

Participation in Prison Activities: An Analysis of the Determinants of Participation

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Abstract The positive associations of participation in prison activities (e.g. socio-cultural activities, educational courses, sports activities, vocational training, etc.), including reduction of recidivism, improvement of wellbeing and contributions to self-worth, are increasingly recognized. However, little is known about the characteristics by which participants differ from non-participants. In response to this research gap, this study aims to examine the determinants of inmate participation in prison activities. The determinants are categorized as outlined by the importation (individual characteristics) and deprivation (prison life characteristics) frameworks. Survey data derived from a research project in a remand prison in Belgium (N=486) provided the empirical evidence for the multiple linear regression analyses. The findings indicate that individual deprivation variables are more likely to predict participation. However, our findings also highlight that the combined effects of importation and deprivation characteristics are more powerful in explaining activity participation. The article concludes by discussing some paths for future prison research and implications for theory and practice. It provides impetus to organize and increase participation in prison activities, taking into account the diverse characteristics, needs and competences of the prison population.

Keywords Deprivation model · Importation model · Participation determinants · Prison activities

Introduction

As is the case with many other countries, the prison population in Belgium is increasing. In 2004, over 9000 inmates were held across the country's prisons; by 2013, this number had increased to more than 12,000 (Walmsley 2005, 2013). Imprisonment is inevitably associated with a deprivation of rights. However, in Flanders (the Dutch-speaking part of Belgium) the

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legislation clearly states that prisoners remain citizens and thus should not be excluded from the normal services provided to society (Flemish Government 2000, 2013). This form of reasoning has also found acceptance on the international level; for instance, the Standard Minimum Rules for the Treatment of Prisoners (United Nations 1955) and the European Prison Rules (Committee of Ministers 2006) both stipulate the prisoners' right to have access to cultural activities, educational courses, vocational training, a library and sports activities. These are all non-treatment programmes, and in this article, we refer to these services and activities collectively as 'prison activities'. In order to provide prisoners with access to these activities, the 'import model' was introduced into Flemish (as well as Norwegian) prisons (e.g. Gröning 2014; Hetland et al. 2007). The import model implies that the services offered in prison are equivalent to those available outside prison. The public sector outside of the prisons has the responsibility to offer activities within correctional institutions (Hetland et al. 2007). This means for instance that the same teacher can give lessons within and outside prison, and that the courses offered in the prison are equivalent to the education offered in wider society. This 'import model' is the contrary of what is happening in most European prisons; mostly it is the responsibility of the prison system to provide services and assistance to prisoners through their own staff (Best 1999). As the Flemish government is responsible for the funding and provision of these activities, most of them are offered in the Dutch language.

It is increasingly recognized that participation in prison activities can have a positive effect on a number of outcomes. For instance, by going to the library, prisoners may improve their literacy skills (Greenberg et al. 2007); it can also take their minds off prison life and help them create their own emotional space (Peshers and Patterson 2011). Concerning (vocational) education, studies show that inmates who participate in these kinds of activities have better employment patterns after their release (Lawrence et al. 2002; Vacca 2004) and are involved in fewer disciplinary violations during their imprisonment (Gerber and Fritsch 1995). The latter is also the case for prisoners participating in sports activities (Martos-García et al. 2009; Meek and Lewis 2014). Besides this, doing such exercises can improve physical health (Nelson et al. 2006; Gallant et al. 2015; Vaiciulis et al. 2011) and psychological functioning (Martos-García et al. 2009).

According to Crittenden (2013), research into prison activities typically examines two themes: necessary additional programming (e.g. Cullen and Jonson 2011; Green et al. 2005) and the evaluation of existing programming (e.g. French and Gendreau 2006; Lawrence et al. 2002; MacKenzie 2000). However, few studies have investigated participation in prison activities (Crittenden 2013). Furthermore, a literature review conducted by Brosens (2013) has demonstrated that most of the participation studies focus on one kind of prison programme and consequently overlook the fact that prisoners can engage in different activities. Therefore, in this article we investigate the relationship between importation and individual deprivation characteristics, and the participation of prisoners in multiple activities.

Theoretical Background

Participation in prison activities is considered a way of adapting to prison life (Dhami et al. 2007; Souza and Dhami 2010). Adaptation to imprisonment has been a topic of research since 1940 (Jiang and Fisher-Giorlando 2002); the two dominant models that explain this phenomenon, developed in the mid-twentieth century but still prevalent today, are the deprivation and importation models (e.g. Dhami et al. 2007; Gover et al. 2000).

