



A comparative analysis of public educational needs in the rehabilitative care of individuals who have committed serious criminal offences: A cross cultural study

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ABSTRACT

Political doctrine has arguably coloured public perceptions of prison, as a lone deterrent, in reducing crime rates. Literature pertaining to public attitudes of criminality reports harsher punitive views towards individuals who have committed criminal offences in the UK, but this has yet to be assessed by education level. In two independently sampled studies, we explored how degree-level classifications more broadly impact the punitive or rehabilitative leaning of an individual (*Study One*, $N = 180$), and whether associations were replicated for forensic psychology education more specifically, internationally (*Study Two*, $N = 183$). Whilst merely having a degree did not significantly impact punitive judgments, undertaking a forensic psychology degree specifically, relative to criminology or psychology degrees more broadly, resulted in more positive and less punitive attitudes. There is a clear need for transparency of the Criminal Justice System in the provision of better education, allowing members of the public to make better informed decisions of their punitive judgments of individuals who have committed serious criminal offences. Furthermore, a better understanding of perceptions of these individuals and implications they may have on their treatment; the derivation of such opinions implicating governmental policies regarding rehabilitative care in cases of serious crime. Individual implications for the Slovak educational system and the overall importance of forensic psychology as an independent course.

1. Introduction

Attitudes can predict behaviour related to politics and voting (Kraus, 1995), which in turn can directly impact the funding, research, and implementation of rehabilitative care for individuals who have committed serious criminal offences. Though the definition of an *attitude* has been debated, many subscribe to Haugtvedt et al.'s (2008) characterisation as “the tendency to respond to an object with some degree of favourableness or unfavourableness” (p.530). Indeed, the term plays a fundamental role in social psychology (Luttrell & Sawicki, 2020) and by extension, forensic psychology more specifically. The latter holds applicability in public research but is crucial in the professional realm as biases can influence individuals' treatment (Banyard et al., 2019; Neal & Brodsky, 2016). A complex relationship occurs between attitudes and the influence on attention, encoding, interpretation, memory, and behaviour (Maio & Haddock, 2009); all of which have applicability in

the field of forensic psychology. Contributing explorations to this relationship have found that the degree to which attitudes influence actions or behaviours varies according to the investigated topic or field (Kraus, 1995), but are hypothesised to be influenced by social conformity by means of strength of individual attitudes and uncertainty (Smith et al., 2007). Whilst these hypotheses have been linked with a fear of crime (McGowan, 2017), the attitude-behaviour relationship is most impacted by the strength of an individual's attitudes (Conner et al., 2022) – individuals are more likely to engage in behaviours when complying with strong personal beliefs.

Existing literature debates over the specific language used when researching individuals who have committed criminal offences and punitive attitudes (e.g., Chen & Einat, 2015; Mackey & Courtright, 2000; Payne et al., 2010; Stringer & Murphy, 2020). In the avoidance of confusion from inconsistent terminologies (Hill et al., 2012), we have opted for the term *individuals who have committed a serious criminal*

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offence, or in short ISCO, as reference to those engaged in criminal activity by the commission of a severe illegal act. For example, murder, rape, and actual bodily harm, amongst others. Similarly, *punitive attitudes* have been chosen for the allusion to personal attitudes of the severity of punishment for ISCOs, incorporating individual beliefs, values, emotions, and perceptions (Kury et al., 2004).

The average layperson seemingly knows little about the inner workings of the Criminal Justice System (CJS), crime rates, or underpinning theories of crime and punishment (Roberts, 1992; Vandiver & Giacomassi, 1997). If wider societies struggle with accessibility in understanding of these practices, the degree of public acceptance and confidence in legal practices is not fulfilled, preventing their necessity for a well-functioning system (Maruna & King, 2013). Current judicial systems in England & Wales have witnessed a shift from expert-driven penal policies to those expressive of public concerns (Dewhurst et al., 2023; Garland, 2001), with discrepancies being highlighted in the desire for harsher sentences but less so than estimated by politicians and lawmakers (Butts & Mears, 2001; Mastrocola, 2020; Pratt, 2018; Sparks et al., 2023). This discrepancy may be attributed to public fear of crime, the dark figure of crime (e.g., unreported or unrecorded crimes), or poor communication between the CJS and the general public (Braga et al., 2014; Flanagan & Longmire, 1996); the latter of which is imperative in correcting the existing fragmented relationship.

1.1. Fear of crime and the media

Research into Fear of Crime (FoC) has found associations with increased punitive attitudes towards ISCOs (De Soto et al., 2022), potentially explaining the notable value attitudes hold in the judicial system. In relation to FoC, it is assumed that increased public attitudes is common in democratic societies (Wood, 2013). However, there is scope for the progression of this idea coupled with the Guard Dog Theory of Media Coverage (Donohue et al., 1995), defined by the media protecting groups with sufficient power and influence to control public domains. Research into race, crime, and the media (Hammond et al) identified the reduction of racially prejudiced language being directly impacted by the US election of the first black President – mapping directly onto Wood's (2013) influence of democracy on public attitudes. Furthermore, FoC is directly associated with heavy media usage and susceptibility to believing distorted or exaggerated news stories (Callanan, 2012), and so, the truth seems to largely mislead public attitudes with the power to influence judicial policy.

