

Work-related Intervention Programs: Desistance from Criminality and Occupational Integration among Released Prisoners on Parole

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Introduction

Desistance from crime relates to a process aimed at stopping criminality over time (Bersani & Doherty, 2018; Laub & Sampson, 2001; LeBel et al., 2008; Maruna, 2001; Maruna, 2010). A distinction is made between "primary" desistance, which is, in effect, a temporary respite from a life of criminality and "secondary" desistance, which involves a change in a criminal lifestyle based on a change in the personal identity of the offender. One of the key components of secondary desistance, which is related to the present research, is the integration of the offender into employment and normative life.

The present evaluation study examines the integration into employment and recidivism of released prisoners who had been under the guidance and supervision of the Prisoner Rehabilitation Authority as part of a program for reducing one-third of their sentences. The study monitored the integration of these prisoners into employment, comparing their progress with prisoners who had served their full sentence. This was performed over a period of three years from termination of supervision in the case of the former and from final release from prison in the case of the latter. In addition, both the groups were monitored for recidivism over a period of eight years.

Theoretical Background

Many researchers describe the prolonged correctional process of prisoners as one that comprises three components: rehabilitation, reentry, and reintegration (the Triple R Model). It is a continuous process, with one phase merging into the next (Gideon &

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Sung, 2011). Based on this process and against the backdrop of the changes that have taken place in phenological ideology and theory, different rehabilitation models have emerged, among them the Risk-Need-Responsivity (RNR) model and later, the Good Lives Model (GLM). Offender treatment based on the principles of both models has been found to reduce recidivism (Ziv, 2018). The basic principles of RNR (Andrews & Bonta, 1994; Gendreau, 1996) are that correctional interventions must be structured on three core rehabilitation principles: risk, need, and responsivity. The risk principle addresses the fact that offender treatment must be suited to the offender's risk to the community. Accordingly, offenders who are identified as being at high risk to reoffend should receive the most intensive treatment. According to the need principle, effective offender therapies must primarily address the offender's criminogenic needs (antisocial attitudes, values, and beliefs; antisocial peer associations; lack of work and financial achievement; substance abuse; lack of problem solving and self-control skills). Lastly, the responsivity principle addresses the need for offender treatment therapies to match the offender's learning style, motivation level, and cultural background (for a detailed description of RNR, see Gideon & Sung, 2011).

The Good Lives Model (GLM) suggests focusing on the needs of the offender and on a search for legitimate ways to satisfy these needs, something that could ultimately lead to risk reduction (for a detailed review, see Ward & Maruna, 2007). One of the needs is employment.

The rationale underlying the employment programs in general are supported by a number of theories as summarized in an evaluation made for the US Justice Department (Sherman, 1997). These theories include the understanding that committing a crime involves rational choices (Clarke & Felson, 1993). Rehabilitation will offer an economically worthwhile alternative – allowing the individual to earn an income from

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legitimate work instead of from unlawful pursuits. Such a program develops necessary work skills, providing prisoners with an opportunity to abandon the life of crime.

Prisoner rehabilitation programs based on employment have been highly popular in the Western world (Nathan, 2010). Much has been written about the connection between unemployment and crime; although there is a subset of prisoners who end up acquiring work-related skills through prison programming (such as working in the kitchen, etc.), many prisoners do not have work habits (such as getting up in the morning, getting to work on time, working for an extended number of hours, obeying and respecting authority, handling pressure) or professions, and their level of education is low – facts that make it difficult for them to integrate into society once they have completed their sentences (Nathan, 2010; Rhodes, 2008).

In Britain, for example, it was found that more than two-thirds of prisoners are unemployed upon their entry into prison (Hunter & Boyce, 2009; Social Exclusion Unit, 2002) and that one of the main reasons for their return to crime, according to the prisoners themselves, is their inability to earn a living (Nathan, 2010). The unemployment rate among released prisoners was found to be much higher than that of the regular population. In addition, the average salary of released prisoners who were employed was lower than the average salary in the economy (Pettit & Lyons, 2002). It should also be borne in mind that many prisoners who are released from prison are burdened with hefty debts and fines (Pogrebin, West-Smith, Walker & Unnithan, 2014). It follows that integrating prisoners into employment frameworks is an important component in their rehabilitation and could constitute a turning point in their criminal career (Duwe, 2015a, b; Gillis & Nafekh, 2005; Skardhamar & Telle, 2012).

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Employment is a significant starting point in the integration of the released prisoner in society, serving as a legitimate source of income, apart from being a key element in any individual's routine activity (Bucklen & Zajac, 2009; Bushway & Apel, 2012; LeBel, Burnett, Maruna & Bushway, 2008). Employment and training programs for prisoners enable them, first and foremost, to gain occupational experience; work habits; economic stability; contact with a positive, normative reference group; and a strengthened self-image with respect to the possibility of rehabilitation (Hunter & Boyce, 2009).

Perseverance in Employment Following Release

Released prisoners are often typified as having low motivation and personal organization skills (Bucklen & Zajac, 2009; Formon, Henderson, & Schmidt, 2018; Social Exclusion Unit, 2002; Solomon, Johnson, Travis, & McBride, 2004; Varghese, 2012). Due to low motivation and other factors, such as not having appropriate transportation, organizations that help released prisoners reported that many of them did not arrive for work interviews that had been arranged for them. It was also found that a criminal record affects future salary and work stability (Bushway, 1998). Additional barriers that released prisoners encounter in finding and maintaining employment include a lack of suitable training, an absence of work experience, and transportation difficulties.

Research studies indicate that social support and assistance in seeking work are important factors in the released prisoner's ability to find a job and maintain it over a period of time in the community (Cherney & Fitzgerald, 2016). The ability to deal with a stigma, a supportive family, stable employment prior to incarceration, connection with employers before release, were also identified as factors that raise the chances of the

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released prisoner in finding and maintaining a job (Novo-Corti & Barreiro-Gen, 2015; Ramakers, Nieuwbeerta, Van Wilsem & Dirkzwager, 2016; Visher, Debus-Sherrill & Yahner, 2011). In contrast, the use of drugs, health problems, emotional disorders, advanced age, family problems, affiliation with a minority group, and financial burdens were found to lessen the chances of released prisoners being employed (Decker, Ortiz, Spohn & Hedberg, 2015; Pogrebin, West-Smith, Walker & Unnithan, 2014; Visher, Debus-Sherrill & Yahner, 2011).