The deprivation model (also called the indigenous or functional model—Rowe 2007) was first introduced by Clemmer (1940), a pioneer in the field of prison research. He describes the process of ‘institutionalization’ by stating that prisoners are shaped and transformed by the institutional environment in which they live. In correctional institutions, this process is called ‘prisonization’. Prisons can be considered as total institutions that are cut off from the outside world (Goffman 1968). Through prisonization, inmates take on to a greater or lesser degree the folkways, mores, customs, and general culture of a penitentiary (Clemmer 1940, p. 299). In other words, the norms of prison life are incorporated into the prisoners’ patterns of thought, feelings and acts (Haney 2003). Clemmer’s ideas are extended by Sykes (1958), who argues that confinement is inextricably bound up with ‘the pains of imprisonment’. Prisoners are deprived of their liberty, goods and services, heterosexual relationships, autonomy and security. This can in some ways coincide with a ‘mortification of the self’, a concept introduced by Goffman (1968). Mortification of the self involves the process through which an individual loses their social identity and is humiliated. Immediately upon the confinement of a prisoner, the correctional institution places a barrier between the prisoner and the wider world. Consequently, certain roles are lost and prisoners are slowly shaped to fit into the administrative machinery. Both Goffman (1968) and Sykes (1958) emphasize that the experienced deprivations or pains of imprisonment have an influence on how someone reacts to their confinement. In summary, it may be stated that prisoners’ adjustment can be predicted according to prison-specific variables, or in other words, by the correctional environment itself (Cao et al. 1997; van der Laan and Eichelsheim 2013).

In response to the deprivation model, Irwin and Cressey (1962) introduced the importation model. Their underlying idea is that inmates bring their social backgrounds and patterns of behaviour with them when they enter prison. In opposition to the deprivation model, advocates of the importation model do not see the prison as a closed system, but rather as a system that interacts with the outside world (Lahm 2008). This theoretical orientation considers those characteristics of individuals that predate confinement as decisive for their adaptation to prison life, or in other words, how prisoners deal with imprisonment depends on the characteristics of the prisoners themselves (Cao et al. 1997; Dye 2010; Jiang et al. 2005; van der Laan and Eichelsheim 2013).

Early studies on adaptation to prison life consider the deprivation and importation models as opposite frameworks, while more recent studies see them as complementary rather than competing models. Such an integrated model recognizes both the experiences that prisoners bring into the correctional institution, as well as their experienced deprivations (Dobbs and Courtney 2005).

Many of the studies that examine the deprivation and/or importation model focus on its relation with negative behavioural responses to imprisonment, such as prison violence and misconduct (e.g. Jiang and Fisher-Giorlando 2002; Lahm 2008; Tasca et al. 2010). Some of these studies have found that both the importation and deprivation models can predict prison misconduct (e.g. Jiang and Fisher-Giorlando 2002; Lahm 2008; Tasca et al. 2010; Wooldredge et al. 2001), while others found the importation theory to be more influential in explaining the variance of prison misconduct (e.g. Cao et al. 1997; Lahm 2008).

Both theories can also be used to elucidate the importance of participation in prison activities for prisoners’ adaptation. While involvement in prison misconduct and violence can be seen as negative criteria related to prison adaptation, participation in prison activities can be considered a positive behavioural response to imprisonment (Lui 2011). Nonetheless, only a few studies are available on the relation between the deprivation/importation model and

participation in prison activities. The research of Dhami et al. (2007) is a notable exception; they investigate the effects of the time spent in prison (deprivation variable on an individual level—Lahm 2008) and quality of life before prison (importation) on inmates' adaptation to prison life. One of the investigated forms of adaptation is participation in regime activities and the number of programmes attended. The measure of quality of life is based on five variables: whether or not prisoners had finished secondary school, were employed, used drugs, had a relationship and had been previously incarcerated. The results reveal that participation in prison activities was higher among prisoners who had a poor quality of life before detention and who had been incarcerated for a longer period of time (Dhami et al. 2007).

To our knowledge, this is the only study that links importation and deprivation characteristics and participation in prison activities as a way of adapting to prison life. The research of Dhami et al. (2007) could however be extended by increasing the number of variables used for deprivation and importation. One independent variable that is related to prison life (deprivation) and included in previous studies concerning adaptation to prison life—although not in the research of Dhami et al. (2007)—is receiving visitors. Some researchers include visitation as an individual measure of deprivation: it is a personal factor that can be affected or influenced by the correctional institution (Lahm 2008, 2015). Others consider getting visitors to be an additional factor that is not considered in the initial importation and deprivation frameworks, but is nevertheless included in the integrated model (Dobbs and Courtney 2005). Cochran (2012), Jiang and Winfree (2006) and Lahm (2008) have investigated the relationship between being visited and the likelihood of engaging in prison misconduct, but their findings are inconsistent. Cochran (2012) found that receiving visitors is associated with a lower incidence of prison misconduct, while both Jiang and Winfree (2006) and Lahm (2008) conversely found no relationship between these two features. It should be noted, however, that Dhami et al. (2007) mention that future research could identify to what extent the degree of adaptation is affected by the quality and quantity of contact with the outside world. In addition, research into participation in educational courses while in prison has shown that prisoners who receive visitors are more likely to participate than those who do not receive visitors (Rose 2004).