Moreover, the glamorisation of true crime involving ISCOs and offences can be argued to affect an individual's FoC, and as such, affect their punitive attitudes. Generalised research suggests the public prefer punitive methods over rehabilitative (O'Hear & Wheelock, 2016), with serious offences, such as individuals who have committed sexual offences and homicide, at the forefront of punitive judgments (Rothwell et al., 2021). Serious crimes have been known to evoke negative emotions from the general public (Olver & Barlow, 2010; Willis et al., 2010), such as the big five: anger, fear, resentment, frustration, and anxiety (Cheung-Blunden & Blunden, 2008). With the flooding of true crime on streaming platforms, such as Netflix and Amazon Prime, these negative emotions are more likely to be conflated with FoC and projected onto an individual's punitive attitudes. Supporting data analyses revealed public support for harsher punishments in response to highly publicised crime (Butts & Mears, 2001), further enforcing the relationship between FoC, the media, and punitive attitudes. However, public opinion of criminality of any kind may fluctuate with social and economic changes and be affected by media representations of ignorance or increased reoffending rates (Levenson et al., 2007; Melossi, 2000; Serisier, 2017), and should not be relied upon for policy development or law-making. Indeed, comparisons between crimes in relation to FoC and media influence in the severity of public emotional discourse may be used (Olver & Barlow, 2010; Willis et al., 2010), but deductions should be interpreted with caution, highlighting the need for idiographic research.

On the other hand, few laypersons have direct experience of forensic settings, and as such, know little about the reality of prison (Roberts & Hough, 2005) – posing issues with the indication of public influence on governmental policy (Shapiro, 2011). Following docuseries and dramatised prison shows, the public are generally aware of violence in prisons but are usually ignorant to increased risk of health problems, assaults, self-harm, and suicide (Mills & Kendall, 2016), or the rise following prison isolations due to COVID-19 (Kothari et al., 2022). Nor are they usually appreciative of the difficulties of social reintegration following incarceration (Roberts & Hough, 2005), or the emotional and financial effect induction to the prison system may have on third parties associated with the ISCOs (Murray & Farrington, 2008), such as partners or children. Media stories tend to exaggerate facilities that some prisoners have access to, influencing a perception of easy prison life (Roberts & Hough, 2005). Arguably, current literature in the domain of print media suggests the UK public believe prison punishments to be easy and not punitive enough on ISCOs (Ford, 2015; Kirk, 2022; Knapton, 2008; Mowat, 2019). Farkas (1997) reported 60% of survey respondents in two US states believed incarcerated ISCOs spent their time 'playing cards and watching television' (p.269), with the British public mostly agreeing with the perception of soft incarceration (Maruna & King, 2013). As such, it can be postulated that public FoC is rooted in the fear of victimisation over the fear of punishment, but the awareness of prison conditions is severely lacking and there is little recent research into this subject area in conjunction with punitive judgments.

1.2. Educational processes on attitude change

In terms of educational needs, critical thinking is one of the primary goals of science education (Bailin, 2002), but the field lacks coherence and a defensible concept. Critical analysis, or thinking, is defined by the intellectually disciplined processes of actively and skillfully analysing information as a guideline for beliefs and actions (Bensley, 2010; Sternberg & Halpern, 2020). Specifically, forensic psychology is known to overlap with multiple scientific disciplines (e.g., criminology, psychiatry, and psychology, among others) with groundings in biological, social, cognitive, and developmental approaches, it is reasonable to assume the requirement of high-standard critical analysis in research development. Indeed, self-reflection and critical thinking are known to be imperative elements in developing individual scientific thought processes (Gredecki & Turner, 2021). There has been a spike in forensic psychology courses with the provision of theoretical and practical knowledge and experience (DeMatteo et al., 2009), despite the debate of requiring critical thought in the field of study as a profession versus a university course (Gredecki & Turner, 2021). Both academics and higher education students have similar understandings of critical thinking (Lloyd & Bahr, 2010), whereas research into mandatory education highlights the need for development in schools (Radulović & Stancić, 2017). As such, research converging critical thinking and forensic psychology, specifically in punitive attitudes of the general public, is relatively low in frequency. Therefore, enhanced critical thinking and criminological education may be required, but research is necessary in understanding the relationship with punitive attitudes.

By means of the Transformative Learning Theory (TLR; Mezirow, 1991), the combination of practical experience and education are theorised to impact individual attitude and attitude change. Although it has been argued that instrumental learning, direction, and specific steps are necessary in correctly addressing new understandings (Taylor, 2007), TLR gained traction via substantial empirical support. However, Damianakis et al. (2020), recognised a sizeable gap in the TLR, highlighting that successful transformation of information includes the ability to initiate self-reflection within a supportive environment, network, or relationship with the lecturer. While it is common for Western universities to engage students with information literacy (Andretta et al., 2008), and acknowledge the equality between tutor and tutee (Fletcher et al., 2015), this is not often a reflected practice in Eastern countries

(Lang & Zha, 2004), arguably impacting student learning processes. When applied to the Slovak educational system, it has been argued that students lack the applicability of the knowledge to specific problems (Džuganová, 2011). Furthermore, the lack of critical evaluation in scientific courses in Slovakia directly juxtaposes that of the UK requirements, limiting Slovak students and stressing the emphasis on theoretical knowledge over practical application (Sandanusová & Schlarmannová, 2020). As such, the direct comparison between critical thinking abilities between students in the Slovak and UK educational systems, in conjunction with the TLR, is imperative in understanding punitive attitude change on forensic psychology courses.

