribution of an additional control variable that is considered more relevant to the current setting, self-efficacy, in predicting both intentions and behavior. Self-efficacy emerged as the strongest predictor of intentions and the only significant predictor of rule-following behavior.

Generally speaking, the present results did not support the broad applicability of the TPB that previous researchers have recognized (see Conner & Armitage, 1998). However, in the present results, we found support for some of the TPB hypotheses. When taken together, the TPB variables and self-efficacy accounted for a significant and substantial proportion of the variance in intention. However, only subjective norm and self-efficacy emerged as significant predictors of intention. Thus, the present study only partially supported Hypothesis 1 in that subjective

norm—but neither attitude nor PBC, emerged as a significant predictor of intention. The present results supported Hypothesis 2 because self-efficacy significantly predicted intention.

The perception of how easy or difficult following the rules would be and the perception of pressure from others to do so emerged as important in predicting youths' intentions to follow the rules. How favorable their attitudes were toward following the rules and consideration of their perceptions of control over performing the behavior did not appear to be as important in the formation of their rule-following intentions. Contrary to the TPB model, the present results did not reveal a simple relationship between attitude and intention. It appears that, at least in the current context, the personal factor of feeling favorably or unfavorably about following the rules did not translate into related intentions. Instead, social-influence and perceived efficacy factors emerged as impactful on intentions.

Contrary to previous researchers suggesting that subjective norm is the weakest predictor of intention (e.g., Armitage & Conner, 2001), in the present study we found subjective norm to be more predictive of intention than either attitude or PBC. Christian and Armitage (2002) in their work with homeless people reached similar results, albeit in the prediction of actual behavior. They reasoned that the participants in their study were members of a minority group (i.e., homeless people) and, as such, would be more motivated to maintain social relationships and be influenced by perceived social pressure to behave in certain ways. Christian and Armitage's reasoning may apply to the present study because of a similar target population comprising homeless youth.

In the present study, we found unexpected results when assessing the predictors of behavior. Armitage and Conner (2001) showed intention to be the strongest predictor of behavior, yet the present results revealed that—contrary to Hypothesis 3—neither intention nor PBC significantly predicted behavior. Instead, we found self-efficacy to be the only significant predictor of rule-following behavior, supporting Hypothesis 4. The fact that intention to follow rules did not emerge as the most proximal determinant of youths' rule-following behaviors brings into question the role that other variables, other than direct intention, have in this context. In the present study, with the target behavior aligned so closely with severe consequences for rule violation (i.e., expulsion from the shelter), it is not surprising that intentions to follow the rules were, on average, fairly high. Indeed, the intention measure had the highest mean: 5.71 on a 7-point scale. As with other behaviors that most people intend to perform, it is likely that there are other factors that need to be considered to explain the variability in people's behavior. In this instance,

youths' confidence in their ability to follow the shelter rules served as a more reliable indicator of behavioral performance than did their intentions to do so.

In the present study, what proved to be the most impactful predictor of subsequent rule adherence was issues of control that were related to the perceived ease or difficulty of following the rules. The present results indicated, then, what affect behavioral intentions and behavior itself are notions of perceived difficulty (self-efficacy) rather than perceived control (PBC). In the present study, it is likely that youths who faced the difficult circumstances resulting in a shelter stay possessed greater insight into their own ability to adhere to the shelter rules than into overall (external) control factors that may impede their adherence plans. Thus, assessment of internal, rather than external, control were more meaningful in this case because of the potentially uncertain environment of a shelter where the impact of external influences, such as the behavior of other residents and staff, is mostly unknown at the time of shelter entry.

The fact that self-efficacy—rather than perceived control—emerged as an important predictor of intention is consistent with previous research (e.g., Armitage & Conner, 1999; Manstead & van Eekelen, 1998; Povey et al., 2000; Terry & O'Leary, 1995; White et al., 1994) and further supports the division of the two control constructs (see Norman & Hoyle, 2004). However, the present results do contrast with Terry and O'Leary's assertion that self-efficacy should not have a direct effect on behavior, despite some evidence that self-efficacy can have direct effects (e.g., Armitage et al., 1999; Manstead & van Eekelen; Povey et al., 2000). In the present study, perceived ease of behavioral performance dominated youths' decision making, yielding a finding that is contrary to Ajzen's (2002) assertion that PBC is superior to self-efficacy in a hierarchical organization of controllability factors. In general, the present results reveal that our focus on control issues in the current setting was beneficial and add more weight to calls for further review of the TPB control measures (e.g., Trafimow et al., 2002).