Other measures of deprivation included in previous studies concerning adaptation to prison life are, for instance, level of security, the prison's location (rural or urban), level of overcrowding, prison population size and number of correctional staff (Cao et al. 1997; Dhami et al. 2007; Dye 2010; Lahm 2008), which can all be considered as prison-level deprivation variables (Lahm 2008).

Meanwhile, importation variables included in previous research, besides the variables investigated by Dhami et al. (2007), include gender, age and race (Cao et al. 1997; Dye 2010; Lahm 2008). Research outside prison has shown that participation is unequally distributed among people based on these variables (e.g. Birchwood et al. 2008; De Donder et al. 2014; Storen and Helland 2010). In addition, the relationship between some of these importation variables and participation in certain prison activities has already been investigated. For instance, younger prisoners are more likely to take part in sports programmes (Lewis and Meek 2012), as are male prisoners when compared to their female counterparts (Meek 2014). Concerning nationality, foreign national prisoners are frequently excluded from educational and training courses due to tests or selection criteria they cannot meet (van Kalmthout et al. 2007). Other importation variables included in previous studies are, for instance, histories of mental illness, juvenile incarceration (Cao et al. 1997) and seriousness of criminal case (Lahm 2008; van der Laan and Eichelsheim 2013).

The Current Study

Whereas studies concerning adaptation to imprisonment are widespread, our study contributes to the existing literature in several ways. First, previous studies focus mainly on prison violence and misconduct, two forms of negative behavioural response to imprisonment. Few studies have empirically tested the influence of individual (importation) and prison life (deprivation) characteristics on participation in prison activities, which can be considered a positive response to incarceration. Second, most of the previous studies using the importation/deprivation models were conducted in Anglo-Saxon countries (van der Laan and Eichelsheim 2013).

To summarize, the aim of our study is to examine the determinants of participation in prison activities, and further, to identify those features (importation or deprivation) which contribute most to explaining inmates' participation. Nevertheless, only a limited number of independent variables will be examined, as the study took place within only one correctional institution (which limits the possibilities of including prison-level measures of deprivation) and no questions were asked concerning histories of mental illness, juvenile incarceration, etc. (which restricts the number of importation variables).

Data and Methods

Participants

The target population of the study comprises all the prisoners of a single remand prison in Belgium (N=677). Although the study aimed to question the entire prison population, not all prisoners (N=20) were able to participate (e.g. they were staying in the hospital, locked up in an isolation cell, held semi-liberty status, were under a special security regime, etc.). All of the other prisoners were personally asked to be voluntarily involved in the study. Of the 657 prisoners that were able to participate in the research, 486 agreed and were surveyed. The sample obtained represents a response rate of 73.97 %, and includes 88.9 % (n=432) male and 11.1 % (n=54) female prisoners aged between 17 and 67 years old (M=32.99, SD=10.48). The respondents were ethnically diverse; 39.4 % (n=181) held Belgian nationality, while 60.6 % (n=278) were foreign national prisoners; 37.5 % (n=170) respondents had between 0 and nine years of education, 41.1 % (n=186) between 10 and 12 years, and 21.4 % (n=97) had 13 years or more (kindergarten excluded). In addition, 62.9 % (n=295) of the prisoners had a partner and 48.2 % had children (n=209).

Data Collection

Using a structured questionnaire, information was collected on various aspects of participation in prison activities (i.e. educational courses, library, socio-cultural activities, sports activities and vocational training). This research project was developed in close co-operation with professionals from each sector offering activities in the respective prison. The data collection took place in October 2012 and over 20 volunteers helped gather the data (i.e. activity providers and members of the university). The questionnaire was available in 13 languages and was self-administered. However, the prisoners also had the opportunity to ask for additional clarification

regarding unclear questions. Furthermore, respondents with reading and writing difficulties could receive assistance from one of the volunteers, which also allowed less literate persons to participate. Nevertheless, prisoners could also refuse to participate. With the purpose of protecting the participants, approval for this research project was obtained from the Ethical Committee of the University. As prison inmates are under certain constraints due to their imprisonment, the ability of a prisoner to make a voluntary and independent decision to participate might be questioned. However, participation in this research posed minimal risk to the participants.

Measures

Dependent Variable

To get an insight into the level of *participation of prisoners in the different prison activities*, we asked the respondents the following questions:

- Have you practised any sports in the past month? (0=no, 1=yes)
- Are you currently taking any classes in prison? (0=no, 1=yes)
- Have you already had contact with the employment and training service? (0=no, 1=yes)
- Do you go to the library? (0=no, 1=yes)
- Have you taken any socio-cultural training courses? (0=no, 1=yes)

Thereupon, a computed variable named ‘participation in different prison activities’ was created. The scores for this variable range from 0 (= participation in no activities) to 5 (= participation in five activities).

Independent Variables

The independent variables consisted of measures of deprivation and importation. Because the study only took place in one prison, we excluded prison structural variables to indicate deprivation (e.g. security level, crowding, number of correctional staff, population size and prison location—Lahm 2008). We included the following individual *deprivation variables*: time served (1=less than one month; 2=between one and six months; 3=more than six months), and whether or not prisoners received visitors (0=not receiving any visitors; 1=receiving visitors).

