

## Key variables for effective intervention in academic dishonesty Variables clave para una intervención eficaz en deshonestidad académica

*Adhara Río*<sup>1</sup>, ORCID 0000-0002-9411-8194

*Mar Durán*<sup>2</sup>, ORCID 0000-0002-3587-7115

*María José Ferraces*<sup>3</sup>, ORCID 0000-0003-4308-3427

*Mauro Rodríguez*<sup>4</sup>, ORCID 0000-0001-7022-2811

<sup>1 2 3 4</sup>Universidad de Santiago de Compostela, Galicia. España

**Abstract:** The fundamental objective of this paper is to explore the importance of positive and negative emotions and past behaviour on the intention to engage in dishonest academic behaviour beyond the explanation given by the Theory of Planned Behaviour. We used a final sample of 262 students from the University of Santiago de Compostela, aged between 18 and 26 years. The results show that the variables added significantly increase the model's explanatory capacity ( $\Delta R^2 = 22\%$ ). This, along with the relationship between the variables with behavioural intention [positive emotions ( $\beta=.10$ ), past behaviour ( $\beta = .51$ )], is what allows these variables to acquire explanatory relevance in the model and provides us with the tools necessary to intervene in and help improve the academic training of our young people.

**Key words:** emotions, past behaviour, theory of planned behaviour, intention, academic dishonesty

**Resumen:** El objetivo fundamental de este trabajo es explorar la importancia de las emociones, positivas y negativas, y la conducta pasada en la intención de llevar a cabo conductas académicas deshonestas más allá de la explicación dada por la Teoría de la Conducta Planificada. Se utilizó una muestra final de 262 estudiantes de la Universidad de Santiago de Compostela, con edades comprendidas entre los 18 y 26 años. Los resultados mostraron que las variables añadidas aumentan de manera significativa la capacidad explicativa del modelo ( $\Delta R^2=22\%$ ). Esto, junto con la relación que presentan las variables con la intención conductual [emociones positivas ( $\beta=.10$ ), conducta pasada ( $\beta=.51$ )], es lo que hace que estas variables adquieran relevancia explicativa en el modelo y nos dote de herramientas necesarias para intervenir y ayudar a mejorar la formación académica de nuestros jóvenes.

**Palabras clave:** emociones, conducta pasada, teoría de la conducta planificada, intención, deshonestidad académica

Received: 04/17/2018

Accepted: 02/18/2019

How to cite this article:

Río, A., Durán, M., Ferraces, M. J., & Rodríguez, M. (2019). Key variables for effective intervention in academic dishonesty. *Ciencias Psicológicas*, 13(2), 356–366. doi: 10.22235/cp.v13i2.1892

*Correspondence:* Adhara Río Pombo, Email: adhara.río@gmail.com. Mar Durán Rodríguez, Email: mar.duran@usc.es. María José Ferraces Otero, Email: mjose.ferraces@usc.es. Mauro Rodríguez Casal, Email: mauro.rodriguez@usc.es.



This work is licensed under a Creative Commons Attribution 4.0 International License

## Introduction

There is clear evidence of different forms of academic dishonesty being risk behaviours that are prevalent and standardised among university students (McCabe, Treviño & Butterfield, 2001; Vandehey, Diekhoff & LaBeff, 2007; Whitley, 1998) and, given the commitment of universities to society to train competent, responsible and upstanding professionals, this problem is a matter of paramount importance.

These actions aimed at obtaining academic approval by dishonest means, in addition to preventing the acquisition of skills necessary for the performance of professionals, are related to the consolidation of dishonest labour practices. Different studies have underscored the importance of acting on this behaviour by directly relating it to future malpractice, which may threaten success in one's professional career, or place the organisation at risk by committing different infractions and ethical violations that will have an enormous social impact (Carpenter, Harding, Finelli & Passow, 2004; McCall, Lombardo & Morrison, 1988; Nonis & Swift, 2001; Rakovski & Levi, 2007).

Studies conducted in this setting show high incidence rates. As evidence of this, a review carried out by Whitley (1998) on 107 studies in university students reports a prevalence range of between 9% and 95%, the average being an alarming 70.4% of young people who had engaged in some kind of dishonest academic behaviour. Along the same lines, another cause for concern is the dramatic increase of this trend over the last 30 years, where the most significant increases are found in the specific behaviour of copying in a test or exam (McCabe, Trevino and Butterfield, 2001), and which is borne out by the results obtained by Vandehey, Diekhoff & LaBeff (2007) in a follow-up study conducted over 20 years, in which the percentages increased by almost 10% in just one decade.