A key difficulty in the integration of released prisoners into the labor market is the serious apprehension that employers feel about hiring them (Shoham & Timor, 2014). This has led to the development of special employment programs (for example, the Friendly Employers program - supportive employers in Israel) that emphasize the need for a more flexible rehabilitation-support approach on the part of professionals, alongside an uninterrupted employment record that begins in prison (for more about the program, see Peled-Laskov & Bailer, 2013).

Employment Rehabilitation Programs for Released Prisoners

Several rehabilitation programs that combine professional training, preparation for work interviews, and even assistance in finding work and support during the period of employment are offered to released prisoners. The effectiveness of programs for the employment of prisoners is generally measured (as was done in this study) according to three criteria: the integration of prisoners into the labor market after their release from prison, wage levels (Davidsko Volk, 2011), and the rate of recidivism (Shoham & Timor, 2012).

Various studies, based by and large on quasi-experimental research, have examined the relationship between participation in professional training and employment programs

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and desistance from delinquency among released prisoners who have taken part in such programs as compared with released prisoners who have not (e.g. Anderson & Schumacker, 1991; Visher, Winterfield & Coggeshall, 2005). Most research shows that integration of prisoners into the labor market following their release from prison and holding a steady job reduce the incidence of recidivism among them (Davidsko & Volk, 2011; Duwe, 2015a, b; Gillis & Nafekh, 2005; Hurry et al., 2006; Rhodes, 2008; Seiter & Kadela, 2003; Skardhamar & Telle, 2012).

In a comprehensive literature survey conducted by Hurry et al. (2006), it was found that the rate of recidivism over the six-month period following release from prison was lower among participants in employment programs than that among released prisoners who had not participated in such programs. In one study, Redcross et al. (2012) compared released prisoners who had received assistance in the framework of a project by the Center for Employment Opportunities with those who had not participated in the project. Participants in the project attended a four-day workshop and were placed in temporary, minimum-wage employment. Where the prisoners demonstrated a willingness to work, they were offered help in finding permanent employment. In contrast, prisoners in the control group were given one-time assistance in work placement. The study found that treatment group members were 24.5 percent more likely to be employed during the first year after random assignment than control group members.

In another study, Duwe (2015a, b) examined recidivism and post-release employment outcomes among 464 offenders released from Minnesota prisons between 2006 and 2008. The study evaluated the effectiveness of EMPLOY, a prisoner reentry employment program designed to help offenders locate, achieve, and retain employment

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at a livable wage. EMPLOY provides incarcerated participants with assistance to enhance their readiness for post-release employment and offers them community support for one full year following release from prison. The program is entirely voluntary. Results from Cox regression analyses revealed that participating in EMPLOY reduced the hazard ratio for recidivism by 32% to 63%. The findings further showed that EMPLOY increased the chances of gaining post-release employment by 72%. Although EMPLOY did not have a significant impact on hourly wage, the overall post-release wages for program participants were significantly higher because they worked for a greater number of hours.

Much importance is attached to the rehabilitation continuum that begins in prison and continues directly following release (Cook et al., 2015). One such endeavor is the PRI Milwaukee Safe Streets program, commencing six months prior to release and including a range of support services following release. The prisoners participate in workshops that provide employment skills, and in group cognitive therapy sessions aimed at altering behavior. The therapeutic staff meets with all participants prior to release in order to ensure that they are equipped with a release plan that includes a place to reside, access to transportation, documents and certificates, and a work placement program. The prisoners are offered ongoing addiction therapy in the community, assistance in finding work, and help in locating employers who are willing to employ released prisoners in return for state subsidization (Cook et al., 2015).

The Vocational Support and Supervision Program of the Israeli “Prisoner Rehabilitation Authority”

In order to have one-third of their sentences commuted, in most cases prisoners in Israel are willing to undertake to work, despite the serious difficulties that they might experience in trying to integrate into the workplace (Seiter & Kadela, 2003; Uggen,

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2002). These difficulties are mainly the result of the problem they have in accepting authority, their meagre experience in the sphere of employment, and their lack of professional skills in various fields. Bearing this in mind, the Israeli Prisoner Rehabilitation Authority has developed a vocational support and supervision program, which takes these difficulties into account (Bialer & Peled, 2011).

The Prisoner Rehabilitation Authority (PRA) in Israel is the state authority entrusted by law (The Parole Law, 2001) with preparing programs for the supervision and guidance of prisoners on parole. Among the key programs run by the authority is one that includes supervision, rehabilitation, and care within the community, with the emphasis on employment, job placement, and support during the parole period.

The vocational support and supervision program of the PRA in Israel does not simply supervise work but involves a large measure of counselling and a holistic approach in therapy. Admission to the program is conditional, among other things, on the prisoner's physical and mental ability to work, on cooperation with therapeutic agencies in prison, and on being drug-free for a period of at least six months. Every prisoner who is under the supervision of the vocational support and supervision program is obligated to participate in therapy twice a week: namely, one individual session and one group session every week. Each session lasts 50 minutes. The individual session is where the difficulties faced by the prisoner reentering the community are raised. Prevalent issues discussed in sessions include: problems in the workplace, difficulty in accepting authority, coping with the temptation to return to criminality, temptations of easy profits, traumas from the incarceration, difficulties and pressures in the family, difficulties in intimate relationships, etc. As for group therapy, the prisoners are placed in a specific group based on the type of crime they have committed: fraud, violence, sex, drugs, etc. The problems that arise in the individual sessions also arise in the group, which gives the prisoners the feeling that they are not alone. The group provides support for the prisoners and helps them cope with their

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difficulties. Another goal of group therapy is to identify the prisoners' misconceptions and mistaken beliefs (such as those related to work) and try to change them (Efodi, 2014).

As for employment, in some cases the prisoners find work for themselves upon leaving prison and must obtain the approval of the Authority and the police for the job. In the event that approval is not forthcoming or the work is ultimately not suitable, the prisoner, with the assistance of the Authority, looks for another job. Regarding supervision, the Authority monitors regular work attendance by visits to the workplace. The frequency of visits varies from one to three times a month and is determined by the prisoner's risk level. The supervising officer comes to the workplace, talks to the employer, checks for problems, and tries to help. Prisoners usually regard the visit positively and only occasionally ask that it be conducted out of view of the employer and other employees (discussion with Gidon Bialer, the director of the Employment Department of the Prisoner Rehabilitation Authority, September, 2018).