The *importation variables*, based on the literature, are gender, age, nationality and quality of life before imprisonment. Previous research has shown that the first three variables have an influence on other forms of adaptation to prison life, like prison misconduct (e.g. Lahm 2008; van der Laan and Eichelsheim 2013) and suicide (Dye 2010). Nevertheless, the only study focusing on the relationship between importation variables and participation in prison programmes (Dhami et al. 2007) did not include these variables. As research has shown that there is a link between age, gender, nationality and participation in certain prison programmes (e.g. age and sport—Lewis and Meek 2012; gender and sport—Meek 2014; nationality, and educational and training courses—van Kalmthout et al. 2007), it would be interesting to investigate their relationship with participation in multiple prison programmes. Furthermore, Dhami et al. (2007) included quality of life before imprisonment as a measure of importation. However, as this is the only study focusing on participation in prison programmes as a form of

adaptation to prison life, it would also be interesting to include this measure within our study to see if the results are comparable.

Age was measured as a continuous variable by asking prisoners to report their year of birth; afterwards, their age was calculated. Gender and nationality were dichotomous dummy variables (0=male, 1=female; 0=Foreign, 1=Belgian). The measurement of quality of life before detention was based on the research of Dhami et al. (2007), using education, having a partner, employment status and previous detention status as quality of life variables. Because the authors coded the different variables relating to quality of life before detention as -1 (poor quality of life) and 1 (high quality of life), these scores were also applied in our study. Education was measured according to years of school attended (without counting kindergarten). Respondents who attended school for less than 13 years (people can finish secondary school in 13 years) were coded as -1. If the respondent attended school for at least 13 years, they were coded as 1. Having a partner and being employed were similarly coded: -1 for a negative response, 1 for a positive response. A reverse coding was used for prior imprisonment: -1 if someone had been in prison before, and 1 if it was the first time.

Afterwards, the scores of the different variables were computed and the prisoners divided into two groups, comprising prisoners with a 0 or negative score (i.e. some or all aspects of a poor quality of life before detention), and prisoners with a positive score (i.e. some or all aspects of a good quality of life before detention). In addition to the previous importation variables that were based on the literature, we added two importation variables in our analyses: having children, as a potential source of support (e.g. Jiang and Winfree 2006), and a command of the Dutch language. The inclusion of whether or not someone has children is based on the motivational literature, which states that some prisoners take part in prison activities because they want to be a role model for their children (e.g. Schlesinger 2005; Torre and Fine 2005). However, the question remains as to whether these prisoners effectively participate more. Command of the Dutch language is included because most of the prison activities are offered in Dutch, and many foreign national prisoners experience language problems during their detention (Barnoux and Wood 2013). Having children was measured as a dichotomous variable (0=having no children; 1=having children), while a command of the Dutch language was measured using a 3-point scale ranging between 1=very good, 2=a little bit, and 3=not at all.

Analytic Strategy

Two stages of analysis were used. First, Pearson correlations were used to evaluate the associations between participation in prison activities and the diverse importation and deprivation characteristics. Second, after having controlled for outliers and multicollinearity, multiple linear regression analyses were conducted to predict participation in prison activities. In total, we tested three models: model 1 included the deprivation variables, model 2 the importation variables and model 3 was a combination of the deprivation and importation variables. In order to help calculate the importance of each independent variable in predicting participation in prison activities, unstandardized coefficients and standard errors are presented. Statistical significance was inferred at a two-tailed value of $p \leq .05$, and a tendency towards difference at a value of $p \leq .10$.

Results

Descriptive Statistics

Table 1 presents the descriptive statistics for the dependent and independent variables included in our study. The table reveals that the mean frequency of participation in prison activities was 1.68. This result indicates that the number of prison activities in which prisoners participated was overall fairly low.

Time spent in prison and receiving visitors served as the inmates' deprivation characteristics. The mean value for time served was 2.04, which means that most of the respondents had been in prison for between one and six months. Additionally, 68.4 % of the respondents had received visitors at least once.

Six variables were included as indicators of importation: age, gender, nationality, command of the Dutch language, having children and quality of life before detention. The respondents were aged between 18 and 67 years (average age was 32.99 years); 39.6 % held Belgian nationality, 10.9 % were female and 88.9 % were male. The mean value for understanding the Dutch language was 1.72, which means that most of the prisoners had either a very good or an adequate understanding of the Dutch language. In addition, 48.2 % of the respondents had children, while 22.7 % of the respondents had a good quality of life before detention and 77.3 % a bad quality of life. Among the inmates, 21.4 % had presumably finished secondary school and gone on to receive at least 13 years of schooling (without counting kindergarten); 30.7 % of the prisoners had been employed before their detention, while 62.9 % had a partner and for 53.9 % it was their first confinement.