However, although numerous prevalence studies have been carried out in different countries (Brimble & Stevenson Clarke, 2005; Hopp & Hoover, 2017; Hughes & McCabe,

2006; Magnus, Polterovich, Olafson, Schraw & Kerhwald, 2014; Oran, Can, Şenol & Hadımlı, 2016; Whitley, 1998), research among the Spanish population has been very scarce, virtually non-existent, with just two prominent studies: the first was conducted from the Blanquerra University School of Nursing, Physiotherapy and Nutrition, with a total sample of 468 subjects, of whom 28% said they had copied during an exam and 68% had resorted to dishonest practices at some point in their undergraduate studies (Rey-Abella, Blanch & Folch-Soler, 2006); the second is a recent Spanish study carried out by Comas, Sureda, Casero and Morey (2011) on a sample of 560 university students from the Balearic Islands, in which they found that the most frequent dishonest academic practice was allowing another student to copy from the exam itself, followed by copying from classmate during the exam. An alarming 46.4% of the subjects admitted to having done so on at least one occasion.

Although there is degree of controversy when defining dishonest academic behaviours (copying in exams, plagiarism of already submitted work, plagiarism of work via the internet, etc.), this study measures the specific behaviour of copying in an exam, as it is one of the most prevalent in the results of previous research, and given that the written exam is the principal method for evaluating learning at all levels of the Spanish educational community, defining the behaviour as *“plagiarising or reproducing the answer to a question in an examination from another colleague, with or without their consent. Answering a question by consulting the text in which the answer appears”*.

The high and increasing prevalence of this problem, its future repercussions, and the lack of research carried out in the Spanish sample all go to underscore the need to study and increase our understanding of the psychosocial factors that influence the maintenance and consolidation of these behaviours, in order to be able to propose specific measures for the prevention thereof.

Most of the studies relating to academic misconduct have focused on demographic,

situational and personal variables; some have used the Theory of Planned Behaviour (Ajzen & Madden, 1986), with favourable results in the study of the mediating variables and the prediction of intention. In accordance with the Theory of Planned Behaviour (TPB), the immediate determinant of behaviour is behavioural intention. This, in turn, is determined by attitude towards the behaviour, subjective norm and perceived behavioural control. These three variables are based on behavioural, normative and control beliefs, respectively. Nonetheless, as the authors point out, there are factors which can limit subjects' will to engage in a determined behaviour. Accordingly, perceived control, along with intention, will also be considered an immediate determinant of behaviour.

One of the cornerstones for using this model as a theoretical framework for studying this behaviour is the results obtained in the meta-analysis conducted by Whitley (1998) on 107 studies published between 1970 and 1996. From this review, among other conclusions, it can be surmised that both students who had favourable attitudes to copying (attitude towards behaviour) and those who felt that their social norm permitted them to do so (subjective norm), as well those who perceived themselves as more effective when copying (perceived behavioural control), were more likely to engage in such dishonest behaviours than those who had unfavourable attitudes, who did not feel permitted to do so by their social norm and who felt less effective. Additionally, in those studies that used the TPB as a theoretical framework, it was found that all the classic variables of the model were significant, predicting, on average, between 28% and 39% of the variance of the intention and concrete behaviour of copying, respectively.

A further example of the model's explanatory capacity in this setting is the research conducted by Beck and Ajzen (1991) on the prediction of dishonest behaviours on the basis of the TPB, which resulted in a high percentage (82%) for explained variance for the intention of copying in an exam.

Although the TPB is one of the most extensively used to predict a wide variety of behaviours, according to a recent meta-analysis by McEachan, Conner, Taylor and Lawton (2011), its explanatory capacity in risk behaviours, such as the one under study here, has not been very high (between 13.8% and 15.3%), with relationships being found between the model's different moderate or insignificant variables, owing to which, from a number of different studies, an extension of the model has been proposed, by adding additional variables with a view to increasing its explanatory power.

In the context of risk behaviours in general, and academic misconduct in particular, there have been different proposals, such as adherence to academic integrity and cognitive dissonance (Stone, Jawahar & Kisamore, 2009), different personality variables (Lonsdale, 2017; Stone, Jawahar & Kisamore, 2010), or the moral norm (Hilbert, 2016; Stone, Jawahar and Kisamore, 2010). However, among all the variables added to the model found in the review in this setting, Past Behaviour (PB) stands out for having obtained the best results in terms of significant increases in variance, for both intention and behaviour.

