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Investigating the Latent Structure of the Theory of Planned Behavior and its Effectiveness in Explaining Intentions to Participate in Counseling among a Sample of Police Officers

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Abstract Confirmatory factor analysis was employed to compare two alternative models of Ajzen's (Organ Behav Hum Decis Process 50:179–211, 1991) Theory of Planned Behaviour (TPB). The efficacy of the TPB to predict intentions to participate in counseling among a sample (N=259) of Irish police officers was investigated using structural equation modelling and based upon responses to a fictitious scenario. The police profession is a highly stressful occupation with many officers suffering from a variety of stress related psychological maladies that could be alleviated with effective psychotherapy. Understanding police officers intentions to participate in psychological counseling is an important endeavour. Results indicated that a modified version of the TPB in which the Perceived Behavioral Control factor was represented by two distinct latent control factors demonstrated superior model fit compared to Ajzen's original model. Structural equation modelling results indicated that this modified version of the TPB was an effective model in the prediction of counseling seeking intentions explaining 92.6 % of variance in behavioural intentions. Self-efficacy (internal control) was found to be most strongly associated with intentions. Theoretical implications and future research potentials are discussed in light of current findings.

Keywords Police officers · Counselling · Theory of planned behaviour · Structural equation modeling

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Introduction

The nature of the police profession means that law enforcement officers frequently encounter situations of a highly stressful kind that can significantly impact on the regulation of their psychological well-being (e.g., Brown et al. 1999; Kroes 1976, 1988; Selye 1978; Somodeville 1978). Previous research efforts have identified a multitude of stress factors associated with the police profession, including task-related stressors (Anshel 2000), organizational-related stressors (Brown and Campbell 1990, 1994), external stressors (Perrier 1984), and personal stressors (Mikkelsen and Burke 2004). The impact of these stressors can exert a negative toll on the psychological and physiological well-being of police officers.

It has been demonstrated that members of the police profession suffer from a multitude of stress-related physiological health problems including high blood pressure, dietary problems including obesity, headaches, gastro-intestinal issues, high cholesterol, and skin disorders (Davidson and Veno 1980; Perrier 1984). Police officers are also at an increased risk of dying from diseases such as cancer and myocardial infarctions (Violanti et al. 1998). A significant minority of police officers have also been found to experience mental health problems. Berg et al. (2006) carried out a study of 3,272 Norwegian police officers and discovered that 11.2 % of those surveyed demonstrated symptoms of severe anxiety while 8.2 % reported symptoms of severe depression. A study utilizing a representative sample of New York police officers found that comparable rates of severe depression with 8.6 % of officers displaying clinically significant symptoms of depression (Andrew et al. 2008). Among these New York police officers, 30.5 % were found to display symptoms of clinical or sub-clinical posttraumatic stress disorder (PTSD) while in the

Netherlands, 7 % of police officers questioned met the criteria for PTSD and a further 34 % of officers showed symptoms of sub-clinical PTSD.

These psychological symptoms not only lead to substantial psychic pain and suffering for the individual but such mental health problems have been found to be significantly correlated with a variety of negative outcomes including an increased likelihood of abuse of illicit substances (Velden and van der Kleber 2009), a greater tendency towards the use of force when carrying out their duties (Kop and Euwema 2001), maladaptive parenting styles that negatively impact of upon a child's adjustment capabilities (Jordan et al. 1992), and decreased levels of job satisfaction (North et al. 2002).

Given the frequency with which police officers experience stressful and traumatic events, and the prevalence of mental health problems among members of the profession, it is apparent that developing an understanding of the willingness of law enforcement officers to engage in professional psychological counseling, were they to ever suffer from a mental health problem, is clearly warranted. The Theory of Planned Behaviour (TPB; Ajzen 1991) constitutes an excellent theoretical model with which to approach the issue of counseling seeking intentions among law enforcement officers. Research which is guided by an empirically supported, integrated social-cognitive model of behaviour will allow for a comprehensive understanding of the psychological processes underlying ones intentions to engage in professional counseling to be ascertained.

Ajzen's (1991) model of the TPB states that the most immediate antecedent of actual behaviour is an individual's behavioural intentions. Determining behavioural intentions therefore provides an excellent predictor of behavior, according to the model. Behavioural intentions are predicted by three distinct latent factors: attitudes, subjective norms, and perceived behavioural control (PBC). The attitudinal factor reflects the person's positive or negative appraisal of the outcome of a given behavior; the subjective norm factor reflects the perceived normative pressures felt by the individual from those people who are of most importance, in relation to the given behavior; while the PBC factor reflects the level of control an individual believes they have in successfully performing the behavior in question.