Table 1 Variables and descriptive statistics

Variables	%	Mean (<i>SD</i>)	Range
Dependent variable			
Participation in prison activities		1.68 (.98)	0-4
Independent variables			
Individual deprivation variables			
Receiving visitors (yes)	68.4		
Time served		2.04 (.59)	1-3
Importation variables			
Gender (man)	88.9		
Age (years)		32.99 (10.48)	18-67
Nationality (Belgian)	39.6		
Command of the Dutch language		1.72 (.80)	1-3
Having children	48.2		
Quality of life before detention (good)	22.7		
Possibly finished secondary school	21.4		
Employed before detention (yes)	30.7		
Having a partner (yes)	62.9		
First time in prison (yes)	53.9		

Correlations

Table 2 presents the correlation coefficients for the variables used in the analyses. Time served showed the highest correlation with participation in prison activities, followed by command of the Dutch language, and whether or not prisoners were receiving visitors. Participation in prison activities was not significantly related to gender or quality of life before detention. Consequently, these variables are omitted in the regression analyses. However, because the research of Dhimi et al. (2007) showed a relationship between participation in prison activities and quality of life before detention, we investigated the correlations between participation on the one hand and the separate variables of quality of life before detention (e.g. whether or not the subject has finished secondary school, whether they were employed, had a relationship or been previously incarcerated) on the other hand. Nevertheless, none of these variables were significantly related to participation.

In addition, there were substantial correlations among some of the independent variables, which could suggest a threat of multicollinearity and distortion of the model fit. However, checks of tolerance levels and VIF values showed no values, respectively, under 0.20 or above 10, which means that there was no threat of multicollinearity (Field 2013).

Regressions

Multiple linear regression analyses were carried out to measure the effects of deprivation and importation variables on participation in prison activities. Table 3 displays the results of these analyses. Three equations are presented. In the first model, two deprivation variables are examined and both of them are able to predict participation in prison activities. An increase in the time spent in prison enhances the chance of participation and is the best predictor in this model. Receiving visitors is also positively related with participation. Prisoners who receive visitors are more likely to participate in prison activities, compared to prisoners who do not receive visitors. This regression model explained 13.1 % of the variance of participation in prison activities.

In the importation model, four variables were examined and two of these were significantly related with participation. In particular, a command of the Dutch language (= the medium of communication) is the best predictor of participation in this model. Prisoners who have a better understanding of the Dutch language are more likely to take part. There is also a significant connection between age and participation. The older the prisoners, the less likely they are to be a participant. The adjusted R^2 suggests that the importation variables explain 8.7 % of the variance of participation in prison activities.

If we include all the deprivation and importation variables in one equation, five variables emerged as significant predictors of participation in prison activities. In particular, the fact of having already spent a longer time in prison was related with higher levels of participation and found to be the best predictor. A second predictive factor is age: the younger the prisoners, the more likely they are to take part. Having children and receiving visitors also help to predict participation. Prisoners without children and those who receive visitors are more likely to participate in prison activities. A final predictor of participation in prison activities is an understanding of the Dutch language; prisoners with a better understanding of this language are more likely to participate. When considered together, the deprivation and importation variables explain 21.6 % of the variance of participation in prison activities.

Table 2 Bivariate correlations for the regression variables

Variables	1	2	3	4	5	6	7	8	9	9a	9b	9c	9d
1. Participation in prison activities	1.00												
2. Receiving visitors	.168**	1.00											
3. Time served	.329**	.072	1.00										
4. Gender	.008	1.57**	.001	1.00									
5. Age	-.145**	.069	.040	.090	1.00								
6. Nationality	.103*	.297**	-.080	.119*	.078	1.00							
7. Command of the Dutch language	-.219**	-.422**	.044	-.081	-.061	-.617**	1.00						
8. Having children	-.106*	.178**	-.009	.232**	.448**	-.067	.001	1.00					
9. Quality of life before detention	.004	.076	.002	-.020	.079	.040	.013	.157**	1.00				
9a. Finished secondary school	.035	.028	.010	-.026	.133**	.123**	.115*	.006	.502**	1.00			
9b. Employed before detention	.037	.139**	.098*	.001	.127**	.044	-.058	.172**	.537**	.115*	1.00		
9c. Having a partner	-.025	.211**	-.058	.009	.088	-.069	.077	.413**	.331**	.016	.106*	1.00	
9d. First time in prison	-.076	-.064	.039	.035	-.099*	-.114*	.246**	-.054	.346**	.110*	.062	-.044	1.00

Note. * $p \leq .05$, ** $p \leq .01$

Table 3 Regression results predicting participation in prison activities

	Model 1: individual deprivation model ($n=421$)		Model 2: importation model ($n=398$)		Model 3: integrated model ($n=361$)	
	b (se)	β	b (se)	β	b (se)	β
Deprivation variables						
Receiving visitors	.344* (.094)	.166			.340* (.111)	.165
Time served	.521** (.075)	.371			.527** (.076)	.330
Importation variables						
Age			-.015* (.005)	-.165	-.016** (.005)	-.180
Nationality			-.107 (.117)	-.055	-.065 (.112)	-.034
Command of the Dutch language			-.323** (.072)	-.271	-.175* (.075)	-.148
Having children			-.139 (.102)	-.073	-.201* (.100)	-.108
Adjusted R^2	.131		.087		.216	