1.3. The present studies

Forensic psychology is recognised in academia as holding specific importance in the assessment, rehabilitation, and management of ISCOs (Bartol & Bartol, 2011), but is not independently taught internationally (Neto et al., 2020). When investigating the importance of forensic psychology education on positive attitude change, the impact of ISCO groups and behaviour-related courses should be examined in conjunction with improvement of correctional and rehabilitative facilities worldwide. The exclusion of interaction effects between demographic variables has been alluded to, specifically that of educational needs related to rehabilitation, punishment, and crime prevention (Chen & Einat, 2015), highlighting the requirement for investigations into differing attitudes amongst university students enrolled on criminology-related pathways. Similarly, previous research suggests criminology students are likely to hold harsher punitive attitudes towards ISCOs (Stacer et al., 2017), and professionals in policing were found to impose more negative opinions than the general public (Chen & Einat, 2015). Similarly, it has been recently found that students with a formal education in criminal justice fields of study were prone to weaker essentialist thinking about crime (Xu et al., 2022), but did not predict culpability and sentencing outcomes – suggesting a proneness to negative thinking about criminality. Despite these findings, there is a gap in research of the punitive stance forensic psychology students are likely to take, specifically in comparison to the public, enabling the deduction of forensic-centred education.

On the contrary, those educated in behavioural understandings and judicial processes have been evidenced to respond most positively towards ISCOs (Mandrachia et al., 2013). Where those graduating from hard science courses were likely to select significantly less severe sentences than non-science graduates when tested (Thomaidou & Berryessa, 2022), with the introduction of psychology as a more liberal science (Chien & Einat, 2014) we may predict similar results. Friestad et al. (2021) suggested that most studies into punitive attitudes were mostly conducted in Anglophone settings, and as such, this limitation is fulfilled by the use of non-Anglophone participants, specifically the lack of research into Slovak populations. Considering these points, the present study investigates two pathways of research: the influence of holding a degree-level education on punitive attitudes in a UK sample; and the influence of degree-specific education on the same judgments in an international (Slovak) population.

In this article, we present two studies to explore the need for forensic psychology informed education in members of the public, both domestic and internationally to better inform attitudes towards rehabilitative care for ISCOs. The first used a cross-sectional design with a multiple analysis of variance (MANOVA) to test the hypothesis that degree-level educated individuals will hold less punitive and more positive attitudes towards ISCOs and, that elevated Fear of Crime scores will translate to harsher punitive opinions. Building on this initial study, we then compared judgment scores across students undertaking forensic psychology-relevant degrees, specifically in UK and Slovak populations. Here, we predicted that forensic psychology students will demonstrate less punitive attitudes than Slovak criminology and psychology students; and, increased negative attitudes towards prisoners will map directly onto

punitive leanings towards ISCOs.

In contribution to existing literature in the field, the present study aims to examine the effect of degree-level, degree-type, and nationality on punitive attitudes toward ISCOs by forming and researching these hypotheses:

1.3.1. Study One

1. Degree-level holders will hold less punitive and more positive attitudes towards ISCOs.
2. Higher FOC scores will be associated with more punitive attitudes.

1.3.2. Study Two

1. Forensic psychology students will demonstrate more positive and less punitive attitudes than Slovak criminology and psychology students.
2. More negative attitudes towards prisoners will be associated with more punitive towards ISCOs.

2. Study one

2.1. Method

2.1.1. Participants

For both studies, we report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study. To determine our target sample size, we conducted a priori power analysis using G*Power (version 3.1.9.2). Assuming an anticipated medium effect size ($f^2 = 0.15$, ensuring any observed effects were of practical importance) and a standard alpha level of 0.05, a minimum of 158 participants would be required to have 80% power in our planned analyses. We aimed to recruit upwards of 175 participants to account for up to 10% of missing data points and/or participants withdrawals.

A total of 180 UK participants ($M_{\text{age}} = 35.33$ years, $SD = 14.17$ years; 50% male) completed an online questionnaire, which was advertised through social media and email servers at UK universities. Of these, 57.8% held a degree or higher ($n = 104$), leaving the remaining 42.2% as non-degree holders ($n = 76$). Inclusion criteria dictated that participants had to be fluent in English, aged 18 years or over, and reside in the UK to control for cultural variations in education. Participants provided written informed consent in accordance with approved central university research protocols and national ethical guidelines by ticking a box on both the first and last pages of our online survey. Participants were not reimbursed for their participation.

2.2. Materials

Demographics. Participants were asked to report their age, sex, and level of education. Specifically, the latter was measured under two categories: higher education (Bachelor's degree or equivalent) or non-degree level of education (mandatory state schooling or equivalent).