The PBC construct is the primary differentiating factor of the TPB model (Ajzen 1991) from its precursor The Theory of Reasoned Action (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975), and was introduced into the model in order to account for those situations where an individual lacks complete volitional control regarding the operation of a given behavior. The PBC factor is a vitally important component of the TPB as it is hypothesized to be capable of predicting actual behavior independent of behavioral intentions (Ajzen 1991). According to Ajzen's (1991) original conceptualization, the PBC factor includes both an internal control component (an individual's belief about their own capacity to carry out a given behavior) and an external control component (an individual's belief about the availability of the necessary resources in the external environment to carry out a given behavior). In those times where PBC is an accurate representation of actual behavioral control within the environment, PBC is hypothesized to act as a surrogate for actual control and can consequently predict actual behavior with a high degree of veracity.

In a meta-analysis of the efficacy of the TPB to predict intentions and actual behavior, Armitage and Conner (2001) suggested that the TPB model could be improved by separating these two control components into distinct predictors of intentions. Ajzen (2002a) rejected this suggestion, arguing instead that a hierarchical integration of the PBC construct represents a more accurate and parsimonious model then that suggested by Armitage and Conner (2001).

Although the TPB has been widely used and empirically validated as an effective model for the prediction of various health related behaviors and intentions including the prediction of physical exercise among young children (Hagger et al. 2007), college student drinking (Collins and Carey 2007), condom use (Albarracin et al. 2001; Molla et al. 2007) cancer symptom detection (Nooijer et al. 2003), healthy eating (Conner et al. 2002), and exercise promotion (Godin 1994), it has only recently begun to be applied for the prediction of mental health related behaviors such as engagement in professional psychological counseling. Skogstad et al. (2006) were the first researchers to investigate the efficacy of the TPB to predict counseling seeking intentions. Among a sample of 527 New Zealand prisoners the researchers were able to explain 44 % of variance in intentions using multiple regression analysis, with the attitudinal factor identified as possessing the strongest relationship with intentions. Smith et al. (2008) employed structural equation modelling to investigate psychological help-seeking intentions among a sample of 307 male participants. In this case the TPB was found to explain 29.6 % of variance in men's intentions to seek psychological help. Such findings provide initial evidence that the TPB is an effective tool for investigating counseling seeking intentions among police officers.

This study has two main objectives: The first is to empirically investigate whether the TPB is more parsimoniously represented by a three-factor model as described by Ajzen's (1991) original conceptualization, or by a four-factor factor model in which behavioural intentions are predicted by attitudes, subjective norms, self-efficacy (internal control), and perceived control (external control). This question will be investigated through the use of an alternative models approach using confirmatory factor analysis (CFA). The second research objective is to determine the efficacy of the TPB to predict intentions to engage in counseling among a sample of law enforcement officers. This question will be investigated through the use of structural equation modelling (SEM) techniques.

Method

Participants

The sample for the current study consisted of 259 members of the Irish police force (N=259). The sample included 171 (n=171) male officers and 88 (n=88) female officers. Participants ranged in age from 20 to 57, with an average age of 27.72 years (M=27.72, SD=6.46). Just less than half the sample of officers were stationed in rural areas (42.9 %, n=111), 40.5 % were stationed in suburban areas (n=105), and 16.6 % were stationed in urban areas (n=43). The majority of officers who participated in this study were relatively inexperienced police officers with 79.5 % of respondents indicating that they had been serving for two years or less (n=206). Forty-three percent of officers were married (n=112), while the remaining participants either resided with parents (26.6 %, n=69), lived with other family members (3.1 %, n=8), or lived alone (27 %, n=70).

Procedure

Participants were recruited during a routine training seminar for members of the Irish police force. IRB approval for the current project was granted from the Irish police force to approach members to partake in the current study. Subsequently, appropriate authorization was granted from the relevant officials of the police force to carry out the study among all members attending the training course. Of the 400 members who were approached to complete the research questionnaire 285 volunteered their participation (71.25 %) however only 259 were retained for the final analysis (64.75 %). Those cases excluded from the final analysis were due to insufficient data provided. Participants were required to complete an anonymous self-report, paper-and-pencil questionnaire booklet which included an instruction sheet and a consent form attached to the front of the booklet. Each participant was provided with a brief description of the study, instructions in how to complete the questionnaire, and the general completion time (approximately 15 min). Participants were assured about the confidentiality of their participation and informed that they could withdraw from the study at any time. Completed questionnaires were returned by the participants to their superior officer in sealed envelopes who subsequently returned the questionnaires to the principal researcher.