The PRA tries to ensure that the various therapeutic personnel work in synchronization. They are expected to be in touch and to update each other on the progress of the prisoner's therapy regarding changes or crises that have arisen. The PRA's regional inspector should see the full picture regarding the prisoners: what happens at work, at home, in the individual and group therapy. In addition, the inspector should be aware of changes or crises experienced by the prisoners and, to the extent possible, offer assistance (Bialer & Peled, 2011).

Against this background, the aims of the present evaluation study are twofold:

1. To examine the integration into employment, the duration of employment and the wage level among released prisoners who had been under the vocational guidance and supervision of the Prisoner Rehabilitation Authority as compared with a group of released prisoners who had served their full sentences and had not been under the supervision of the Authority.

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2. To examine the rate of re-incarceration of released prisoners who had been under vocational guidance and supervision as compared with a group of released prisoners who had served their full sentences and had not been under the supervision of the Authority.

No research designed to evaluate the efficacy of the program has been conducted to date in Israel, let alone one that proposes advanced statistical methods. Our hypothesis is that among prisoners who had participated in a vocational support and supervision program there would be a higher level of integration into employment, a higher level of perseverance in employment, and a higher level of wages, along with a lower level of repeated incarcerations, as compared with the group of released prisoners who did not receive vocational support following their full release from prison.

Method

Socio-legal and employment data on 311 released prisoners who had participated in the rehabilitation and supervision program during the period 2007-2010 were gathered from four cities in Israel, two large and two average in size. This group of ex-prisoners had been referred to the Prisoner Rehabilitation Authority in the framework of parole contingent on supervision. Data on the prisoners were obtained from the files of the Prisoner Rehabilitation Authority in the above cities.

Of the 311 prisoners in the supervised group, 243 had data on the period they were under supervision of the Prisoner Rehabilitation Authority. The average period of supervision was 10.5 years, with a standard deviation of 4.6.

This group of early-release prisoners was compared with released prisoners (344 in number) who were sampled randomly from a group that had been released during the period 2007-2010 after having served their full sentences, and were residing in the same

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four cities. This group was found to be similar in socio-legal and occupational characteristics to all prisoners who had served their full sentences (2,728 in number) and who had been released in the same period in the same cities as the supervised group. Since the group had been released after serving their full sentences they were not required to be part of any rehabilitation or supervision program under the aegis of the Prisoner Rehabilitation Authority.

Our research design attempted to reduce as far as possible the differences between the groups being investigated by using a two-staged approach, as described below.

Stage One

In the first stage a comparison was made between the groups based on socio-legal and occupational characteristics, such as age, nationality, marital status, number of children, military service, education (number of years), number of incarcerations, duration of incarceration, and the nature of the latest offence. The prisoners were guilty of a wide range of offences, which were grouped into four categories: violence (including domestic violence), drugs, property, and other, including sexual crimes. In addition, data were collected on the two groups regarding integration into occupations in prison, such as professional training received in prison, number of jobs held or job months in prison relative to the total time spent in prison, and participation in enrichment programs during incarceration.

Data on integration into employment of the two groups (655 prisoners in all), the duration of employment and the level of wages were obtained from the Central Bureau of Statistics. Data on recidivism for incarceration were obtained from the computerized system of the Prison Service and referred to released prisoners from both the groups.

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These data also include the date of return to prison following full release or following completion of the period of supervision and up to the end of data collection (2015).

Table 1: Means and Standard Deviations of Continuous Socio-legal and Employment Variables

Demographic variables	Vocational Support and supervision group (n=309)	Without support and supervision group (n=346)	t-test
Age of prisoner	41.36 (9.74)	43.11 (12.07)	2.02*
Number of children	1.41 (1.64)	1.70 (2.16)	1.85
Education (years)	10.41 (2.30)	9.73 (2.14)	3.72**
Number of incarcerations	2.58 (1.92)	3.49 (2.83)	4.83**
Number of months in prison	29.53 (25.07)	14.45 (18.87)	8.62**
Number of courses attended in prison	.56 (0.91)	.27 (0.69)	4.36**
Relative number of days employed in prison	.15 (0.22)	.08 (0.19)	4.44**

***p<.001 **p<0.01 *P<0.05

Table 1 shows, as expected, that significant differences exist in almost all parameters between the group that had received vocational support and supervision and the group that had not. Differences exist in variables such as age and education, with the released prisoners from the comparison group being older and less educated. In addition, significant differences exist between the average number of incarcerations, duration of incarceration, number of courses and number of work days in prison, with the average number of incarcerations in the comparison group being higher, and the duration of incarceration being longer in the group with support and supervision. In addition, the average number of courses attended in prison and the number of work days in prison were higher among the group with supervision.

Table 2: Comparison of Group Characteristics – Qualitative Socio-legal and Employment Variables

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Demographic variables	With support and supervision	Without support and supervision	df	χ^2
Marital status	43.6% single 38.8% married 17.6% divorced	42.2% single 33.2% married 24.6% divorced	2	5.10
Ethnicity	78.7% Jewish 21.3% non-Jewish	69.4% Jewish 30.6% non-Jewish	1	7.28**
Military service	56.7% no service 22.3% partial service 21.0% full service	75.2% no service 11.2% partial service 13.6% full service	2	18.60**
Place of residence	53.4% Jerusalem 28.2% Tel Aviv 11.3% Netanya 7.1% Ashdod	34.1% Jerusalem 37.0% Tel Aviv 12.1% Netanya 16.8% Ashdod	3	30.47**
Type of offence	15.4% violence 24.8% drugs 36.0% property 23.8% other	24.0% violence 19.9% drugs 24.0% property 32.1% other	3	18.96**
Participation in an enrichment program in prison	88.2% no 11.8% yes	95.7% no 4.3% yes	1	11.75**
Work in prison	44.7% did not work 55.3% worked	71.4% did not work 28.6% worked	1	48.12**

***p<.001 **p<0.01 *P<0.05

Table 2 shows that there is no difference in the marital status of the prisoners in the two groups. There is a significant difference, however, in the other variables. From the viewpoint of ethnicity, there appears to be a higher percentage of non-Jews in the comparison group. There is a higher percentage of violent crime and a lower percentage of property crime in the comparison group vis-à-vis the supervised group. With respect to drug offences there is no difference between the groups. In addition a lower percentage of prisoners in the comparison group participated in enrichment programs or worked in prison.