The incorporation of Past Behaviour into the model was already a matter of debate in the formulation of the Theory of Reasoned Behaviour, the precursor of the TPB. Authors such as Bentler and Speckart (1979, 1981), Cialdini, Petty and Cacioppo (1981), Echevarria, Paez and Valencia (1988), among others, have already formulated the need to integrate past behaviour into the model to increase its predictive capacity. Nonetheless, for Ajzen & Fishbein, prior experience would have no direct bearing on intention or behaviour, since the effect of the same would appear in the attitude itself; hence, the incorporation thereof would not increase the model's predictive capacity. Ensuing studies showed that the inclusion of this variable not only increased the predictive capacity of the model, but also had a direct effect on behaviour and behavioural intention (Echevarria et al. 1998). Later studies into the

specific behaviour of copying support these conclusions. Passow, Mayhew, Finelli, Harding and Carpenter (2006) found that the frequency with which subjects had copied exams at high school contributed significantly (by 10%) in their current frequency of copying. On the other hand, Harding, Mayhew, Finelli and Carpenter (2007) discovered that the PB not only increased the predictive capacity of the model, but also had a direct bearing on both behaviour and intention. In a recent study, Cronan, Mullins and Douglas (2018) found that, after attitude, this variable was the second strongest predictor of Intention, ahead of Subjective Norm and Perceived Behavioural Control, classic variables of the model.

The other variable added to our model is Anticipated Emotions. A line of study has recently been opened in which emotions occupy a central role in the study of different intentions of action, becoming an important variable to consider in relation to different behaviours, with results that support its inclusion (Ajzen, 2011; Ajzen & Sheikh, 2013; Ravis, Sheeran & Armitage, 2009). Although no forerunner for the inclusion of these variables into the study of academic dishonesty has been found in the literature, in our study, it was decided to include anticipated emotions as risk behaviours are behaviours of high emotional involvement which are difficult to address as a whole from a model of basically rational person. Both anticipated positive emotions (APE) and anticipated negative emotions (ANE) have been included, since behaviour of this type has both positive and negative aspects for the perception of the student. The former may be more immediate and are linked to the achievement of a good academic outcome, and the negative ones (learning deficits, non-attainment of educational objectives, bad work practices, infractions, etc.) would occur in the medium to long term.

Given that, in this risk behaviour, these variables have never been studied together, and more specifically, the influence of emotions has not previously been investigated in the setting of academic dishonesty, the

principal objectives of this study can be divided into the following: 1) ascertaining the possible contribution that the variables added to the original model make in explaining the intention to copy; and 2) specifying the type of relationship established between these new variables and those from the TPB.

## Method

### *Participants*

The initial sample comprised N = 262 students from the University of Santiago de Compostela, aged between 18 and 26, of which 48 were male (18.3 %) and 214 female (81.7 %). The average age of participants was 20.37, with a standard deviation of 3.41 years. The questionnaires were applied collectively in classrooms in the University of Santiago de Compostela, during class hours, with the collaboration of the teachers responsible for each of them. In all cases, notification was given that completion of the questionnaire was completely voluntary and all students gave their express verbal consent to participate in the investigation. Anonymity and confidentiality were also guaranteed.

### *Instrument*

To conduct this study, a questionnaire was constructed based on the instructions provided by Ajzen (2002) and taking into account the subsequent review made by the author himself in 2006 (<http://people.umass.edu/aizen/pdf/tpb.measurement.pdf>). Following the author's indications, intention was defined in terms of its elements: Objective, Action, Context and Time (OACT). In this work the action (copying), the objective (an exam), the context (the classroom) and the temporal fraction (the next evaluation), a period of time which Ajzen leaves to the researchers' own choice, are defined.

Each item was drafted based on the indications provided by the author (Ajzen, 2002, 2006). The resulting items were presented clearly and precisely, in a manner

that allowed subjects to issue value judgments, thus offering different opposing alternatives, from the most favourable to the most unfavourable, depending on different categories or response options. Each subject responded to both Likert and Semantic Differential scales.

Items referred to both the classic variables of the model (attitude towards behaviour, subjective norm, perceived behavioural control and intention) and the new variables included (emotions, moral norm and past behaviour).

To measure *Attitude towards the Behaviour*, we used a 7-point semantic differential scale, comprising one single item and five pairs of adjectives. To do so, we have taken into account the two components given by the global evaluation of the individual and which Ajzen calls instrumental (harmful-beneficial) and another more experimental one (unpleasant-pleasant), respectively. “*For you, copying in an exam is...*”, “*detrimental/beneficial, unpleasant/pleasant, useless/useful, bad/good, boring/fun*”.