Fear of Crime (FoC; Jackson, 2009). The FoC uses four crime-related contexts to inform the following dimensions about personal crime: frequency of worry, perceived likelihood, perceived control, and perceived consequences (Cronbach's $\alpha = 0.50$). A 4×4 model is created with the combination of dimensions and crime-related mini vignettes (e.g., "being robbed by an unknown person on the streets") for participants to answer in a self-report method using a five-point scale. High scores across the 4×4 model suggests a higher fear of crime.

Punishment and Rehabilitation (adapted from Burton et al., 1991). This scale was adapted to directly investigate ISCOs rather than prisoners more broadly, and comprises of two sections with 7 and 9 items, respectively, that assesses attitudes towards punishment and rehabilitation. Statements were rated on a five-point scale from *Strongly Disagree* to *Strongly Agree* on the punishment section (e.g., "many people don't

realise it, but prisons today are too soft on ISCO"; Cronbach's $\alpha = 0.90$) and on the rehabilitation portion (e.g., "the most effective and humane reduction in crime is to make a strong effort to rehabilitate ISCO"; Cronbach's $\alpha = 0.90$). Items 1, 4, 5, 8, and 9 on the rehabilitation sections were reversed to ensure avoidance of subject bias and demand characteristics. Increased scores on the punishment section and lower on the rehabilitative arm suggests more punitive attitudes towards ISCOs, such as incarceration or the death penalty. Whereas lower punitive scores and higher rehabilitative connotes less punitive attitudes, promoting interventions for successful reintegration to the community.

2.3. Procedure

Both studies were approved by an institutional ethical review panel prior to data collection (ETH2122-1915). Participants initially entered their demographic and educational information prior to completing the self-report FoC questionnaire and a scale on rehabilitative and punitive beliefs in a randomised order to reduce the likelihood of order effects. On average, the study took less than 10 min to complete.

2.4. Planned analyses

In instances of missing data ($n = 0$), the sample mean would be calculated. Following assumption testing, a multivariate analysis of variance (MANOVA) of between-subjects will allow us to compare between two levels of the independent variable (education; degree vs. non-degree holders) against three dependent variables (FoC scale score, punitive scale score, and rehabilitative scale score). The procedure, materials, and analytic pathways for *Study One* were pre-registered here: <https://archive.org/details/osf-registrations-cftxe-v1>.

3. Study one results

Data met the parametric assumptions for a MANOVA, including the normality of data distributions and outlier detection across degree-level and linearity. The mean numbers of FoC scale scores, punitive scale scores, and rehabilitative scale scores for the two levels of education (degree vs. non-degree holders) are shown in [Table 1](#).

3.1. Correlational analyses

We computed bivariate Pearson's correlations between FoC scale scores, punitive scale scores, and rehabilitative scale scores. FoC was neither correlated with punitive scale scores ($r = 0.009, p = 0.901$) nor rehabilitative scale scores ($r = -0.126, p = 0.091$). However, punitive scale scores were negatively correlated with rehabilitative scale scores ($r = -0.343, p < 0.001$), suggesting harsher punitive views are associated with less emphasis on the need for rehabilitative care of ISCOs.

3.2. Multivariate analysis of variance

Differences between degree classification level (degree and non-degree) were analysed using a one-way between-groups multivariate analysis of variance (MANOVA) with the dependent variables being total scores on the FoC scale, punitive scale, and rehabilitative scale. Pillai's trace demonstrated a statistically significant difference between degree classification on combined dependent variables ($V = 0.092, F(3, 176) = 5.978, p = 0.001, \eta_p^2 = 0.092$). To investigate the difference

Table 1

Mean numbers of FoC scale scores, punitive scale scores, and rehabilitative scale scores (with standard deviations) for the degree and non-degree holders.

	Fear of Crime scale	Punitive scale	Rehabilitative scale
Degree	43.39 (5.42)	21.49 (3.28)	29.14 (7.09)
Non-degree	43.12 (5.32)	22.12 (3.52)	24.64 (7.29)

between the three dependent variables separately, a Bonferroni-adjusted alpha was used ($\alpha = 0.025$). Results indicated non-significant differences for both Fear of Crime ($F(1, 178) = 0.116, p = 0.735, \eta_p^2 = 0.001$) and punitive attitudes ($F(1, 178) = 1.514, p = 0.220, \eta_p^2 = 0.008$), but statistically significant differences for rehabilitative attitudes ($F(1, 178) = 17.233, p < 0.001, \eta_p^2 = 0.088$), which was further explored with an independent samples *t*-test. Degree-level participants scored significantly higher on the rehabilitative scale ($M = 24.64, SD = 7.30; t(178) = 4.15, p < 0.001$), suggesting those with a degree classification, in any domain, are likely to believe in the efficacy of rehabilitative measures in treating ISCOs (see [Fig. 1](#)). The magnitude of differences between degree and non-degree holding participants (mean difference = 4.50, 95% CI [2.36, 6.64] was moderate ($\eta_p^2 = 0.088$)), accounting for 8.8% of the variance.

4. Study one discussion

Study One found that degree classification did not have a significant effect on participants' FoC scale scores nor the punitive scale scores, but it did for the participants' rehabilitative scale scores. However, it can be concluded that a participants' degree classification from any field of study resulted in a preference for implementing rehabilitative treatment methods for ISCO's, over the use of punitive methods. The present study found that younger individuals are more likely to seek Higher Education than their older counterparts, but this may be attributed to increase accessibility following the introduction of student loans. Therefore, we have found that degree-level education equates to a preference for rehabilitative treatments for incarcerated individuals, we build on the remaining gap between degree classifications and cultures by exploring preferences of forensic psychology students specifically in the UK, and their Slovak counterparts – criminology and psychology pathways – in reference to the educational impact on perceptions of individuals with convictions.