Since the comparison group constitutes a representative sample of prisoners who were released after serving their full sentences, it was expected that this group would have less positive characteristics (a greater number of incarcerations, more serious offences,

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less involvement in rehabilitation programs during incarceration, etc.), as a consequence of which their sentences were not reduced (Shoham, Yehosha & Efodi, 2013).

Against the backdrop of these differences, and in order to reduce the selection bias and control the possible effect of socio-legal and employment variables, use was made in the first stage of multivariable models. These consisted of the logistic regression model for the probability of integrating into the workforce, the linear regression model for the duration of work, and the Cox regression analysis for the probability of survival without re-incarceration. Due to the concern that these statistical models might not be sufficient, and in order to reduce the selection bias between the two groups, a second stage of research was carried out. In this stage, two sub-groups were constructed, one that had received guidance and supervision and one that had not, based on a similarity in propensity for participating in the guidance and supervision program.

Stage Two

In order to reinforce the multiple linear regression, in this stage we conducted a propensity score analysis of observational data (Rosenbaum & Rubin, 1983) to create a supervision program group and a comparison group having similar characteristics, enabling comparisons to be made within these matched groups.

The propensity score is the probability that a released prisoner will be assigned to the supervision program based on background characteristics. This score is estimated by a logistic regression model where the dependent variable is participation in the supervision program (participate yes/no) and the background characteristics are the predictor variables in the model. The propensity scores are then used to match prisoners who had participated in a supervision program with released prisoners who had served their full sentence.

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Propensity scoring attempts to simulate randomization of subjects as occurring in randomized controlled trials. Random assignment of subjects to treatment or control groups leads to a similar distribution of covariates in the groups. However, unlike randomization to treatment groups, the balancing achieved by propensity scoring is only on observed covariates and is not robust against a "hidden bias" due to unobservable selection. An attempt was made to overcome the "hidden bias" by including as many theoretically relevant covariates as possible in the propensity score model.

For selection of sub-groups the best match method was used, including, as stated, matching of a subject from the supervised group with one from the comparison group with the nearest propensity score (single match approach). A 0.1 calliper was used for the selection process. Following identification of two matching samples a test was carried out to ensure that the approach did indeed provide balanced samples that did not differ consistently from each other in other variables that were relevant to the selection process.

There were 309 prisoners from the supervised group prior to matching, with an average "matching" score of 0.641 (SD=0.22, min=0.05, max=0.99). The comparison group, i.e. the unsupervised prisoners, numbered 346, with an average propensity score of 0.354 (SD=0.23, min=0.004, max=0.94). Following matching, the supervised group numbered 143, with an average score of 0.479 (SD=0.17, min=0.05, max=0.94); the comparison group also numbered 143, with an average score of 0.506 (SD=0.20, min=0.05, max=0.84).

Table 3: Socio-legal and Employment Characteristics of the Two Matched Groups

Socio-demographic variables	With support and supervision (n=143)	Without support and supervision (n=143)	Statistic
Age of prisoner (mean)	41.05	40.99	t(284)=.05

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Number of children(mean)	1.37	1.41	t(284)=.16
Education (mean)	10.17	10.25	t(284)=.34
Marital status	44.0% Single 35.0% Married 21.0% Divorced	45.4% Single 34.3% Married 20.3% Divorced	$\chi^2(2) = .06$
Ethnicity	77.6% Jewish 22.4% non-Jewish	76.2% Jewish 23.8% non-Jewish	$\chi^2(1) = .08$
Military service	58.2% did not serve 26.1% partial service 15.7% full service	74.2% did not serve 12.4% partial service 13.4% full service	$\chi^2(2) = 7.65^*$
Place of residence	37.8% Jerusalem 35.0% Tel Aviv 14.6% Ashdod 12.6% Netanya	39.9% Jerusalem 37.1% Tel Aviv 9.0% Ashdod 14.0% Netanya	$\chi^2(3) = 2.16$
Average number of incarcerations (mean)	2.76	2.73	t(284)=.10
Number of months in prison (mean)	19.83	21.57	t(284)=.79
Type of offence	21.6% violence 21.0% drugs 30.8% property 26.6% other	18.9% violence 22.3% drugs 30.8% property 28.0% other	$\chi^2(3) = .39$
Number of courses attended in prison (mean)	.38	.41	t(284)=.38
Relative number of days employed in prison (mean)	.11	.13	t(284)=.73
Participation in an enrichment program in prison	91.6% no 8.4% yes	93.0% no 7% yes	$\chi^2(1) = 0.66$
Work in prison	65.0% did not work 35.0% worked	63.6% did not work 36.4% worked	$\chi^2(1) = 0.06$

*P<0.05

Table 3 shows that the two matched sub-groups, the supervised prisoners (143 in number) and the released prisoners who had served their full sentence (143), are similar in almost all of the characteristics selected. At this stage, whose findings are described below, statistical analyses were performed only for the matched pairs in terms of the propensity score but for various reasons did not obtain parole and therefore served their full sentence.

Findings

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Stage One

Integration into employment. Altogether data were obtained that describe the integration into employment indices of 635 prisoners, (290 belonging to the supervised group of the Prisoner Rehabilitation Authority and 345 belonging to the comparison group), representing 97% of the total sample.

Integration into employment (the dependent variable) has positive values as well as a large number of zeros (prisoners who did not integrate) and was examined according to a two-part model: one refers to the binary part (integration of the prisoner into employment during the three-year monitoring period), and the other focuses only on the group that did integrate, examining the number of months with reported work during the monitoring period.

The Logit model was run initially, allowing control of the selection bias and identification of the factors influencing the probability of integrating into the workforce. In this model the dependent variable is one that receives a value of 1 for prisoners who had integrated into the workforce and 0 for prisoners who had not.

Table 4: Results of assessment of the Logit Model for probability of integration into the work force.