To measure *Subjective Norm* (SN), 8 items were prepared, attempting to gather the expectations that the subject believes its significant groups have, differentiating the expectations of friends from those of family members: “*The majority of my friends/relations think that (I should/should not) copy in an exam in the next evaluation*”. “*My friends/relations expect me to copy in some exam in the next evaluation (extremely improbable/extremely probable)*”. “*My friends/relations (disapprove/approve) of my copying in an exam in the next evaluation*”. “*Some of my friends/relations (do not copy in exams/copy in exams)*”.

According to Ajzen (2002), *Perceived Behavioural Control* (PBC) must contain items of self-efficacy and controllability. On the basis thereof, 4 items were used, 2 based on self-efficacy: “*In your opinion, copying in an exam in the next evaluation is...*”. “*If you wanted to, you would be able to copy in an exam in the next evaluation*”, between “*totally impossible*” and “*entirely possible*” and between “*Completely false*” and “*entirely*

*true*”, respectively. And two more on controllability: “*How much control do you think you have over copying in an exam in the next evaluation?*” “*Whether I copy in an exam in the next evaluation depends almost entirely on me*”, between “*I have no control*” and “*I have complete control*” and between “*totally disagree*” and “*totally agree*”, respectively.

To ascertain *intention*, 2 items were used: “*I intend to copy in an exam in the next evaluation*”. “*I will attempt to copy in an exam in the next evaluation*”, between “*highly improbable*” and “*highly probable*” in the former and between “*definitively false*” and “*definitively true*”, in the latter.

As has already been pointed out, new variables have been added to the classical ones for the TPB. Thus, in order to measure *emotions*, we used one single item which includes 9 emotions, both positive and negative: “*If you copied in an exam in the next evaluation, you would feel: anger, guilt, enthusiasm, fear, happiness, shame, regret, confidence and sadness*”. In this case, the scale ranged from 1 = not at all to 7 = totally. The preparation of this item is based on the previous contributions of different authors who include the anticipated affect variable into the classic model in the setting of different risk behaviours, such as the one presented here (Ajzen & Sheik, 2003; Caballero, Carrera, Sánchez, Muñoz & Blanco, 2003; Caballero, Toro, Sánchez & Carrea, 2009; Conner, Graham & Moore, 1999).

Following the indications of Ajzen (2002), the final variable, *past behaviour* (PB), was measured with two items and was formulated as follows: “*How often did you copy during the last term/four-month period?*” Between “*never*” and “*always*”. “*Have you ever copied in an exam?*” “*yes*” or “*no*”.

### **Procedure**

The questionnaire was handed out collectively in class time. The anonymity and confidentiality of participants' responses was guaranteed at all times, with the importance of sincerity in responses being stressed.

**Data analysis**

In order to establish the possible dimensionality of anticipated emotions, an exploratory factor analysis was conducted and two significant factors were obtained. On one hand, a factor of positive emotions (APE), comprising enthusiasm, happiness and confidence; and on the other, of negative emotions (ANE), comprising anger, guilt, fear, shame, remorse and sadness. Both explained 66.95% of the variance.

Subsequently, an analysis of the  $\alpha$  internal consistency coefficients and the correlations between variables was performed (see Table 1). Two hierarchical regressions were then conducted in which the dependent variable

was intention to copy in an exam. In Step 1, the TPB variables were analysed. Later, positive and negative emotions (APE and ANE) and past behaviour were included, in order to ascertain the contribution that they all made in this intention to copy (see Table 2). The independence statistics of the residuals were tested using the Durbin-Watson test, obtaining values of 1.89 and 1.96, respectively (there is no self-correlation). When analysing all the variables together, an important change was observed in the pattern of influence of those variables characteristic of the TPB. Thus, in order to verify the possible causes, a mediation analysis was performed and an explanatory model was proposed by means of *path analysis* with AMOS 20.