Measures

Scenario The TPB questionnaire was constructed according to the guidelines set forth by Ajzen (1991, 2002b). The questionnaire was based upon a fictitious scenario which included the four elements of time, context, action, and target, as proposed by Ajzen and Fishbein (1977). The scenario describes an event that took place six weeks previously in which an individual witnesses a severe road traffic accident. In the intervening six weeks this individual begins to experience significant personality changes. The individual is reported to now experience prolonged periods of extreme sadness, lack of energy, distressing thoughts related to the traumatic event, low energy levels, reduced interest in normally pleasurable activities, severe panic attacks while outside, and refusal to leave the house even for work. A friend of this individual attends a G.P. about the matter and the G.P. recommends that the described person should attend a professional psychologist for counseling within the next week. An appointment is thus made for next week. Participants in this study are asked to place themselves in the position of this fictitious person and complete the questions that follow. All items within the questionnaire begin or end with a sentence stem that relates to the described scenario and all items were measured along a seven-point Likert scale. The questionnaire used in this study can be found in the Appendix.

Attitudes The attitudinal factor was measured by three items (α=0.69) which assessed participants beliefs about the value of attending psychological counselling. An example of such an item is: "*For you to go along to see a professional psychologist within the next week would make you feel……Good-Bad?"* Lower scores indicated more favorable attitudes.

Subjective Norms The subjective norm factor was measured by four items (α=0.88) which assessed the degree to which participants believed that significant others in their life would want them to participate in counseling. An example of such an item is the following; "*It is likely that your closest friends think that you should participate in counseling with a professional psychologist within the next week*." Higher scores indicate higher perceived normative influences.

Perceived Behavioral Control The PBC construct was measured by six items (α=0.76) and in accordance with recommendations of Ajzen (2002a, b) and Armitage and Conner (2001) these six items measured both the internal and external control components of PBC. Higher scores indicate increased levels of perceived behavioral control.

Self-Efficacy (Internal Control) This factor measured participant's levels of internal control, or self-efficacy, with regards to participating in psychological counseling. Three items were used to measure this factor (α=0.79), an example of which is the following; *"Do you think you would have the ability to participate in counseling with a professional psychologist within the next week?"* Higher scores indicate greater self-efficacy.

Perceived Control (External Control) This factor measured participant's levels of external control, or perceived control,

with regards to participating in psychological counseling. Three items were used to measure this factor (α=0.61), an example of which is the following; *"How much personal control do you feel you have to participate in counselling with a professional psychologist in the next week?"* High score indicate greater perceived control.

Behavioural Intentions This factor measured participant's intentions to engage in psychological counseling and were measured by three items (α=0.77), an example of which is the following; *"How likely is it that you will intend to participate in counselling with a professional psychologist within the next week?"* High scores indicate stronger intentions to engage in counseling.

In addition participants were requested to complete a demographic questionnaire which included questions regarding the number of year's service in the Irish Police force and their age.

Analysis

The statistical analysis contains two steps, a measurement level and a structural level. In terms of the measurement level, two alternative models of the TPB (Fig. 1) were specified and estimated in Mplus version 6.0 (Muthen and Muthen 1998–2010) using CFA techniques. CFA helps to determine the factor structure and factor loadings of measured variables, and to assess the fit between the data and pre-established theoretical models. The following goodness-of-fit indices were selected in order to compare the different models: chi-square (X^2), Root Mean-Square Residual (RMSR), Root-Mean-Square Error of Approximation (RMSEA; Steiger 1990) with 90 % confidence interval (90 % CI), Akaike Information Criterion (AIC; Akaike 1973), Comparative Fit Index (CFI; Bentler 1990), and Tucker Lewis Index (TLI; Tucker and Lewis 1973). A non-significant chi-square Kline (1994) and values above 0.95 for the CFI and TLI are considered to reflect a good model fit (Hu and Bentler 1999; Vandenberg and Lance 2000). However, for CFI and TLI, values above 0.90 indicate adequate fit (Bentler 1990; Hu and Bentler 1999). RMSEA and RMSR values less than 0.05 suggest good fit and values of up to 0.08 indicate reasonable errors of approximation in the population (Browne and Cudeck 1989). AIC was used to compare alternative models, with the smallest value indicating the best fitting model.

In relation to the structural level, the TPB models were specified and estimated in Mplus 6.0 with restricted maximum likelihood estimation (Muthén and Muthén 1998–2010), using structural equation modelling (SEM). SEM is a broad data analytic method for the quantification and statistical testing of theoretical constructs. The common structural equation model is a combination of two data analytic methods; path analysis (PA) and factor analysis (FA). PA is a technique of pictorially demonstrating the associations among observed variables in a path diagram. This is normally presented in a multiple regression analysis context (Cohen and Cohen 1983). The benefit of PA is that it allows for the direct, indirect, and total effect of one observed variable on another to be obtained. Thus, within a SEM method, the structural and measurement elements of analysis are estimated simultaneously (McCallum and Austin 2000). In the current research, the structural part of the analysis determines the relationship among latent variables. For the purpose of the current study, Model 1 representing Ajzen's (1991) original model consists of four latent variables: attitudes, subjective norms, PBC,