	OR (95% CI)
Age	.95*** (.93, .98)
Number of children	1.01 (.89, 1.16)
Years of education	.94 (.85, 1.04)
Ethnicity (reference group – non-Jewish)	1.32 (.76, 2.32)
Place of residence (reference group – Tel Aviv Jerusalem)	1.42 (.85, 2.38)
Ashdod / Netanya	1.26 (.71, 2.23)
Marital status (reference group – single)	
Married	.88 (.48, 1.63)
Divorced	.63 (.33, 1.19)
Number of incarcerations	.85** (.78, .94)
Duration of incarceration (years)	.95 (.84, 1.08)

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Principal offence (reference group – violence)	
Drugs	.80 (.40, 1.61)
Property	.49* (.25, .95)
Other	.57 (.29, 1.11)
Total vocation rate	1.06(.38, 2.99)
Nm course	1.06 (.80, 1.39)
Number of work days in prison relative to the duration of incarceration	1.27(.45, 3.62)
Supervision (reference group – without supervision)	3.37*** (2.01, 5.67)
n	531
-2LL	517.17
$\chi^2(17)$	107.42***
Nagelkerke R ²	.27

***p<.001 **p<0.01 *p<0.05 OR – relative probabilities

Table 4 shows that even following controlling for the socio-legal and employment variables (including age and number of incarcerations), the group of prisoners under supervision had a 3.4 times better chance of integrating into the workforce than did the comparison group. Analysis of the logistic regression shows that age had a negative effect on integration into the workforce, with each additional year lessening the chances of integrating into the workforce by 5%. The number of incarcerations also had a negative effect on the chances of integrating into the workforce: each additional incarceration reduced the chances of integrating into the workforce by 15%. For prisoners whose main offence was property, there was a 50% less chance of integrating into the workforce as compared with prisoners whose principal offence was violence. No difference was found between drug offences or other offences and violence in the chances of integrating into the workforce. In addition, it was found that the period in which the prisoner worked in prison had a positive effect, close to significant, on integration into employment following release. No significant effect was found on the chances of integrating into the workforce for variables such as education, number of children, marital status, place of residence, ethnicity, duration of incarceration, number of courses and number of work days in prison.

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Perseverance in employment. For those prisoners who had integrated into the workforce, a linear regression (OLS model) was run. In this model the dependent variable is the number of months during the three-year period from release (or end of the supervision period) that the prisoner reported working.

Table 5: Results of OLS Regression for the number of months employed

	B (SE)
Age	.02 (.08)
Number of children	.06 (.44)
Years of education	-.05 (.28)
Ethnicity (reference group – non-Jewish)	2.11 (1.42)
Place of residence (reference group – Tel Aviv	
Jerusalem	-.50 (1.31)
Ashdod / Netanya	1.57 (1.55)
Marital status (reference group – single)	
Married	1.75 (1.58)
Divorced	-1.23 (1.83)
Number of incarcerations	-1.56***(.30)
Duration of incarceration (years)	.06 (.35)
Principal offence (reference group – violence)	
Drugs	-3.90*(1.68)
Property	-3.60*(1.61)
Other	.67 (1.68)
Total vocation rate	1.45 (2.27)
Nm course	.30 (.66)
Number of work days in prison relative to the duration of incarceration	4.96 [#] (2.63)

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Supervision (reference group – without supervision)	5.71***(1.30)
n	385
F(17,367)	6.05***
R ²	.22

***p<.001 *P<0.05 # p=.06

Tests for multicollinearity in analysis of the linear regression for the duration of employment indicated that a very low level of multicollinearity was present (VIF less than 1.99 for all variables).

Table 5 shows that even after controlling for the socio-legal and employment variables, the duration of employment of the supervised group was longer by 5.7 months on average than that of the comparison group. In addition, the duration of employment of released prisoners whose principal offence was drugs or property was shorter than that of prisoners whose principal offence was violence. The number of incarcerations has a significant negative effect on the duration of employment. In contrast, no significant influence on duration of employment was found for age, education, number of children, marital status, place of residence, ethnicity, number of courses and duration of incarceration.

Level of Wages. In this study, the effectiveness of the program was measured not only by indices of integration and perseverance in employment but also by the wages paid to the released prisoners. From the database available to us, it was also possible to obtain the average wage level of the two groups. Since the data appearing in the database are annual data and since it was not possible to know if the reported months included the period of supervision (during which period the prisoners are obligated to

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work), the year succeeding the end of the supervision period or release from prison was selected and data was collected from that point for three years.

Table 6: OLS Regression for Wage^a

	B (SE)
Age	.003 (.004)
Number of children	-.003 (.02)
Years of education	-.02 (.02)
Ethnicity (reference group – non-Jewish)	.05(.08)
Place of residence (reference group – Tel Aviv)	
Jerusalem	-.02 (.07)
Ashdod / Netanya	.12(.09)
Marital status (reference group – single)	
Married	.14 (.09)
Divorced	.001 (.10)
Number of incarcerations	-.07*** (.02)
Duration of incarceration (years)	-.02 (.02)
Principal offence (reference group – violence)	
Drugs	.09 (.10)
Property	-.02 (.09)
Other	.02 (.09)
Total vocation rate	-.05 (.12)
Nm course	.01 (.04)
Number of work days in prison relative to the duration of incarceration	.02 (.15)
Supervision (reference group – without supervision)	.22** (.07)
F(17,306)	2.19**
R ²	.11

***p<.001 **p<.01 *p<.05

a – explained variable: log of the average monthly wage

Estimation of the regression for wage, as presented in Table 6, shows that the average gap in wage between the prisoners in the supervised group and the prisoners without supervision was 22% (the supervised group earned on average 22% more than the comparison group). In addition, it was found that every additional year of incarceration reduces the wage by 7% on average. Age, education, number of children, marital status, place of residence, ethnicity, duration of incarceration, principal offence and period of work in prison were not found to have a significant effect on wage.

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Recidivism for Incarceration. In order to examine the issue of re-incarceration, the survival function was estimated for the supervised group and the comparison group for the entire period of monitoring (2007-2015). Table 7 shows that 93% of released prisoners from the supervised group did not return to prison in the first year, 87% did not go back to prison for a period of two years, 82% for a period of three years, and 79% for a period of 4 years. In contrast, 83% of released prisoners from the comparison group did not return to prison during the first year, 72% during the first two years, 64% during a period of three years, and 61% during a period of four years. It may be seen that in both the groups most of the cases of re-incarceration occurred during the first four years following release. It may also be seen from the life timetable and Graph 1 that after four years the decrease in the survival function is extremely moderate. A significant difference was found in the survival function between the two groups [Wilcoxon (Gehan) Statistic = 30.54, df = 1, p < .001].