Table 1.  
Means, standard deviations, alphas and correlations

|           | <i>M</i> | <i>SD</i> | $\alpha$ | Intention | Attitude | SN     | PBC    | APE    | ANE    |
|-----------|----------|-----------|----------|-----------|----------|--------|--------|--------|--------|
| Intention | 1.81     | 1.30      | .94      |           |          |        |        |        |        |
| Attitude  | 2.98     | 1.13      | .79      | .49**     |          |        |        |        |        |
| SN        | 2.73     | .93       | .76      | .45**     | .57**    |        |        |        |        |
| PBC       | 5.80     | 1.54      | .79      | -.19**    | -.26**   | -.23** |        |        |        |
| APE       | 1.76     | .97       | .78      | .42**     | .49**    | .37**  | -.23** |        |        |
| ANE       | 3.75     | 1.59      | .88      | -.39**    | -.58**   | -.39** | .16**  | -.32** |        |
| PB        | .98      |           | ---      | .66**     | .44**    | .37**  | -.18** | .38**  | -.32** |

Note: (SN= Subjective Norm; PBC= Perceived Behavioural Control; APE= Anticipated Positive Emotions; ANE= Anticipated Negative Emotions; PB= Past Behaviour) \*  $p < .05$ ; \*\*  $p < .01$

Table 2.  
Hierarchical regression with variables of the TPB, Positive and negative emotions, Moral Norm and Past Behaviour

|          | Step 1  |       | Step 2  |              |        |
|----------|---------|-------|---------|--------------|--------|
|          | $\beta$ | $R^2$ | $\beta$ | $\Delta R^2$ | $R^2$  |
| Attitude | .40***  |       | .15*    |              |        |
| SN       | .35***  | .28** | .20**   | .04***       |        |
| PB       |         |       | .44***  | .22***       |        |
| APE      |         |       | .13*    | .01*         | .50*** |

Note: (SN= Subjective Norm; APE= Anticipated Positive Emotions; PB= Past Behaviour) \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\* $p < .001$

## Results

As can be seen, the  $\alpha$  internal consistency coefficients are all of a high magnitude (between .76 and .94). It can also be observed that all the variables analysed have significant relationships with the dependent variable. It is worth highlighting the correlations of PB ( $r^2 = .66$ ) and that of Attitude ( $r^2 = .49$ ).

Regarding the hierarchical regression data in the prediction of the Intention, in Step 1, it is observed that the variables of the TPB, except for Perceived Behavioural Control, are significant and account for 28% of the variance. In Step 2, when introducing the new variables, there is an increase in the explained variance with respect to Step 1 ( $r^2 = .50$ ), with these variables (except the ANEs) contributing significantly to increasing the variance (by 22 %) and improving the predictive capacity of the original model. A modification in the pattern of influence of the constructs proposed by Ajzen can also be observed, since, when Attitude and SN are analysed in conjunction with the added variables, the explanatory role thereof is reduced.

Taking the foregoing into account, and adhering to the recommendations of Baron & Kenny (1986), it would seem that part of the change in the influence of the classical variables of TPB on intention may be mediated by the anticipation of positive affective reactions and the individuals' prior

experience in engaging in the behaviour in the past. Thus, a mediation analysis was conducted using the attitude towards the behaviour as an independent variable, and anticipated positive emotions (APE) and past behaviour (PB) as mediating variables.

It was shown that the regression weighting of Attitude over Intention ( $B_1 = .56$ ) accounts for a variance of 49%. When APEs are included, this weighting dropped ( $B_1' = .31$ ), which could indicate that it was acting as a mediating variable for the attitude towards the behaviour-intention ratio. The Sobel tests (1982) corroborated the foregoing, showing a significant effect for this mediation ( $Z(\text{Sobel}) = 6.29$ ;  $p = .001$ ). The coefficient  $B_1 - B_1'/B_1 = .45$  indicates that 45% of the ratio between attitude intention is explained by the APE variable. In turn, PB also mediates in this relationship, as it was observed that the regression weighting of the Attitude over Intention ( $B_1' = .49$ ) accounts for a variance of 50%. When PB is included, this weighting drops ( $B_1' = .28$ ).  $Z = 7.17$ ;  $p = .00$ . The coefficient  $B_1 - B_1'/B_1 = .043$  indicates that 43 % of the attitude-intention ration is explained by the APE variable. Lastly, a path analysis was conducted with all variables. Given that the ANEs exercised no significant effect on intention, and that the resulting model did not provide an acceptable fit, a final one was performed, excluding them (Figure 1).