Note. b =unstandardized regression coefficient; se =standard error; β =standardized regression coefficient

* $p \leq .05$, ** $p \leq .001$

Discussion

Participation in Prison Activities

The current study investigates the power of individual (importation) and prison life (deprivation) characteristics to predict participation in prison activities. Understanding the predictors of participation is important because there are numerous positive outcomes associated with it (e.g. reduction of recidivism—Kim and Clark 2013; improvement of wellbeing and social capital—Digennaro 2010; improvement of literacy skills—Greenberg et al. 2007; and reduction of misconduct—Lahm 2009). Nevertheless, most studies focus on those inmates who do take part in prison activities (e.g. Manger et al. 2010; Martos-García et al. 2009), but overlook those who do not take part (Brosens 2013; Johnsen 2001).

The results of our study demonstrate that the deprivation model is more powerful in explaining inmates' participation in prison activities than the importation model. Nevertheless, participation is best explained by a combination of the two models. However, since more importation and deprivation variables could be included in the models, the results of this study should be cautiously interpreted (further discussion about this aspect can be found in the section about limitations and future research). Nevertheless, our study has indicated that several deprivation and importation variables are related with participation in prison programmes. As this is one of the first studies to investigate the relationship between the importation/deprivation frameworks and prisoners' participation in prison programmes, it can provide input for further research.

The deprivation variable that contributes most to explaining prisoners' participation is time served. The finding that the likelihood of becoming engaged increases when prisoners have been incarcerated for a longer period of time is compatible with the research of Dhami et al. (2007). There are a number of possible explanations. A first explanation can be found in the prisonization process through which prisoners are shaped and transformed by the correctional environment (Clemmer 1940), since prison activities are one aspect of this environment.

Dhami et al. (2007) mention that an official sentence plan can influence the participation level of individual prisoners. However, further research is necessary to investigate the extent to which prisoners in Belgium have official sentence plans, and if these effectively serve as a motivating factor for participation in prison activities. Furthermore, prisoners who have been incarcerated for a long period of time may be more informed about the possibility of prison activities and more likely to go along with the norms of prison life. On top of this, at the start of the detention period, it is probable that prisoners will have other concerns (e.g. appearance before the court, employment, housing, family matters, etc.) and will not be so interested in the prison activities.

Research into the relationship between time served and the motivating/demotivating factors for participation in prison programmes could provide a greater insight into whether the reasons for (not) taking part differ between prisoners with a shorter and those with a longer current sentence length. For instance, research into the motives behind participation in prison activities has shown that prisoners have the choice of either ‘using’ their time in prison or ‘filling in’ their time. When people ‘use their time’, their participation in prison programmes might be the result of a motivation to improve themselves, while participation as ‘filling in time’ might be the result of a wish to alleviate boredom (Dhami et al. 2007). Additional research could shed light on the predictors of the experience of these different kinds of motives. Who are the prisoners who participate to fill in their time? Who are those who prefer to use their time? Is there a difference between prisoners with a short and those with a longer current sentence length? Manger et al. (2010) have investigated the relationship between time served and the motivating factors influencing participation in educational courses while in prison. They found that prisoners with longer sentences are more likely to follow educational courses because they want to prepare for life after release and to acquire knowledge and skills. Those with a longer sentence length are thus more likely to ‘use their time’, as opposed to ‘filling in their time’. Nevertheless, research into the relationship between time served and motivating/demotivating factors affecting participation in other kinds of prison programmes is scarce.

Besides time served, receiving visitors is also positively related with participation in prison activities. This is in line with previous research: prisoners who receive visitors are more likely to take part in educational courses while in prison, compared to their fellow inmates who do not receive visitors (Rose 2004). In addition, some academics have found that having visitors reduces the likelihood of being involved in prison misconduct (e.g. Cochran 2012). Perhaps it is possible that prisoners who receive visitors want to maintain their social ties to society and choose more positive forms of behaviour in prison, for instance through participation in prison activities.

The importation variables that are related with participation in prison activities are younger age, good understanding of the Dutch language and having no children. In terms of age, we could find no previous studies investigating the relationship between age and participation in multiple prison activities. However, considering sports, Condon et al. (2008) mention that young prisoners in particular get more exercise in prison than outside. In some correctional institutions, older prisoners are denied access to the gym because they are not considered adequately fit. The relationship between age and participation in education has already been investigated, but the findings are inconsistent. In different examples of research, the youngest (18–24 years) and oldest (45+) age groups were shown to be underrepresented in the participation rates (Eriksson Gustavsson and Samuelsson 2009; Gunnlaugsson and Ragnarsson 2009). The study by Manger et al. (2013) has shown that participation rates decrease slightly when age increases.