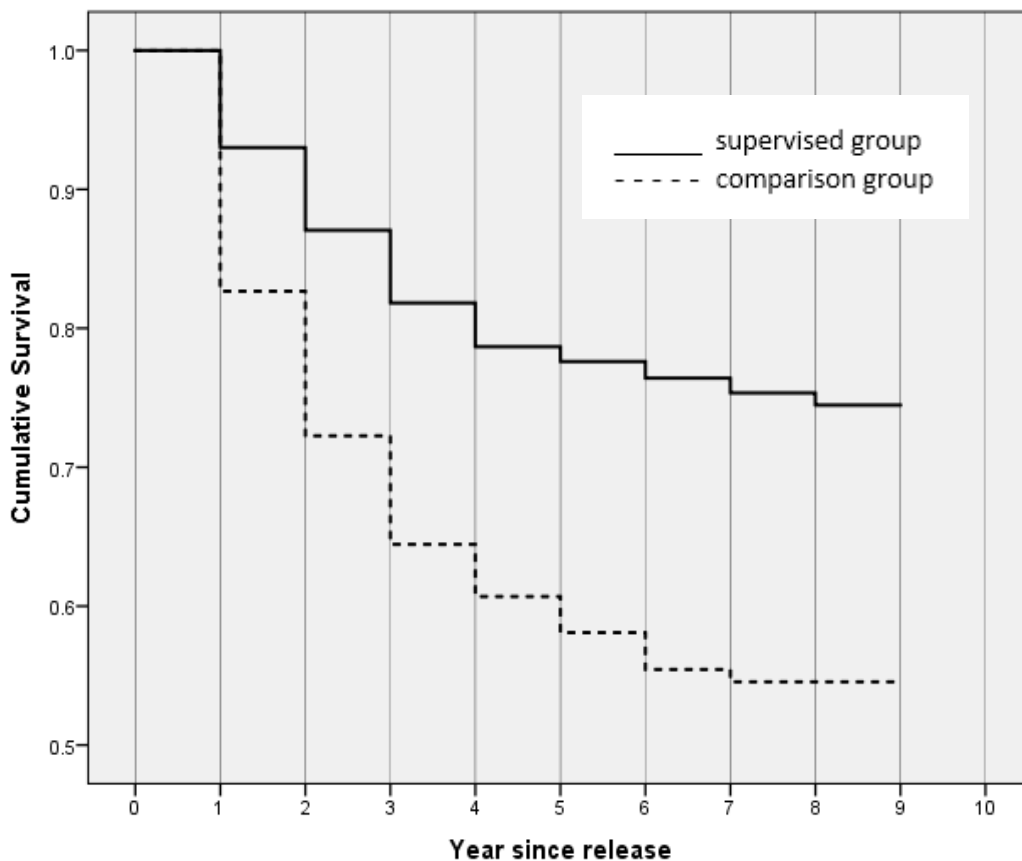
Table 7: "Survival Function" from Incarceration –Life Timetables of Supervised Group / Comparison Group

	Time period	No. of prisoners included in the time period	No. of unmonitored prisoners in the time period	No. of prisoners exposed to danger in the time period	No. of prisoners imprisoned in the time period	Rate of prisoners imprisoned in the time period	Survival rate in the time period	Cumulative survival rate
Supervised group	First year	286	0	286	20	.07	.93	.93
	Second year	266	0	266	17	.06	.94	.87
	Third year	249	0	249	15	.06	.94	.82
	Fourth year	234	0	234	9	.04	.96	.79
	Fifth year	225	5	222.5	3	.01	.99	.78
	Sixth year	217	47	193.5	3	.02	.98	.76
	Seventh year	167	48	143	2	.01	.99	.75
	Eighth year	117	59	87.5	1	.01	.99	.74
	Ninth year	57	57	28.5	0	.00	1.00	.74
Comparison group	First year	346	0	346	60	.17	.83	.83
	Second year	286	0	286	36	.13	.87	.72
	Third year	250	0	250	27	.11	.89	.64

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Fourth year	223	0	223	13	.06	.94	.61
Fifth year	210	0	210	9	.04	.96	.58
Sixth year	201	51	175.5	8	.05	.95	.55
Seventh year	142	35	124.5	2	.02	.98	.55
Eighth year	105	59	75.5	0	.00	1.00	.55
Ninth year	46	46	23	0	.00	1.00	.55

Graph No. 1: Survival Rate from Re-incarceration among Supervised Prisoners and Prisoners Without Supervision



In order to check whether the risk of re-incarceration in the supervised group is lower than that in the comparison group, even after control of the socio-legal and employment variables, and also with a view to learning about the factors influencing the survival of the prisoners without a return to prison, the Cox Proportional Hazard model was run. This model takes into account not only the prisoner's return to prison but also the time elapsed up to that juncture. The Cox regression can handle censored observations (cases

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where recidivism does not occur by the end of the study) and is more appropriate for situations in which the length of the follow-up period varies among offenders.

Table 8: Cox Model for the Risk of Re-incarceration

	HR (95% CI)
Age	.95*** (.93, .96)
Number of children	.92 (.82, 1.03)
Years of education	1.04 (.97, 1.12)
Ethnicity (reference group – non-Jewish)	.99 (.70, 1.39)
Place of residence (reference group – Tel Aviv)	
Jerusalem	1.49* (1.09, 2.08)
Ashdod / Netanya	1.17 (.80, 1.70)
Marital status (reference group – single)	
Married	1.71* (1.13, 2.59)
Divorced	1.87** (1.21, 2.90)
Number of incarcerations	1.17*** (1.11, 1.24)
Duration of incarceration (years)	1.01 (.92, 1.10)
Principal offence (reference group – violence)	
Drugs	.90 (.58, 1.39)
Property	1.08 (.73, 1.62)
Other	.77 (.50, 1.18)
Relative period of employment ¹	.05*** (.02, .13)
Supervision (reference group – without supervision)	.47*** (.34, .65)
n	572
-2LL	2405.15
χ^2 (15)	167.44***

***p<.001 **p<.01 *P<.05 HR – relative risk

¹ Duration of employment divided by the period of supervision up to a return to prison within a period of up to 8 years.

It is seen from Table 8 that after controlling for the socio-legal and employment variables, the supervised group of prisoners have a 53% less incidence of a return to prison than the comparison group. It appears that age has a positive effect on survival without re-incarceration: an advancement of one year in age reduces the incidence of a return to prison by 5%.

It was also found that married and divorced individuals have a 1.58 and 1.69 times greater risk, respectively, of recidivism than single individuals. It appears that here too the number of incarcerations increases the risk of recidivism, with every additional

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incarceration increasing the incidence of re-incarceration by 17%. The duration of employment following prison has a positive effect on survival outside the prison walls. Prisoners who worked for a greater number of months in the labor market had a chance of surviving for a longer time before a return to prison. Education, ethnicity, the duration of the last incarceration and principal offence were not found to have a significant effect on the chances of survival without a return to prison.