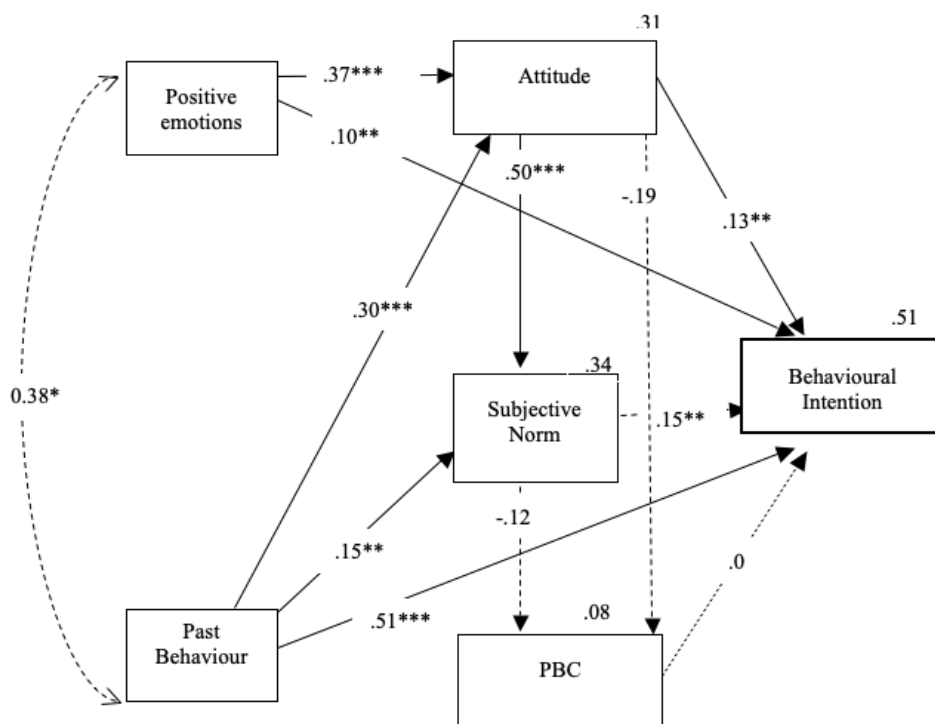


Figure 1.  
Structural Equation Model of the extended TPF model

Figure 1 shows that the APEs ( $\beta = -.10$ ), and PB ( $\beta = .51$ ) have a direct bearing on intention. All the added variables exerted an indirect influence on intention through the classic constructs of the model; thus, EPA exerts an indirect influence on intention through attitude and PB exerts an indirect influence through Attitude and SN. Total explained variance is 51% and the model fit is good ( $\chi^2 = 6,68$ ; g.l. = 3;  $p = .06$ ;  $\chi^2 / \text{g.l.} = 2.80$ ; GFI = .99; CFI = .99; RMSEA = .069 [.000- .141; SRMR = .31]).

### Discussion

Traditionally, it has been debated whether, as Ajzen proposes, the possible influence of emotions is provided for in the concept of attitude towards behaviour. We feel that these results seem to transcend that debate, since not only do we see the need to clearly differentiate them, but it is also particularly noteworthy that positive emotions have a direct and significant influence on intention.

A fundamental aim of this work has been to ascertain the possible contribution that emotions (both positive and negative) and past behaviour have on explaining the intention to engage in dishonest academic behaviours. On the one hand, the variables proposed have been shown to contribute significantly to increasing the variance explained for the original model. Those subjects who copied most during previous evaluations, who anticipate more positive reactions to such behaviour, those who perceive greater approval from their family and friends, and who have a higher score in attitude towards the behaviour (i.e., a positive attitude to copying) are those who have a greater intention to continue copying.

Here, it should be noted that, unlike in studies such as those of Rivis, Sheeran and Armitage (2009), positive anticipated emotions have a stronger relationship with intention than negative ones, possibly owing to immediate reactions to behaviour being more important for the subjects than the future repercussions on academic and work performance.



Past behaviour was the strongest predictor of intention, which seems to provide sufficient support to propose it as a predictor of this risk behaviour, given that it was directly and significantly associated with the intention of continuing to maintain said behaviour.

As it has also been possible to verify, the inclusion of the new variables resulted in a modification of the influences of the original variables of the TPB: The predictive power of both Attitude and SN was decreased due to the mediating role of the new variables added.

Nonetheless, in addition to emphasising the foregoing, the structural equation model proposed also highlighted another aspect which we consider to be highly noteworthy: not only do the variables proposed in this study have an indirect relationship with intention through the constructs of the TPF, as already pointed out by Ajzen in many of his works, but they also have a direct relationship. This means that these variables cannot be reduced to simple, insignificant residual relationships.