5. Study two

Building on both *Study One* and [Rothwell et al. \(2021\)](#), this study sought to explore whether education in forensic psychology specifically, relative to related (criminology) or broader (psychology) degree-level education, would impact perceptions of individuals with convictions. Despite both forensic psychology and criminology degrees delivering education related to rehabilitation, punishment, and crime prevention ([Chen & Einat, 2015](#)), we would expect the scientific standard of forensic psychology courses ([Gredecki & Turner, 2021](#); [Lloyd & Bahr, 2010](#)) to influence punitive attitudes positively with a leaning towards rehabilitative care of ISCOs. Simultaneously, this study allows for the exploration of important regional differences in educational provision which might facilitate future changes in educational provision. The results of *Study One* did not suggest a significant relationship between Fear of Crime and punitive attitudes towards ISCOs, and as such, we chose to adopt the 'Attitudes Towards Prisoners' scale, detailed below, to better understand the relationship with punitive attitudes across UK and Slovak cohorts.

5.1. Method

5.1.1. Participants

To determine our sample size, we conducted a priori power analysis using G*Power (version 3.1.9.2). Assuming an anticipated medium effect size ($f^2 = 0.15$, ensuring any observed effects were of practical importance), and a standard alpha level of 0.05, a minimum of 150 participants would be required to have 80% power in our planned analyses. We aimed to recruit upwards of 176 participants to account for up to 10% of missing data points and/or participant withdrawals.

A total of 183 participants ($M_{age} = 25$ years, $SD = 6.05$; 72% female) completed an online questionnaire advertised through social media and

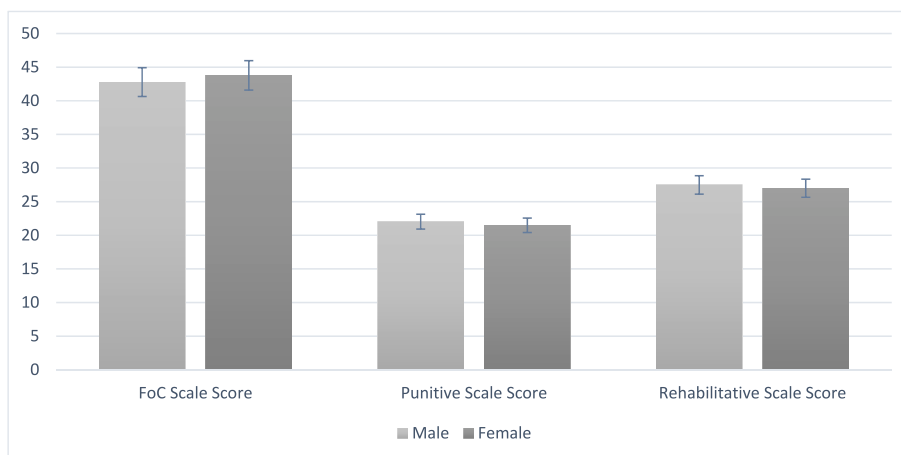


Fig. 1. Mean of participant gender identification and scale scores. Error bars represent ±1 standard error of the mean.

university mailing lists. Inclusion criteria dictated that participants were fluent in English, aged 18 years or older, and enrolled in either psychology ($N = 54$), criminology ($N = 76$), or forensic psychology degrees ($N = 53$). Owing to a lack of forensic psychology-specific training in Slovakia (Neto et al., 2020), forensic psychology students were recruited from the UK, and criminology students were recruited from Slovakia. UK-based forensic psychology students were recruited as a control group. Participants provided written informed consent in accordance with approved central university research protocols and national ethical guidelines by ticking a box on the first and last pages our online survey. Participants were not reimbursed for their participation.

5.2. Materials

Demographics. Participants were asked to report their age, sex, ethnicity, and year of academic study. Moreover, they were asked to identify the degree (forensic psychology, criminology, or psychology) that they were currently enrolled on.

Attitudes Towards Prisoners Scale (ATP; Melvin et al., 1985). The ATP consists of 36-items measuring attitudes toward prisoners (e.g., “prisoners have feelings like the rest of us”). Statements were rated on a five-point scale from 1, *Disagree Strongly*, to 5, *Agree Strongly*, (Cronbach’s $\alpha = 0.93$) and included 19 reverse-scored statements. High scores are indicative of more positive attitudes towards prisoners.

Punitiveness Scale (PS; Mackey & Courtright, 2000). The PS consists of 15-items that measure punitive attitudes towards ISCOs (e.g., “we are entirely too soft on people convicted of crime”). Statements were rated on a ten-point scale from 0, *No Agreement*, to 10, *Complete Agreement*, (Cronbach’s $\alpha = 0.91$) with no reverse-scored statements. Higher scores are indicative of more punitive attitudes.