Stage Two

In order to reinforce the validity of the findings presented above, and owing to the possibility that the aforementioned analyses do not offer a full solution to the problem of the selection bias between the two groups, it was decided, as stated, to perform an additional stage (stage two) in which integration into work and recidivism would be tested only between the two sub-groups that were set up using the best match method (Propensity Score Matching) for the participants in the program. The effectiveness of the vocational support and supervision program was tested once again based on three indices: integration into the workforce, average number of work months for those who had integrated into the workforce for a certain period of time, and survival without re-incarceration.

Data were obtained on indices relating to the integration into the workforce of 281 of the 286 prisoners (98%). Of these, 138 belong to the supervised group of the Prisoner Rehabilitation Authority and 143 to the comparison group.

Table 9: Integration into Employment of Released Prisoners for the Two Matched Groups

	With support and supervision (n=138)	Without support and supervision (n=143)	Statistic
Integration into work time	114 (83%)	90(63%)	$\chi^2(1) = 14.26^{***}$

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Work month during 3 years (mean(SD))	18.42(11.67)	13.80(10.64)	t(279)=2.92**
Integration into work time more than 12 month	71 (51%)	43 (30%)	$\chi^2(1) = 13.31^{***}$

***p<.001 **p<0.01

It is seen from Table 9 that the percentage of prisoners from the Prisoner Rehabilitation Authority who had integrated into the workforce (83%) was significantly higher than the percentage of prisoners from the comparison group who had done so (63%).

An examination of the number of work months during a period of three years notched up by prisoners who had integrated into the workforce shows that with the Prisoner Rehabilitation Authority group, the average employment time was 18.42 months, being significantly higher than that of the comparison group, in which the average was 13.80 months.

One of the variables that the research literature addresses is employment stability (Peled-Laskov & Bialer, 2013). As stated, in the framework of the data that were available to us from the Central Bureau of Statistics, we were able to examine only the number of reported months of work during the three-year period and not the continuity of employment. In an attempt to overcome this limitation, we examined only those who were employed during a period of 12 months and over.

It is also seen from Table 9 that the percentage of prisoners who had integrated into the workforce for more than 12 months from the Prisoner Rehabilitation Authority group (51%) was significantly higher than the percentage of prisoners who had integrated into the workforce for more than 12 months from the comparison group (30%).

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Table 10: "Survival Function" from Incarceration – Life Timetables of Supervised Group / Matched Comparison Group

	Time period	No. of prisoners included in the time period	No. of unmonitored prisoners in the time period	No. of prisoners exposed to danger in the time period	No. of prisoners imprisoned in the time period	Rate of prisoners imprisoned in the time period	Survival rate in the time period	Cumulative survival rate
Supervised group	First year	143	0	143.0	12	.08	.92	.92
	Second year	131	0	131.0	8	.06	.94	.86
	Third year	123	0	123.0	7	.06	.94	.82
	Fourth year	116	0	116.0	5	.04	.96	.78
	Fifth year	111	5	108.5	2	.02	.96	.76
	Sixth year	104	33	87.5	0	.00	1.00	.76
	Seventh year	71	21	60.5	1	.02	.98	.75
	Eighth year	49	26	36.0	0	.00	1.00	.75
	Ninth year	23	23	11.5	0	.00	1.00	.57
Comparison group	First year	143	0	143.0	22	.15	.85	.85
	Second year	121	0	121.0	18	.15	.85	.72
	Third year	103	0	103.0	10	.10	.90	.65
	Fourth year	93	0	93.0	5	.06	.94	.62
	Fifth year	88	0	88.0	6	.07	.93	.57
	Sixth year	82	19	72.5	5	.07	.93	.53
	Seventh year	58	15	50.5	2	.04	.96	.51
	Eighth year	41	25	28.5	0	.00	1.00	.51
	Ninth year	16	16	8.0	0	.00	1.00	.51

In order to examine the rates of re-incarceration, a survival function was estimated for the matched supervised and comparison groups for the entire period of monitoring (2007-2015). Table 10 shows that very similar rates of re-incarceration were found among the matched sub-groups: 92% of released prisoners from the supervised group did not re-enter prison in the first year, 86% did not return to prison for a period of two years, 82% for three years, and 78% for four years. In comparison, 85% of released prisoners from the comparison group did not return to prison during the first year, 72% during a period of two years, 65% during three years, and 62% did not return to prison for a period of four years. It may be seen that in both the groups, most of the recurring

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incarcerations were in the first four years following release out of the eight years of monitoring.

It may also be seen from the life timetable that after four years the decline in the survival function is very moderate. A significant difference was found in the survival function between the two groups [Wilcoxon (Gehan) Statistic = 13.60, $df = 1$, $p < .001$].

Discussion

The present research examined the results of participation by prisoners on parole in a support and supervision program, with the emphasis on employment. The findings of the present research show that released prisoners who had one-third of their sentences commuted and who had been under the guidance and supervision of the Prisoner Rehabilitation Authority exhibited significantly more positive indices than those who had served their full sentences and had not been under the supervision of the Prisoner Rehabilitation Authority. The positive results were manifested in four important indices: integration of the released prisoner into employment; duration of the reported employment; wage level; and level of recidivism. The indices refer to a monitoring period of up to three years (with the exception of recidivism, in which case the monitoring period was up to eight years).

One of the major limitations in evaluating rehabilitation programs for released prisoners lies in the method of selecting the comparison or control group (in order to prevent a selection bias). The present research was compelled to approach the selection bias in a number of ways, namely: use of models such as the logistic regression model for the probability of integrating into the workforce, the linear regression model for the period of work and wage level, and the Cox regression model for the likelihood of survival without re-incarceration. Despite the statistical methods employed the concern

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remained that the two groups used for the purposes of the research were different from each other. However, based on the Propensity Score Matching method, it is highly probable that the comparison was made between two groups that were indeed very similar in terms of their propensity for participation in an employment program.

The relatively high percentage of released prisoners who were employed at any stage could be surprising in view of the difficulties awaiting released prisoners in seeking work (Davidsko & Volk, 2011; Pierson, Price & Coleman, 2014). On the other hand, this can be explained in light of the different cultural reality existing in Israel.