The present results lend themselves to applied recommendations. To improve rule-following behavior, youth workers can use the findings that self-efficacy and subjective norm were significant predictors of intention to follow the rules and that self-efficacy was the only significant predictor of actual rule-following behavior. The present results indicate the possibility that rule-following behavior of youths who are currently staying at youth shelters could be improved if youth workers advocate how easy following the rules is and put in place support mechanisms to facilitate this sense of ease. In addition, youth workers could try to create an environment in which there is a normative atmosphere that is conducive to following the rules, one in which youths perceive sustained

pressure from others to follow the rules. Youth workers could cultivate these social-influence factors in a positive way by creating an environment in which youths encourage each other to follow the rules and support each other in such behavior. The introduction of group rewards and/or penalties may benefit this goal.

We should note some limitations of the present study. The sample size of 70 youths was small, and therefore the sample may not be representative of homeless youths who are seeking shelter services. Nevertheless, the sample size was not substantially smaller than those of other studies in this field (e.g., Christian & Armitage, 2002; Dalton & Pakenham, 2002; Teare & Peterson, 1994), whose small sizes are due to the difficulty in accessing minority samples.

In addition to the problems of sample size and diversity is the question regarding youths' comprehension of the questionnaire. We noted several cases as missing large amounts of data. Researchers must consider that the problems with responses may be due to the homeless youths' lack of understanding of the questions or the answer format. It is likely that data from one-on-one interviews with participants rather than data from our questionnaire would have benefited the present study. As suggested by Christian and Armitage (2002), verbal interviews may minimize any embarrassment in illiterate participants, a legitimate goal because of the relatively high proportion of school, behavior, and learning problems among homeless youth (see Cauce et al., 2000). Unfortunately in the present study, our difficulty in obtaining direct access to all participants prevented face-to-face interviews.

Christian and Armitage (2002) conducted the first study that assessed homeless people's attitudes toward outreach service programs and that used the TPB as a theoretical basis. The present study adds importantly to this literature in that no other study has examined the utility of the TPB in assessing rule-following behavior among homeless youths who are currently staying at youth shelters. The benefit from the present study's testing of the utility of the TPB in this context has been to identify some factors, specifically subjective norm and self-efficacy, that may help researchers to understand rule-following behavior. Youth workers can use the present conclusions to inform interventions for improving rule-following behavior in their shelters and, thus, may prevent the negative consequences of rule violations.

A further strength of the present research was its use of objective data for rule-following behavior. The use of objective reports from youth workers regarding the behavior of each youth who participated is a significant strength because the behavior that we assessed may be more susceptible to social desirability than are other behaviors in self-report methods of data collection. Because of time constraints, the design of the present study was

successful in allowing a reliable follow-up measure of behavior. Future researchers should aim to replicate the present study with a larger sample size and to assess the value of interventions arising from the present study that may have practical benefits for the youths, youth workers, and shelters involved in the future research.

Overall, the present study revealed self-efficacy and subjective norm to be significant predictors of homeless youths' intentions to follow the rules at youth shelters. We also found self-efficacy to be a significant predictor of actual rule-following behavior. Consequently, we noted the control factor of perceptions of how easy or difficult following the rules would be as the most important determinant of rule-following behavior in shelters for homeless youths. The present results also supported the importance of distinguishing perceived control and perceived efficacy in attitude-behavior models. Researchers and shelter staff can apply the present findings to youth shelters, possibly benefiting the shelters' youth workers and homeless youths. An understanding of the determinants of homeless youth's intention to follow the rules and of their rule-following behavior at youth shelters is vital to preventing or minimizing undesirable behavior and the consequential removal of homeless youths who violate the rules.

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