This direct relationship opens up a new field in which to investigate these contributions beyond the TPB model. It is also observed that the PBC, a classic variable of the model, does not play a significant role in intention and does not come into the regression equation. Thus, we could assume that intention to copy is linked more to components of positive emotions and experience than to feelings of efficacy or the controllability of the action. The foregoing leads us to the factors to be taken into account in the prevention of the harmful habit and its involvement.

Influencing the negative repercussions that this behaviour entails in the long term is another factor that should be considered in an intervention programme.

Being fully aware of the characteristics and limitation of the sample, and that all these results would need to be tested in more extensive samples, one of the major limitations we encountered when conducting this study was that related with study of affect. There is an enormous degree of heterogeneity when

specifying affective evaluations between different studies (Conner, 2013). There is a great deal of multiplicity, both in the selection thereof, in the measures employed to evaluate them, and in the temporal perspective (some evoked and others anticipated), which greatly hinders any possible comparison which may be established with the results of other research. The same is true for Past Conduct.

There is some disagreement in the scientific community regarding how to conceptualise and interpret the contribution of this variable. Some researchers see the impact of past behaviour as a result of a measuring error, or as a result of the presence of other factors which have not been taken into account (Ajzen 1991, 2002), while others see past behaviour as a significant construction which is too important to ignore (Verplanken & Aarts, 1999). Our results are in-line with the latter perspective, considering past behaviour as an element which is sufficiently relevant to be incorporated into the explanatory model of intentions and, very possibly, also into future behaviours.

A further limitation is the fact that the study focuses on behavioural intention and not on the behaviour itself. This is principally because, as Ajzen & Sheikh (2013) have already pointed out in their studies, emotions, if they are related, would be more related with the intention of engaging in a behaviour than with the behaviour itself; hence, we have opted for the study on the intention. Future research will also necessarily include the study of behaviour itself as an important variable to be taken into account and observing what may be happening in such a decisive step as that of the intention-behaviour relationship.

Authors' participation:

a) Conception and design of the work; b) Data acquisition; c) Analysis and interpretation of data; d) Writing of the manuscript; e) Critical review of the manuscript.

A.R. ha contribuido en a,b,c, d, e; M.D en a, d, c, d, e; M.J.F. en c, e; M.R. en d, c.

## References

- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211.
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and Theory of Planned Behavior. *Journal of Applied Social Psychology*, 32, 1-20.
- Ajzen, I. (2006). *Constructing a Theory of Planned Behavior Questionnaire*. Recuperado desde <http://people.umass.edu/aizen/tpb.html>
- Ajzen, I. (2011). Theory of planned behavior. *Handbook Theory Social Psychology*, 1(1), 438.
- Ajzen, I., y Madden, T. J. (1986). Prediction of goal-directed behavior: The role of intention, perceived control, and prior behavior. *Journal of Experimental Social Psychology*, 26, 305-328.
- Ajzen, I., y Sheikh, S. (2013). Action versus inaction: anticipated affect in the theory of planned behavior. *Journal of Applied Social Psychology*, 43(1), 155-162.
- Baron, R. M., y Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Beck, L., y Ajzen, I. (1991). Predicting dishonest actions using the theory of planned behavior. *Journal of research in personality*, 25(3), 285-301.
- Bentler, P. M., y Speckart, G. (1979). Models of attitude–behavior relations. *Psychological review*, 86(5), 452.
- Bentler, P. M., y Speckart, G. (1981). Attitudes" cause" behaviors: A structural equation analysis. *Journal of Personality and Social Psychology*, 40(2), 226.
- Brimble, M., y Stevenson-Clarke, P. (2005). Perceptions of the prevalence and seriousness of academic dishonesty in Australian universities. *The Australian Educational Researcher*, 32(3), 19-44.
- Carpenter, D. D., Harding, T. S., Finelli, C. J., y Passow, H. J. (2004). Does academic dishonesty relate to unethical behavior in professional practice? An exploratory study. *Science and engineering ethics*, 10(2), 311-324.
- Cialdini, R. B., R. E. Petty, y J. T. Cacioppo (1981) "Attitude and attitude change". *Annual Review of Psychology*, 32, 357–403.
- Comas, Rubén, Sureda, Jaume, Casero, Antonio, Morey y Mercè. (2011). La integridad académica entre el alumnado universitario español. *Estudios pedagógicos*, 37(1), 207-225
- Conner, M. (2013). Health cognitions, affect and health behaviors. *The European Health Psychologist*, 15, 33-39.
- Cronan, T. P., Mullins, J. K., y Douglas, D. E. (2018). Further understanding factors that explain freshman business students' academic integrity intention and behavior: Plagiarism and sharing homework. *Journal of Business Ethics*, 147(1), 197-220.
- Echevarría, A., D. Páez, y J. F. Valencia (1988) "Testing Ajzen and Fishbein's attitudes model: the prediction of voting". *European Journal of Social Psychology*, 18(2)181–190.
- Harding, T. S., Mayhew, M. J., Finelli, C. J., y Carpenter, D. D. (2007). The theory of planned behavior as a model of academic dishonesty in engineering and humanities undergraduates. *Ethics & Behavior*, 17(3), 255-279.
- Hilbert, T. R. (2016). *Relationships among academic dishonesty, moral obligation, and fraud detection software* (Order No. AAI3684964). Available from PsycINFO. (1780495579; 2016-99020-486). Retrieved from
- Hopp, C., & Hoover, G. A. (2017). How prevalent is academic misconduct in management research? *Journal of Business Research*, 80, 73-81.
- Hughes, J. M. C., y McCabe, D. L. (2006). Academic misconduct within higher education in Canada. *The Canadian Journal of Higher Education*, 36(2), 1.