5.3. Procedure

Participants initially entered their demographic and educational information prior to completing the self-report ATP and PS in a randomised order to reduce the likelihood of order effects. On average, the study took less than 10 min to complete.

5.4. Planned analyses

In instances of missing data ($n = 0$), the sample mean would be calculated. Following assumption testing, a multivariate analysis of variance (MANOVA) of between-subjects will allow us to compare the three levels of the independent variable (degree-type; forensic psychology, criminology, and psychology) against the two dependent variables (ATP score and PS score). Owing to *Study Two* being completed by

a separate team sub-team, analyses for this study were not pre-registered, though we endorse future replications of our findings with such measures in place.

6. Study two results

Data met the parametric assumptions for MANOVA, including normality of data distributions and outlier detection across degree group and linearity. The mean numbers of attitudes toward ISCOs and punitive attitudes for the three investigated groups, forensic psychology, criminology, and psychology are shown in Table 2.

6.1. Correlational analyses

We computed bivariate Pearson correlations between length of education, ATP, and PS scores. ATP scores were negatively correlated with PS scores ($r = -0.648, p < 0.001$), suggesting that positive attitudes toward ISCOs are associated with lower punitiveness. It was found that longer length of education was negatively associated with ATP scores ($r = -0.215, p = 0.003$), and positively associated with PS scores ($r = 0.162, p = 0.028$), suggesting students reporting longer periods of time in education showed more punitive attitudes and less positive views toward ISCOs.

6.2. Multivariate analysis of variance

Differences between degree groups (forensic psychology, criminology, and psychology) were analysed using a one-way between-groups multivariate analysis of variance (MANOVA) with the dependent variables being total scores of the ATP and PS. Pillai’s trace demonstrated a statistically significant difference between degree group on combined dependent variables ($V = 0.275, F(4, 360) = 14.363, p < 0.001, \eta_p^2 = 0.138$). To investigate the difference between the two dependent variables separately, a Bonferroni-adjusted alpha was used ($\alpha = 0.025$). Results indicated significant differences for both Attitudes Towards Prisoners ($F(2, 180) = 30.402, p < 0.001, \eta_p^2 = 0.253$) and punitive attitudes ($F(2, 180) = 20.039, p < 0.001, \eta_p^2 = 0.182$). *Post hoc*

Table 2 Mean numbers of attitudes toward prisoners and punitive attitudes (with standard deviations) in each university course group.

	Forensic Psychology	Criminology	Psychology
Attitudes Towards Prisoners (ATP)	140.43 (13.31)	119.18 (16.46)	125.09 (15.73)
Punitiveness Scale (PS)	37.62 (3.24)	65.28 (26.02)	61.44 (26.49)

Bonferroni analysis (see Table 3) indicated that forensic psychology students had more positive attitudes towards individuals who have committed a serious criminal offence. The test evidenced a lack of difference between criminology and psychology pathway students, and were both more punitive and less positive than forensic psychology students.

7. Study two discussion

In recognition of the need to explore specific differences between fields of study across cultures, *Study Two* satisfies this deficit, as presented in *Study One*. It has been found that forensic psychology students held more positive views towards ISCOs, reinforcing the importance of forensic-specific education across different education systems and cultures. Evidence from this study shows no difference in ATP scores between psychology and criminology participants, which differs from usual liberal social science outcomes (Chen & Einat, 2015), suggesting psychology is not a relevant substitute in international education systems for forensic psychology. Additionally, this is particularly concerning in its use as evidence for problematic biases in professional practices.

8. Discussion

This paper contributes to the fields of psychology and education, specifically highlighting the requirement for forensic psychology education in the general public for the benefit of those in need of rehabilitative care. Findings include degree-level participants scoring significantly higher on the rehabilitative scale in *Study One*, as such, those with a degree classification in any domain are likely to support the efficacy of rehabilitative interventions for ISCOs; and in *Study Two*, those educated in forensic psychology degrees hold more positive and less punitive attitudes towards ISCOs than their criminology and psychology counterparts.

8.1. Study One

The first arm of research found that the presence of a degree classification did not have a significant effect on participant fear of crime or punitive preferences but did on the support for rehabilitative care of ISCOs. Follow-up *t*-tests found that individuals with a degree-level classification, in any field, are likely to prefer the implementation of rehabilitative interventions for individuals convicted of a serious criminal offence. This finding maps directly onto the first hypothesis, the preference for rehabilitative measures opposes punitive leanings, connoting more positive attitudes towards ISCOs. Younger generations are more likely to seek higher education than their older counterparts; potentially attributed to better accessibility and more favourable attitudes towards student loans (Callender & Mason, 2017). Additionally, existing literature using similar designs to this suggests traditionalism tends to be higher in older populations (Eaves et al., 1997; Rothwell et al., 2021), but is also linked to harsher views on punitive sentencing (Huang et al., 1996). It may be deduced that this research incrementally

extends the body of knowledge for traditionalism, in that participants adhered to current understandings of “old fashioned” views on the rehabilitative care for individuals who have committed a serious criminal offence, suggesting a higher order underpinning.