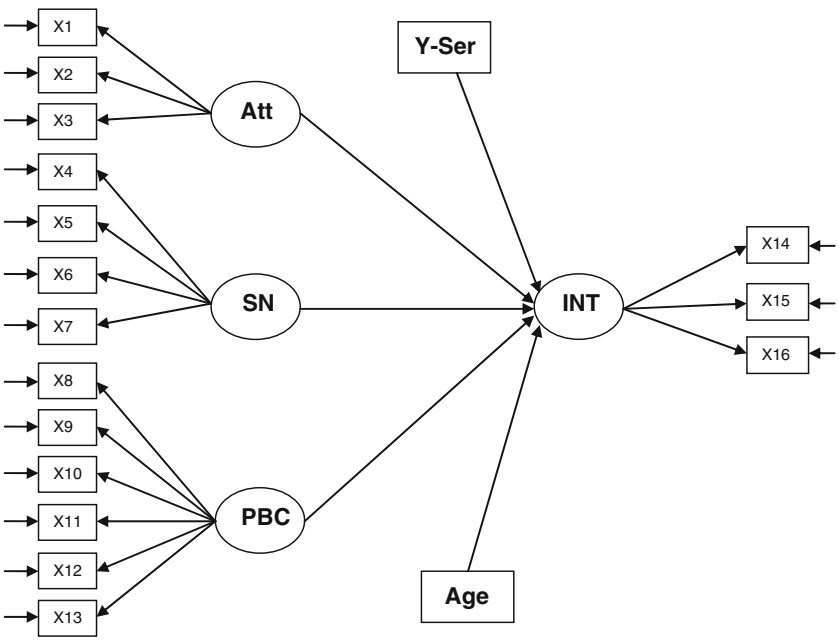

Fig. 1 Theoretical Model 1 representing Ajzen's (1991) original model consists of four latent variables: attitudes, subjective norms, perceived behavioural control, and behavioural intentions

and behavioural intentions (see Fig. 1). Model 2, a modified version of Ajzen's TPB model consists of five latent variables: attitudes, subjective norms, self-efficacy, perceived control, and behavioural intentions (see Fig. 2).

Results

Descriptive Statistics and Correlations

Descriptive statistics including means (M), standard deviations (SD), and the range for the all variables are presented in Table 1, together with Cronbach's Alpha reliability (Cronbach 1951).

The intercorrelations among all variables were investigated using Pearson product–moment correlation coefficient. Self-efficacy was identified as possessing the strongest positive significant correlation with behavioural intentions ($r=0.73$, $p<0.05$) and perceived control was identified as possessing the weakest significant association with behavioural intentions ($r=0.30$, $p<0.05$).

Table 2 reports the fit indices for the two specified models of the TPB. On the basis of the results obtained, Model 1 representing Ajzen's (1991) original conceptualization of the TPB as a three-factor model was found to possess adequate model fit (RMSEA=0.07; SRMR=0.07; CFI=0.86; TLI=0.83). Model 2, a four-factor model representing a modified version of Ajzen's TPB model was demonstrated to possess good model fit (RMSEA=0.06; SRMR=0.06; CFI=0.89; TLI=0.86). The chi-squares values for the two models were both large relative to the degrees of freedom, and were statistically significant however it is important to note that such a finding does not suggest rejection of the models. This is due to the fact that large sample sizes tend to inflate chi-square values and increase the power of the test and therefore increase the likelihood of discovering a significant finding (Tanaka 1987). In addition to the lower RMSEA and SRMR values, and higher CFI and TLI values, Model 2 also had the lower AIC value. On the basis of these results, it was concluded that Model 2 was superior to Model 1 as a descriptor of the data. The adequacy of Model 2 was also assessed with respect to the parameter estimates obtained from the analysis. Standardized and unstandardized factor loadings, along with factor correlations are reported in Tables 3 and 4 respectively.

The utility of the TPB to predict intentions to engage in psychological counseling was assessed using structural equation modelling. The modified version of the TPB was found to have good model fit ($\chi 2=270.68$, df=134, $p<0.05$; RMSEA=0.06; SRMR=0.06; CFI=0.89; TLI=0.86) and explained 92.6 % of the variance in behavioural intentions (see Table 3). Self-efficacy was found to have a strong, positive direct influence on behavioural intentions ($\beta=0.96$, $p<0.05$), with subjective norms the only other factor demonstrating a statistically significant influence on behavioural intentions; its association however was considerably weaker ($\beta=0.20$, $p<0.05$). Neither attitudes nor perceived control were found to influence levels of behavioural intentions. In addition to the latent predictor variables of the TPB (Ajzen 1991), the model also included two demographic variables (age and years of service within the police force) which significantly contributed to the amount of variance explained in intentions: $\beta=-0.17$, $p<0.05$ for age, and $\beta=0.23$, $p<0.05$ for years of service.