Concerning the relationship between an understanding of the Dutch language and participation, we can suggest some possible explanations. As most of the activities are offered in Dutch, it is a sound conclusion that the better the understanding of the language, the higher the possibility of getting involved in one or more prison activities. This is in line with the conclusion of Barnoux and Wood (2013), which states that foreign national prisoners experience language problems during their detention. Molleman and Leew (2012) also argue that cultural minorities are less positive about the delivery of programmes, possibly due to language problems. Our research builds on these findings, indicating that an understanding of the language explains more about participation in prison programmes than nationality. This means that the language people speak and their nationality should not be considered synonymous; there are Belgian prisoners who experience language difficulties and foreign prisoners who have mastered the Dutch language sufficiently. Providing an explanation as to why prisoners without children are more likely to participate is more difficult. We assume that this is connected with age because it is generally the younger prisoners who have no children.

Conversely to the research of Dhami et al. (2007), our study does not suggest any relationship between quality of life before detention (importation) and inmates' participation in prison activities. Furthermore, the separate variables (i.e. whether or not a prisoner was previously employed, has finished secondary school, has a partner or has been previously incarcerated) were found not to be related to participation. Previous research has frequently shown that the majority of people who come into contact with the prison system are socially excluded: for instance, in terms of having poor prospects on the labour market, or educational and familial disadvantages (Social Exclusion Unit 2002). The fact that participation is equally divided among prisoners who have had bad and good qualities of life before detention is possibly an indication that those people who have been excluded from society can be offered opportunities during their imprisonment to help bring them back into civic society, rather than further exclude them.

Limitations and Future Research

A number of the limitations of this study are noteworthy. One initial shortcoming is that only prisoners of a single remand prison participated in our research. The inclusion of prisoners of other correctional institutions—both prisoners remanded in custody and convicted prisoners—would enrich the data and give insights into the participation differences and similarities among various prison populations. Furthermore, because of the small number of women included in our study, the results concerning gender should be cautiously interpreted. It might be interesting to increase the number of female respondents and investigate how the importation and deprivation variables affect men and women differently. Since gender-responsive literature has shown that there are notable differences between male and female inmates (e.g. Bloom et al. 2005; Schram et al. 2004), it might be the case that by analysing them separately, differences in these variables arise. Furthermore, since our research points out that prisoners with children are less likely to participate in prison activities, it would be interesting to differentiate fathers from mothers. For example, research from the United States has shown that mothers and fathers are equally likely to participate in employment and educational courses, while mothers are more likely to attend parenting and childrearing courses (Glaze and Maruschak 2008). Further research in Flanders and other European areas could provide insight into the programmes in which male and female parents are more or less likely to take part.

The fact that only one prison was involved in this study explains why the amount of deprivation variables is also limited. By conducting the research in several different correctional institutions, more deprivation variables could be included: for instance, security level (minimum, medium, or maximum) (Cao et al. 1997; Dye 2010) or the level of overcrowding (Dye 2010). Although we do have information about the level of overcrowding and the security level of the prison in which the research took place, we could not include these variables in the analyses because we were not able to compare them with other correctional institutions that are less/more overcrowded and/or have a different level of security. Besides this, the number of importation variables could also be increased. Prisoners bring their own attitudes, values, beliefs and past experiences into prison, which are not considered in our study; these might include histories of mental illness, juvenile incarceration (Cao et al. 1997) and seriousness of criminal case (Lahm 2008; van der Laan and Eichelsheim 2013).

Furthermore, despite the fact that the questionnaire was available in 13 languages, some prisoners could not be involved in the study due to linguistic limitations. This was however only a small proportion of the whole prison population. Of all the refusals (26 %), only 6.5 % reported language barriers; there was no possibility of their taking part in the research since the questionnaire was not available in a language they had mastered.

A fourth limitation concerns the fact that visitation is not included as a measure of the depended variable (i.e. participation in prison activities). Some academics might question this since, in particular studies, visitation is considered as a type of programming (e.g. Blowers and Blevins 2015; Hoffmann et al. 2010). The range of prison activities included in our study is based on Flemish legislation concerning activities and services for prisoners. In Flanders, there is a ‘Decree on the organisation of care and services for prisoners’, which states that there must be a selection of high-quality programmes offered in each prison encompassing culture, education, health, sport, vocational training and wellbeing. The request to set up a research project came from the activity providers responsible for these kinds of programmes. This created the opportunity to form a steering committee (members were representatives of each sector offering activities in the respective prison, along with the coordinator of these activities and two academics) and to co-construct the research. The steering committee made the decision to focus exclusively on the activities for which they were responsible (Brosens et al. 2015), and to exclude (for instance) visitation. In this article, however, we made the choice to differentiate therapeutic (i.e. wellbeing and health) from non-therapeutic programmes, as not all prisoners were eligible to participate in treatment programmes, while all prisoners could voluntarily participate in all the activities included in our study (i.e. culture, education, sport and vocational training). Nevertheless, it would be interesting to investigate which importation and deprivation variables are related with participation in therapeutic programmes, or in other types of programmes, like visitation. Furthermore, some previous studies consider the measures we included as deprivation characteristics—related with prison activity participation—as predictors of negative behavioural responses to imprisonment (e.g. Dye 2010; Lahm 2008; van der Laan and Eichelsheim 2013).