The lack of difference between degree classifications on the FoC scale directly opposes the second hypothesis but may be accredited desensitisation of the news. FoC is associated with heavy media usage and susceptibility to believing distorted or exaggerated news stories (Callanan, 2012), and so, the truth might seem less threatening. Due to increased accessibility of media, most members of the public would be categorised as heavy media (consuming 4+ hours a day; Callanan, 2012), exacerbating their desensitisation. There was no difference between sex on the FoC scale, as all vignettes were general “everyday” crimes, such as burglary. However, it may be estimated that females would report more fear when responding to violence or sexual violence (Feldes et al., 2012, pp. 2009–2011; Pain, 1991). Therefore, it may be deduced that FoC scale scores are subjective to the individual and the crime vignette posed to them. The MANOVA reported a non-significant effect of degree classification on punitive and rehabilitative beliefs of the individual. This discrepancy between results and current literature may be attributed to this arm of the research not defining the field of expertise when specifying degree classification.

8.2. Study Two

The second arm of research indicated that forensic psychology students, specifically, held more positive views towards individuals who have committed a serious criminal offence and less punitive judgments than both criminology and psychology students. Validating the importance of Bartol and Bartol’s work (2011), wherein forensic psychology is recognised in academia as holding specific importance and applicability in the assessment, rehabilitation, and management of individuals undergoing incarceration. The finding that Slovak participants in this study held more punitive attitudes towards ISCOs can be attributed to the lack of forensic psychology-specific knowledge, of which may partially be due to them having only criminological or psychological pathway degrees. Hence, UK forensic psychology students were used in this study as a control. Considering this, it would be reasonable to assume this research reinforces the importance of forensic psychology education across different systems and cultures, in line with previous research (Mandrachia et al., 2013; Rothwell et al., 2021; Wurtele, 2018). However, there are inconsistencies between previous research and the present study when investigating the effect of students’ seniority or acquired length of education. While the present study found the length of education to be negatively correlated with attitudes towards ISCOs (as measured by the ATP scale; Melvin et al., 1985) and positively correlated with punitive attitudes (as measured by the PS; Mackey & Courtright, 2000), the opposite was found by previous research, showing the decrease in punitive attitudes in the last year of education (Chen & Einat, 2015; Mackey & Courtright, 2000; Wurtele, 2018). As this sample is mostly comprised of criminology students (41.5%), it may be a reflection of Chen and Einat’s (2014) finding that students with a deeper belief in classical criminological theories tend to be more punitive.

Table 3

Post hoc Bonferroni analysis results between IV levels (forensic psychology, criminology, and psychology) and Attitudes Towards Prisoners (ATP).

		ATP			PS		
		<i>t</i>	SD	<i>p</i>	<i>t</i>	SD	<i>p</i>
1. Forensic Psychology	2	21.25*	2.75	<0.001	−27.65*	4.56	<0.001
	3	15.34*	2.98	<0.001	−23.82	4.92	<0.001
2. Criminology	1	−21.25*	2.75	<0.001	27.65*	4.56	<0.001
	3	−5.91	2.74	0.097	3.83	4.54	1.00
3. Psychology	1	−15.34*	2.98	<0.001	23.82*	4.93	<0.001
	2	5.91	2.74	0.097	−3.83	4.54	1.00

Note. *t* is mean difference. *. The mean difference is significant at the 0.05 level. ATP = Attitudes Towards Prisoners; PS = Punitiveness Scale.

Therefore, this sample's length of education may benefit from being explored in conjunction with beliefs in criminological theories, explaining their increased punitive attitudes.

Furthermore, most of the sample in the present study is represented by Slovak students (70.5%), it may be argued that the relationship between degree type and negative, punitive attitudes may be accredited to the Slovak participants rather than to the UK-based university participants. Additionally, a lack of knowledge on the causes of offending behaviours and individual differences may have contributed to stereotypical views (Friestad et al., 2021; Shafiq et al., 2016), influencing participants' negative and punitive attitudes. Previous research mostly investigated samples from Anglophone countries (Friestad et al., 2021), whilst this research recruited two participant groups from a non-Anglophone country. Educational systems in eastern European countries, including Slovakia, are more theoretically oriented, providing students with less critical evaluation experience or practical applications (Džuganová, 2011; Sandanusová & Schlarmannová, 2020), whereas forensic psychology is generally comprised of critical thinking in both theoretical and practical aspects (DeMatteo et al., 2009). Findings of this research might, therefore, imply the importance of a practical approach, as well as the importance of critical thinking, problem-solving, and courses designed to address and intervene offending behaviours, such as the course of forensic psychology. Such an approach might not only affect students' attitudes, as shown in this sample, but might also improve practices included in working with individuals who have committed a serious criminal offence (Bartol & Bartol, 2011), such as risk assessment, rehabilitative care, and management of such individuals. Lastly, students of more liberal social science, such as psychology, have been found to hold more positive and less punitive attitude when compared to students of CJS courses, such as criminology (Chen & Einat, 2015; Mandracchia et al., 2013; Rothwell et al., 2021). The present study did not confirm this between attitudes of psychology and criminology students, suggesting graduates may have problematic biases in professional practice, as well as highlighting that psychology is not a relevant substitute for forensic psychology.