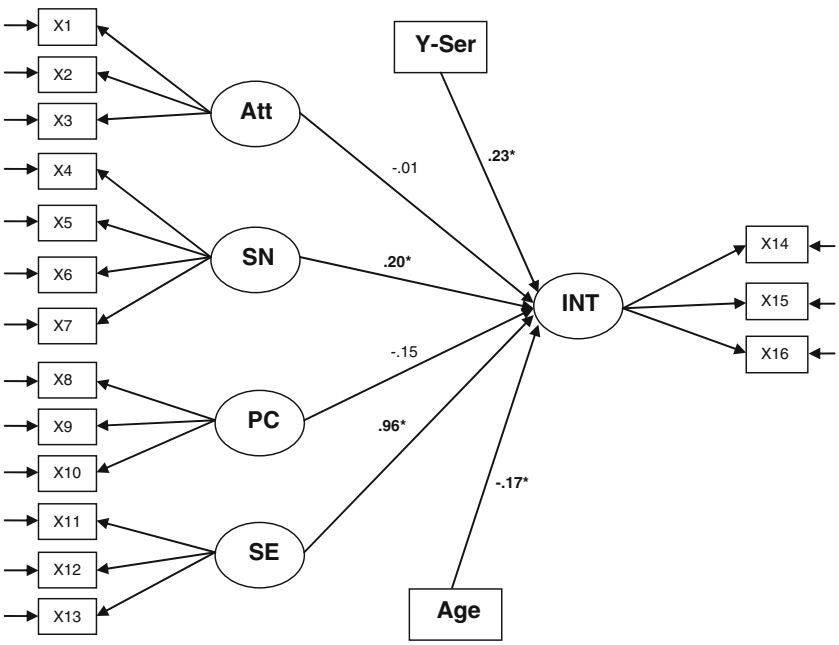

Fig. 2 Empirically tested Model 2 consists of five latent variables: attitudes, subjective norms, self-efficacy, perceived control, and behavioural intentions - a modified model of Ajzen's original TPB model

Table 1 Descriptive statistics, reliability, and correlations for all continuous variables

Variables	ATT	SN	PBC	SE	PC	BI	Age	Y-Ser
Attitudes (ATT)	1							
Subjective Norms (SN)	0.11	1						
Perceived Behavioral Control (PBC)	0.36*	0.29*	1					
Self-Efficacy (SE)	0.40*	0.33*	0.88*	1				
Perceived Control (PC)	0.19*	0.15*	0.82*	0.44*	1			
Behavioural Intentions (BI)	0.40*	0.41*	0.63*	0.73*	0.30*	1		
Age	0.02	−0.03	−0.18*	−0.13*	−0.17*	−0.10	1	
Y-Ser	0.03	−0.02	−0.18*	−0.12*	−0.19*	−0.05	0.76*	1
Means	11.78	11.23	17.49	9.28	8.21	10.28	27.72	2.48
Standard Deviations	2.99	5.35	6.43	4.05	3.47	4.25	6.46	2.13
Range	4–21	4–28	6–42	3–21	3–21	3–21	20–57	1–35
Possible Range	3–21	4–28	6–42	3–21	3–21	3–21	n/a	n/a
Cronbach's Alpha	0.69	0.88	0.76	0.79	0.61	0.77	n/a	n/a

Statistical significance: *$p<0.05$

Discussion

There were two primary objectives in carrying out the current research project. The first objective was to empirically test competing conceptualizations of a widely used model of volitional behaviour in the psychological literature, namely Ajzen's (1991) Theory of Planned Behavior, using rigorous and stringent statistical methodologies. Researchers have argued about how the TPB can be most accurately and parsimoniously conceptualized, with Armitage and Conner (2001) calling for the PBC construct to be divided so that internal and external control factors can be considered separately, while Ajzen (2002a, b) has consistently argued in favour of a single latent control variable incorporating both the internal and external control components. Despite these differing theoretical arguments, very little empirical work has been undertaken in the last decade to directly compare these competing conceptualizations. An alternative models approach employing confirmatory factor analysis provides an appropriate method of investigating this question from an empirical perspective.