- Lonsdale, D. (2017). Intentions to cheat: Ajzen's planned behavior and goal-related personality facets. *The Journal of Psychology: Interdisciplinary and Applied*, 151(2), 113-129
- McCall, M. W., Lombardo, M. M., y Morrison, A. M. (1988). *Lessons of experience: How successful executives develop on the job*. Nueva York: The Free Press.
- McCabe, D. L., Treviño, L. K., y Butterfield, K. D. (2001). Cheating in academic institutions: A decade of research. *Ethics & Behavior*, 11(3), 219-232.
- McEachan, R. R. C., Conner, M., Taylor, N. J., y Lawton, R. J. (2011). Prospective prediction of health-related behaviours with the theory of planned behaviour: A meta-analysis. *Health Psychology Review*, 5(2), 97-144.
- Nonis, S., y Swift, C. O. (2001). An examination of the relationship between academic dishonesty and workplace dishonesty: A multicampus investigation. *Journal of Education for business*, 77(2), 69-77.
- Olafson, L., Schraw, G., y Kehrwald, N. (2014). Academic dishonesty: Behaviors, sanctions, and retention of adjudicated college students. *Journal of College Student Development*, 55(7), 661-674.
- Oran, N. T., Can, H. Ö., Şenol, S., y Hadımlı, A. P. (2016). Academic dishonesty among health science school students. *Nursing Ethics*, 23(8), 919-931.
- Passow, H. J., Mayhew, M. J., Finelli, C. J., Harding, T. S., y Carpenter, D. D. (2006). Factors influencing engineering students' decisions to cheat by type of assessment. *Research in Higher Education*, 47(6), 643-684.
- Rakovski, C. C., y Levy, E. S. (2007). Academic dishonesty: Perceptions of business students. *College Student Journal*, 41(2), 466-482.
- Rey-Abella, F., Blanch, C. y Folch-Soler, A. (2006). Nivel de conducta académica deshonesto entre los estudiantes de una escuela de ciencias de la salud. *Enfermería Clínica*, 16(2), 57-61.
- Rivis, A., Sheeran, P., y Armitage, C. J. (2009). Expanding the affective and normative components of the Theory of Planned Behavior: A meta-analysis of anticipated affect and moral norms. *Journal of Applied Social Psychology*, 39(12), 2985-3019.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology*, 13, 290-312.
- Stone, T. H., Jawahar, I. M., y Kisamore, J. L. (2009). Using the theory of planned behavior and cheating justifications to predict academic misconduct. *Career Development International*, 14(3), 221-241.
- Stone, T. H., Jawahar, I. M., y Kisamore, J. L. (2010). Predicting academic misconduct intentions and behavior using the theory of planned behavior and personality. *Basic and Applied Social Psychology*, 32(1), 35-45.
- Vandehey, M., Diekhoff, G., y LaBeff, E. (2007). College cheating: A twenty-year follow-up and the addition of an honor code. *Journal of College Student Development*, 48(4), 468-480.
- Verplanken, B., y Aarts, H. (1999). Habit, attitude, and planned behaviour: is habit an empty construct or an interesting case of goal-directed automaticity?. *European review of social psychology*, 10(1), 101-134.
- Whitley, B. E. (1998). Factors associated with cheating among college students: A review. *Research in higher education*, 39(3), 235-274.