In Israel, employers have limited access to criminal records (The Crime Register and Rehabilitation of Offenders Law, 1981), there is a relatively low unemployment rate, and there is a willingness on the part of some Israeli employers to hire released prisoners, despite their apprehensions (Timor & Shoham, 2014). This willingness seems to stem from, among other things, an important value in Judaism that encourages the integration of people who have deviated from "the straight and narrow" and seek to change their ways. In addition, Israel is a small country under constant security threat. This creates a sense of mutual responsibility and family feeling. Beyond that, people tend to know each other more and are willing to help and arrange work for each other.

The vocational supervision program in Israel like EMPLOY (Duwe, 2015a, b), and PRI (Cook et al., 2015) in the USA, is holistic in nature, incorporating help in finding work, preparation for employment, support, and psychological guidance. Unlike PRI, which offers therapy and support already during the period of incarceration, the present program establishes initial contact with the prisoner in prison in an attempt to find work that is suited to him, although therapeutic content begins after release. Unlike EMPLOY, which is a voluntary program, prisoners in Israel are obliged to cooperate as part of the

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supervisory activity during the remaining one-third of their sentence, otherwise they are liable to return to prison.

As in the findings of Duwe (2015a, b) and Cook et al., (2015), here too it was found that the percentage of prisoners who had integrated into the workforce from the supervised group was significantly higher than the percentage of prisoners who had integrated into the workforce from the comparison group. An examination of the number of months worked during a three-year period showed that among the supervised group the average time of employment was significantly higher than in the comparison group. In addition, as in the results of Duwe (2015a, b) and Cook et al., (2015), a gap was found in the average wage between the prisoners in the supervised group and prisoners in the comparison group, possibly due to the fact that the supervised group worked for longer hours and not necessarily because of better performance, with the associated higher wage and potential for lower recidivism (Ramakers et al., 2016; Uggen, 1999).

Moreover, as found by Duwe (2015a, b), the percentage of prisoners with re-incarcerations in the supervised group was significantly lower than the percentage of prisoners with re-incarcerations in the comparison group.

In conclusion, there is a resemblance between the occupational support program in Israel and the programs in the USA, and despite the different cultural settings, similar findings were obtained in Israel to those in the USA.

The study findings support the claim that the greater the chances of prisoners finding work, the lower the incidence of a return to crime (Nally, Lockwood, Ho & Knutson, 2014; Skardhamar & Telle, 2012), while demonstrating how employment serves as a factor in discontinuation of criminal activity. In addition to the fact that it reduces financial neediness, it also widens the circle of informal social supervision by giving the

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prisoners a chance to be involved in conventional activities and to conform, thus thwarting opportunities for criminal behavior. Moreover, intermingling with others who are employed raises the probability that the prisoners will develop or observe pro-social values, attitudes, and beliefs, a factor that itself constitutes a means of informal supervision (Sampson & Laub, 1993). In addition to the emphasis that the Israeli program places on employment as a dynamic risk factor that is relatively easy to change by helping the prisoner find work, as a comprehensive program it also provides a response to dynamic criminogenic needs, such as to encourage pro-social attitudes, and as such, the chances of success are higher (Latessa, 2011; 2012)

An additional variable that should be considered in the wake of the research results is the age of the prisoner participating in the supervision program. It was found that age has a positive effect on the avoidance of re-incarceration: the higher the age, the lower the incidence of returning to prison. This finding supports the concept, based on the age graded life-course theory, that programs like the vocational support and supervision program would have a positive effect mainly on older prisoners (Uggen, 2000) – this, despite the fact that advanced age reduces the chances of integrating into the workforce (Visher, Debus-Sherrill & Yahner, 2011).

It was also found, as in other research studies (e.g. that of Shoham, Gideon & Weisburd, 2008) that the number of incarcerations has a negative effect on the chances of integrating into the workforce, on the duration of employment, on wage level, and on the risk of repeat incarceration, and that the duration of employment of released prisoners whose principal offence was drugs or property is shorter than that of prisoners whose chief offence was violence (Spivak & Damphousse, 2006).

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An explanation for the fact that prisoners convicted of violent crimes last longer in jobs than prisoners accused of property crimes perhaps lies in the fact that a significant number of the former are guilty of domestic violence (according to the Israeli Central Bureau of Statistics ,2016, more than 50% of violent crimes are domestic violence). Employers apparently view them less as criminals and more as husbands who found themselves embroiled in a distressful situation, and therefore are less fearful about employing them (Timor & Shoham, 2014).

Another finding that calls for explanation is the fact that the group scheduled for early release spent a greater number of months in prison than the comparison group, who were not eligible for parole. This finding is in line with practice in Israel, according to which a prisoner with a shorter remaining sentence is not suitable for prison based rehabilitation programs and therefore, does not, in most cases, earn early release.

A factor to be considered is that reliance on data from the Central Bureau of Statistics could be somewhat limited since the data do not include information on unreported work, such as that involving black money.

Although the possibility cannot be ruled out that the significant findings in favor of the prisoners who had been under supervision could be related to other variables that were not taken into account, the positive results found in the research, even after control of the relevant variables, may point to the importance of directing prisoners on parole to programs that combine formal supervision with guidance and support in employment.

Since in the present research no subjective viewpoint was studied, it is worth conducting an additional, more comprehensive research (Scott, 2010; Soeker, Carriem, Hendricks, Joynt & Naidoo, 2013) in order to address subjective variables such as: "How did this help the released prisoners in their own eyes?" or "What factors prevented

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them from being rehabilitated?", "To what extent are they satisfied with their work?". Examination of self-satisfaction is important in light of the fact that many of them find simple jobs that are relatively less challenging (Ramkers, Nieuwbeerta, Van Wilsem & Dirkzwager, 2016) and the fact that the type of work and its characteristics were found to be related to the level of repeat offences (Ramkers, Nieuwbeerta, Van Wilsem & Dirkzwager, 2016).

Conclusion and Recommendations

To sum up, it appears that the vocational support and supervision programs of the Israeli Prisoner Rehabilitation Authority have the potential for reintegrating released prisoners into a normative community and helping them to desist from crime. Accordingly, it is recommended to increase the numbers of released prisoners who are given parole (in Israel less than 20 percent of prisoners obtain parole) and invest additional resources in strengthening and expanding the vocational support and employment programs provided for released prisoners, alongside with intensifying contacts with places of work that offer a friendly environment and are in sync with the special needs of the released prisoner.

It is also recommended that employers who are willing to employ released prisoners be encouraged and rewarded (for example, through tax benefits or grants). In addition, it is advisable to guide such employers and create support frameworks for them that will allow them to air the difficulties associated with the employment of released prisoners.

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