Table 2 Fit indices for two alternative SEM models of the TPB

Item	Model 1	Model 2
X^2	315.85	270.68
df	140	134
p	0.00	0.00
RMSEA	0.07	0.06
90 % CI	0.06 0.08	0.05 0.07
SRMR	0.07	0.06
AIC	17255.60	17210.90
CFI	0.86	0.89
TLI	0.83	0.86

RMSEA=Root-Mean-Square Error of Approximation; CI=Confidence Interval; SRMR=Standardized Root Mean Square Residual; AIC=Akaike Information Criterion; CFI=Comparative Fit Index; TLI=Tucker Lewis Index

As such, two distinct models were specified; the first is congruent with Ajzen's (1991) original conceptualization in which behavioural intentions are influenced by three latent factors (attitudes, subjective norms, and perceived behavioral control), and a second model congruent with the model recommended by Armitage and Conner (2001) in which behavioural intentions are influenced by four latent factors (attitudes, subjective norms, self-efficacy, and perceived control). Results of the CFA indicated that although Ajzen's (1991) original model of the TPB demonstrated adequate model fit according to the RMSEA, SRMR, CFI, and TLI values, the modified version suggested by Armitage and Conner (2001) yielded a superior model fit on each of the goodness-of-fit indexes and also demonstrated a superior AIC value.

These results provide strong empirical evidence in support of Armitage and Conner's (2001) conclusion that the TPB model would be improved by splitting the PBC construct into its constituent components; self-efficacy (internal control) and perceived control (external control). Further evidence supporting the utility of distinguishing the internal and external control elements of the PBC construct comes from the results relating to the direct influencing effects of self-efficacy and perceived control on behavioral intentions. Current results demonstrated that self-efficacy has a very strong, positive influence on the prediction of behavioral intentions while perceived control had no significant influence on intentions. Importantly, the present results contribute additional empirical support for the Integrated Model of Behavioral Prediction (IMBP: Fishbein and Ajzen 2010;

Table 3 Standardized and unstandardized factor loadings and regression weights (with standard errors) for Model 2

Item	β	B	SE
MEASUREMENT LEVEL			
Attitudes			
X1	69	1.00	–
X2	0.63	0.85	0.27
X3	0.63	0.80	0.25
Subjective Norms			
X4	0.75	1.00	–
X5	0.86	1.08	0.10
X6	0.83	1.06	0.09
X7	0.76	0.96	0.09
Perceived Control			
X8	0.46	1.00	–
X9	0.76	1.62	0.37
X10	0.52	1.21	0.25
Self-Efficacy			
X11	0.67	1.00	–
X12	0.85	1.08	0.09
X13	0.73	0.90	0.07
Intentions			
X14	0.67	1.00	–
X15	0.85	0.97	0.08
X16	0.67	0.78	0.07
R^2 Behavioural Intentions: R^2=0.93, SE=0.09, p<0.05			
STRUCTURAL LEVEL			
Attitudes ==>Intentions	−0.01	−0.01	0.15
Subjective Norms ==>Intentions	0.20*	0.23	0.10
Perceived Control ==>Intentions	−0.15	−0.31	0.27
Self Efficacy ==>Intentions	0.96*	1.08	0.19
Age ==>Intentions	−0.17*	−0.03	0.01
Employment ==>Intentions	0.23*	0.26	0.08

All Factor loadings are statistically significant (p<0.05). Statistical significance: * p<0.05

Fishbein 2000), an alternative adaptation of the Theory of Reasoned Action (Fishbein and Ajzen 1975) to Ajzen's TPB model. The IMBP includes attitudes and subjective norms as direct predictors of behavioural intentions however this model specifies self-efficacy (internal control) rather than perceived control (external control) as the major perceived behavioural control factor in the prediction of behavioural intentions. Given that self-efficacy was found to be the strongest predictor of behavioural intentions while perceived control made no impact, current findings suggest that intentions to participate in psychological counseling among the police profession can be better understood with reference to the IMBP rather than the TPB.

Table 4 Correlations between the latent factors

Item	Att	SN	PC	SE
Attitudes (Att)	–			
Subjective Norms (SN)	0.15	–		
Perceived Control (PC)	0.38*	0.23*	–	
Self Efficacy (SE)	0.62*	0.38*	0.62*	–

Statistical significance: * p<0.05

This discovery is highly important as it appears that what is of most importance when it comes to intending to participate in counseling, for these police officers, is a strong belief in their own internal capacity to undergo such a process of treatment, not their beliefs regarding the availability of the necessary resources or potential barriers in the external environment which could influence their ability to participate in psychological counseling. Such a crucial finding would be impossible to identify without distinguishing the PBC construct into separate latent factors.

The second objective of the current study sought to determine the efficacy of the TPB in the prediction of behavioural intentions to engage in counseling among a sample of Irish police officers. To date, the TPB has not been employed as frequently in the prediction of mental health related behaviors as it has with other physical health related behaviors. This is a curious discovery given the strength of evidence supporting the efficacy of the TPB to predict health related behaviors and intentions (Armitage and Conner 2001). We believe that great strides could be made in the prediction and understanding of mental health behaviors through the use of an empirically verified, integrated social-cognitive model of behavior such as the TPB or the IMBP.