8.3. Implications

This research contributes to the existing narrative of forensic psychology educational needs, specifically in punitive and rehabilitative measures utilised within the CJS, but wider implications of note have been identified. Our findings have potential impact for the successful rehabilitation and reintegration of individuals with serious criminal convictions back into society. Previous literature indicates more punitive attitudes towards ISCOs from members of the public (O'Hear & Wheelock, 2016) despite little general understanding of judicial processes and forensic settings (Roberts, 1992; Roberts & Hough, 2005; Vandiver & Giacomassi, 1997), which informs policies expressive of public concerns (Garland, 2001).

It is understood that lengthy prison sentences can lead to harmful consequences, with prison life and reintegration into society post-incarceration (Murray, Coker, & Elsey, 2019; Rogers et al., 2011), in both UK and international systems (Nagin, Piquero, Scott, & Steinberg, 2006; Steinberg & Piquero, 2008). Long-term sentencing is costly (e.g., £5.5 billion in the 2017/18 financial year; Newton et al., 2019) and largely ineffective in reducing recidivism, but more specifically, it is poor in decreasing reoffending rates in those with a mental illness (Fazel et al., 2016). Therefore, building on current work (e.g., Rothwell et al., 2021; Thomaidou & Berryessa, 2022), the present study indicates the need for forensic-specific psychology education in promoting less traditional attitudes towards punishment and more rehabilitative-oriented to crime. Research from Gertner et al., (2021) convey that a deeper understanding of science and the influence it can have on behaviour may enhance fairness in treatment of individuals who have committed offences and better outcomes in their sentencing. With psychology being considered a more liberal social science (Chen &

Einat, 2015), it may be argued that forensic psychology, and science more broadly, can assist in the improved accuracy and better informed judgements of the general public, as well as combatting the over-simplifications of legal and judicial processes in knowledge dissemination.

The present study's findings propose a benefit for the use of education in forensic psychology to better allow informed decisions on the rehabilitative care of ISCOs. Future research should seek to develop the accessibility and dissemination of education for the public, those with and without higher education. Additionally, the degree to which raising awareness around the benefits of rehabilitative care could combat the sensationalised media reports relating to serious crime offences. This education requirement is not UK-specific. The lack of a forensic psychology degree type in Slovak nations highlights the requirement for the development of forensic-specific education internationally, highlighting the underlying, but important, international impact of this study.

8.4. Limitations and future research

Despite the success in partial fulfilment of the hypotheses, the study does have some limitations. The research did not control for several potentially confounding variables: previous experiences with crime, differing justice systems, stereotypical views, and teaching systems – all found to have importance in student attitude formations (Damianakis et al., 2020; Friestad et al., 2021). It should also be considered selection factors may contribute to the results in the UK sample in that individuals with less punitive and more rehabilitative-oriented beliefs will gravitate towards psychology-based disciplines, such as forensic psychology. However, due to Slovakia not hosting forensic psychology-specific courses at all, the UK sample is required for comparison regardless of such factors. To combat this, supplementary screening tests, such as personality scales or longitudinal studies with a baseline prior to degree education, may be considered. Additionally, the use of the Authoritarianism, Conservatism, and Traditionalism scale (ACT; Duckitt et al., 2010) may have benefitted in the exploration of confounding personality type, political affiliation, and cultural beliefs. The results of which would provide a broader scope of individuals who have committed serious criminal offences in comparison to similar existing research (Rothwell et al., 2021). In the same vein, the scales used may have been improved by providing a specific distinction between offender groups to distinguish the perception of different crimes and how idiographic rehabilitative care is understood.

Further limitations include the low Cronbach's α of the FoC scale in *Study One* (0.50), supplementary research may benefit from exploratory factor analysis of the scale with the aim of increasing Cronbach's alpha to identify variability between items in the data. Additionally, limited representations of course and participant sex in *Study Two*, and as such, restricts the desired generalisability. In psychology, it is known that those identifying as female are more likely to undertake a higher education degree (Riegle-Crumb, 2010), explaining the skew in results towards such individuals in the dataset. Similarly, the sample sizes of both studies are relatively small, and so, is demographically restricted, replications may benefit from far larger and more diverse samples to increase generalisability and applicability. The present study has confirmed the importance of forensic psychology education, especially as an independent course, and highlighted the lack thereof in the Slovak educational system and in the UK public. However, limited practical experience and application of knowledge in Slovak universities has been previously noted (Džuganová, 2011; Sandanusová & Schlarmannová, 2020) and the present study focuses on student perceptions, as such, future research may require professional samples to investigate experience in a forensic setting as a confounding variable.

8.5. Conclusions

This study is the first to explore educational needs in the field of

rehabilitative care for individuals who have committed serious criminal offences, specifically in conjunction with a non-Anglophone population, such as Slovakia. The results indicated that the recognition of need for rehabilitative interventions increased with the presence of a degree classification, and when broken down into degree type, those with a background in forensic psychology showed the most positive and least punitive attitudes. Results were discussed in the context of relevant topics and factors that influence these perceptions, such as fear of crime, eastern educational systems, and classical criminological beliefs, whilst recognising the studies' limitations and future direction to improve the body of research further. Finally, the findings highlight the pertinent need for forensic psychology-specific education around individuals who have committed serious criminal offences. Change in opinions would shift political attitudes and voting, and in turn, directly impact funding, research, and implementation of rehabilitative care for these individuals, increasing the prevention of further criminality.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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