Fifth, previous research has shown that participation in certain prison programmes can have diverse positive effects. For instance, by going to the library, prisoners may increase their literacy skills (Greenberg et al. 2007); participants of (vocational) education have better employment patterns after release (Lawrence et al. 2002; Vacca 2004) and are less frequently involved in misconduct (Lahm 2009). In addition, participants of sports activities are also less frequently involved in disciplinary violations during imprisonment (Martos-García et al. 2009; Meek and Lewis 2014). As some of these positive effects are related with participation in

certain prison programmes, it would be interesting to investigate the relationship between deprivation and importation characteristics and participation in specific prison activities. By doing this, one could investigate which features could be expected to increase the participation rate and effect(s) of certain programmes.

Lastly, the results of our study are limited because cross-sectional data are used, through which the causal relationship between the independent and dependent variables cannot be determined. For instance, it is not clear whether or not visitation and participation in other prison activities were happening simultaneously, or which came first.

Implications for Policy and Practice

Notwithstanding the above limitations, the research project shows that an examination of prisoners' characteristics and features related to imprisonment can contribute to an understanding of participation in prison activities. This study not only concentrates on participants (i.e. the group of prisoners on whom most previous studies concerning participation in prison programmes are focused—e.g. Manger et al. 2010; Martos-García et al. 2009), but also on those who do not take part. Non-participants are frequently overlooked in previous research (Brosens 2013; Johnsen 2001). Consequently, this study provides an insight into the profile of prisoners who are most vulnerable to being excluded from participation in prison programmes. Knowing that participation has several positive effects (e.g. reduction of recidivism—Kim and Clark 2013; improvement of wellbeing and social capital—Digennaro 2010; improvement of literacy skills—Greenberg et al. 2007), it is important that policy and practice devote special attention to these vulnerable groups. The implications for policy and practice with regard to importation and deprivation variables are described below.

Concerning the importation variables, the study first points to the importance of age for participation. Given the significance of age, policy makers and activity providers should consider the prison population as a heterogeneous group with diverse characteristics, needs and competences. Nowadays, it is clearly the case that younger prisoners in particular engage more readily in prison activities. Mueller-Johnson and Dhami (2009), and Wahidin (2006), have indicated that correctional institutions focus their resources and facilities—such as training, education and resettlement programmes—on the younger prison population. Snyder et al. (2009) state that this not only concerns (vocational) education programmes, but that recreational programmes are also mostly geared towards the majority population (i.e. younger and more able-bodied prisoners). Wahidin (2006) considers this to be ageism. For instance, when correctional staff are faced with limited resources, they are less likely to involve older prisoners in their educational or training activities, because they assume that older people are less likely to find employment after release (Wahidin 2006). Nevertheless, older people also have a great many individual competences and, consequently, different strategies could be developed for particular age groups, taking into account the specific needs of each.

An acknowledgement of the prison population as heterogeneous relates not only to age, but also to the language(s) prisoners have mastered. Although Flemish prisons contain a large number of foreign inmates (Snacken 2007), the majority of the respondents in our study have a reasonable or good command of the Dutch language. However, there is still a considerable proportion of prisoners who have little or no understanding of Dutch and therefore cannot participate, since most of the activities are offered in Dutch. Policy makers and activity providers could dedicate themselves to informing foreign national prisoners about the provision of Dutch language courses.

In addition, whether prisoners have a good or a rudimentary understanding of the Dutch language, they can still participate in prison activities for which a certain level of Dutch is required.

Finally, previous research has shown that the prison population is predominantly from the underclass: that is, from the most disadvantaged groups in society. Their level of education is almost always lower than the national average (de Maeyer 2005), a large proportion of this class has health problems (Binswanger et al. 2009; Møller et al. 2007) and a large proportion has a low socio-economic position (Friestad 2010). Our research has shown that the majority of prisoners participate in at least one prison activity. Activity providers could explore the possibility of using prison activities to serve as a bridge towards participation in social services in society, in order to reduce recidivism.

With regard to the deprivation variables, the significance of receiving visitors for participation has been identified. Prisoners who receive visitors participate more often in prison activities, compared to prisoners who never receive visitors. For this latter group (or for prisoners who rarely have visitors), volunteers (e.g. moral consultants, chaplains, etc.) could play a valuable role. The interactions between the prisoner and the volunteer could possibly help to offset the day-to-day strains of prison life (Cochran and Mears 2013). It could be a challenge for policy makers and correctional institutions to enlarge the existing volunteer workforce.

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