Results from the structural equation modeling analysis lend credence to this assertion. The modified version of the TPB supported in this study explained 92.6 % of variance in the police officers intentions to engage in psychological counseling. This is a considerably higher level of variance explained in intentions compared to a previous study by Smith et al. (2008) who also examined the efficacy of the TPB to explain counseling seeking intentions using an SEM approach. The high level of variance explained in intentions relative to prior research findings is likely due to the fact that the current study considered an alternative factor structure of the TPB which was demonstrated to possess excellent model fit of the data and to be superior to the three-factor conceptualization of the TPB which was employed previously. Current findings, in addition to the findings of Smith et al. (2008), Skogstad et al. (2006) and others (e.g. Mo and Mak 2009; Westerhoff et al. 2008) provided substantial empirical supporting attesting to the efficacy and the utility of the TPB in the prediction of counseling seeking behavior. These findings provide initial evidence that the TPB is well suited to investigate the prediction of various other mental health related behaviors.

Results indicated that among this sample of Irish police officers self-efficacy, and to a much lesser degree, subjective norms were significantly associated with intentions to participate in counseling with a professional psychologist. Generally speaking, police officers with greater intentions to participate in psychological counseling had a high degree of belief in their own capability to engage in the counseling process and were more responsive to the perceived pressures from significant others in their lives to participate in counseling. Given that the police profession is a highly stressful one in which a substantial minority of officers experience a range of stress-induced psychological maladies that are highly responsive to psychological interventions (Butler et al. 2006), increasing intentions to undergo counseling is of great importance. Results from this research suggest that the most fruitful target of intervention lies in increasing one's sense of self-efficacy to go through the process of psychotherapy. It appears that greater an individual's belief in their own ability to enter therapy the more likely they will be to intend to participate in counseling should they ever require treatment.

Social pressures also appear important in increasing intentions to participate in counseling. Participants who reported more favorable subjective norms were more likely to intend to participate in counseling. Encouraging family members, friends, and colleagues to facilitate a positive evaluation of engagement in counseling would likely result in a greater uptake in counseling services.

Age of the participant and number of years service also emerged as significant predictors of intentions to participate in counseling however a curious result emerged with age negatively associated with intentions while the number of year's service of participants being positively associated with intentions. This seemingly contradictory finding may well be a consequence of the fact that the current sample was quite young and the majority these officers had less than two years experience. Our results suggest that younger officers were more likely to intend to participate in counseling, and as these younger officers gain more experience in the police profession their intentions to engage in counseling increase. Further research with a specific focus on this possible trend is required however in order to gain a clearer understanding.

Limitations and Conclusion

As with any research endeavor there are a number of limitations associated with the current study that the reader would do well to consider. The sample used in this study was very specific; even with respect to the police population the individuals recruited to participate in the study were generally young and inexperienced in their careers as police officers. Future research should preferably utilize more diverse populations groups to test the efficacy of the TPB to predict intentions to participate in counseling. Although typical of this kind of research, the current study employed the use of a hypothetical scenario to assess police officers intentions to engage in counseling. Due to this methodological limitation it remains distinctly opaque as to the capability of respondents to realistically place themselves in the described hypothetical situation. Replicating this study among a clinical population who has received a diagnosis of a psychiatric or psychological disorder would therefore be beneficial. The cross-sectional design employed in the current study to measure intentions makes it impossible to draw any conclusions regarding the predictive ability of intentions on actual counseling seeking behaviour. Use of a longitudinal design would be most preferable in investigating the connection between intentions and behaviour therefore future research efforts employ such methodologies. Prior to such research taking place, it was necessary however to provide initial empirical support for the application of a social-cognitive model in the prediction of counseling seeking intentions. One further limitation of the current study is that we did not assess whether any prior engagement in psychological counseling predicts intentions, or whether current mood had an effect one's intentions. It would be useful to consider relevant past behavior as a possible predictor of future behavior while controlling for the possible effects of emotional distress on an individual's self-report level of behavioral intentions.

In conclusions, current findings suggest that the TPB is an efficacious model in the prediction of intentions to participate in psychological counseling and suggests that the model could be well utilized investigating the prediction of many other mental health related behaviors. Furthermore, results from the CFA suggest that the TPB can be more parsimoniously explained by altering the PBC construct from a single latent factor to two distinct latent factors representing the internal and external control factors, respectively.

Appendix

Please read the following scenario and answer the questions, which are based on the scenario.

Six weeks ago while out walking Terry witnessed a severe road traffic accident. Terry, having basic first aid training, attempted to aid the victims of the accident. In the six weeks since witnessing the accident Terry has shown noticeable behavioural and personality changes. Terry has reported feeling no energy and extremely sad for most of each day. Terry has also been plagued by disturbing thoughts since witnessing the road traffic accident. Due to these disturbing thoughts Terry's sleep patterns have become erratic. Terry has become socially withdrawn, refusing to go out with friends and has lost interest in activities that

were once a source of enjoyment. Two weeks ago Terry suddenly began to feel extremely anxious when out walking and in the last week Terry has refused to leave the house at all, even for work.

Terry's best friend Chris, worried about the noticeable changes in Terry's behaviour, sought the advice of the local G.P. The G.P. advised Chris that Terry should go along to see a professional psychologist to receive counseling for these problems as soon as possible. Chris made an appointment with a professional psychologist on Terry's behalf for next week and has urged Terry to keep the appointment and go along to see the psychologist.

Now please answer the following questions putting yourself in the position of Terry, so that to the best of your ability, you are answering these questions as if you were in Terry's situation:

1. How likely is it that you would intend to go along to see a professional psychologist for counseling within the next week if you were in Terry's position?

Likely	_____	_____	_____	_____	_____	_____	_____	**Unlikely**
	extremely	quite	slightly	neither	slightly	quite	extremely	

2. For you to go along to see a professional psychologist within the next week would make you feel:

And again, if you were in Terry's position…

Good	_____	_____	_____	_____	_____	_____	_____	**Bad**
	extremely	quite	slightly	neither	slightly	quite	extremely	
Valuable	_____	_____	_____	_____	_____	_____	_____	**Worthless**
	extremely	quite	slightly	neither	slightly	quite	extremely	
Proud	_____	_____	_____	_____	_____	_____	_____	**Ashamed**
	extremely	quite	slightly	neither	slightly	quite	extremely	

3. Do you think you would have the ability to participate in counseling with a professional psychologist within the next week?

Definitely Do Have The Ability	_____	_____	_____	_____	_____	_____	_____	**Definitely Do Not Have The Ability**
	1	2	3	4	5	6	7	

4. Do you feel that whether or not you participate in counseling with a professional psychologist within the next week is entirely up to you:

Agree	_____	_____	_____	_____	_____	_____	_____	**Disagree**
	strongly	quite	slightly	neither	slightly	quite	strongly	

I would like to know how you think other people might expect you to act, if you were in Terry's position, with regard to participating in counseling with a professional psychologist within the next week. For example would you say that?

5. It is likely that your closest friends think that you should participate in counseling with a professional psychologist within the next week:

Likely _____ _____ _____ _____ _____ _____ _____ **Unlikely**
extremely quite slightly neither slightly quite extremely

6. It is likely that your closest family members think that you should participate in counseling with a professional psychologist within the next week:

Likely _____ _____ _____ _____ _____ _____ _____ **Unlikely**
extremely quite slightly neither slightly quite extremely

7. It is likely that your partner (wife/husband, boyfriend/girlfriend) thinks you should participate in counseling with a professional psychologist within the next week:

Likely _____ _____ _____ _____ _____ _____ _____ **Unlikely**
extremely quite slightly neither slightly quite extremely

8. It is likely that most people you know would think that you should participate in counseling with a professional psychologist within the next week:

Likely _____ _____ _____ _____ _____ _____ _____ **Unlikely**
extremely quite slightly neither slightly quite extremely

And how likely is it that you would agree that if you were in Terry's position,

9. You will try to participate in counseling with a professional psychologist within the next week:

Likely _____ _____ _____ _____ _____ _____ _____ **Unlikely**
extremely quite slightly neither slightly quite extremely

10. To what extent do you see yourself capable of participating in counseling with a professional psychologist within the next week:

Capable _____ _____ _____ _____ _____ _____ _____ **Incapable**
extremely quite slightly neither slightly quite extremely

11. How much personal control do you feel you have to participate in counseling with a professional psychologist within the next week:

Complete Control _____ _____ _____ _____ _____ _____ _____ **No Control**

1 2 3 4 5 6 7

12. Do you feel confident that you would be able to participate in counseling with a professional psychologist within the next week?

Agree _____ _____ _____ _____ _____ _____ _____ **Disagree**
strongly quite slightly neither slightly quite strongly

13. Do you feel that participating in counseling with a professional psychologist within the next week is beyond your control?

Not At All _____ _____ _____ _____ _____ _____ _____ **Very Much So**
1 2 3 4 5 6 7

14. You have decided to participate in counseling with a professional psychologist within the next week:

Agree _____ _____ _____ _____ _____ _____ _____ **Disagree**
strongly quite slightly neither slightly quite strongly

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