

Introduction

This research brief descriptively explores the relationship between the completion of select correctional education programming and recidivism, while integrating both risk—as measured by the LSI-R—and employment as mediating factors. The underlying theory is that correctional education programming increases human capital which increases the likelihood of post-release employment, but more particularly post-release employment with sustained wages above the poverty threshold. This subsequently reduces the likelihood of recidivism; therefore the relationship between correctional education programming and recidivism is largely indirect. Risk is added as an additional factor to determine if the strength of the indirect relationship between correctional education programming and recidivism varies for ex-offenders within the different risk categories.

Methods

Relevant Definitions:

Vocational training completers: those who enrolled and successfully finished all aspects of their respective vocational training program.

Recidivism: any Kansas Department of Correctional Education (KDOC) readmission within two years of release. Since three release cohorts [1] were used in the analysis with the last year being 2011, the two-year measurement allowed a parallel amount of potential survival time for each study group member regardless of their year of release.

Consistent and Quality Employment: having earnings in either three out of the first four full quarters (discounting the quarter of release) or two out of the first four full quarters following release in addition to the quarter of release. The total wages in each quarter were required to be equal to or greater than \$2786 or the mean quarterly poverty threshold in Kansas during the post-release timeframe of the study (CY 2008-CY 2011).

Risk: The study group members were categorized as: low, moderate, and high risk based on the LSI-R within the shortest timeframe of the most recent intake date for their current sentence.

- *LSIR score of 18 or lower (low risk)*
- *LSIR score of 19-31 (moderate risk)*
- *LSIR score of 32+ (high risk)*

Success: not recidivating within the two-year post-release tracking period.

Delimitations

Each study group member was required to have a post-release record of employment or recommitment to better ensure that members were able to be tracked post-release within

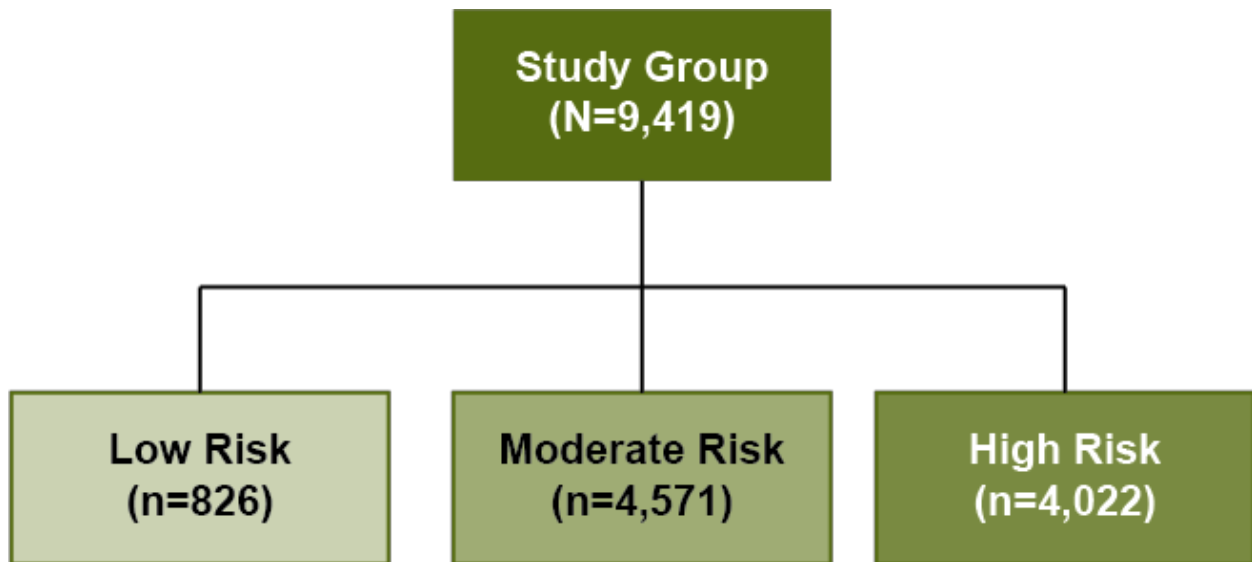
Kansas. This approach was used by Lichtenberger (2010) in a similar study of vocational training completers within the state of Virginia. Study group members were also required to have at least one LSI-R administration during their most recent incarceration spell prior to release. If there was more than one administration, the LSI-R score from the administration closest to the admission date for the most current sentence was used.

Differentiation by LSI-R Risk Level

The first section includes information related to recidivism rates by risk level without taking into consideration correctional education programming. In addition, this section provides the interaction of risk and quality and consistent employment as it relates to one's likelihood of recidivism.

As illustrated in Figure 1, the low-risk offenders comprised the smallest group portion of the study group—only 826 out of 9,419 (9%). The high risk group constituted roughly 43% of the entire study group, whereas moderate risk offender comprised the largest portion of the study group at 48%, or nearly one-half.

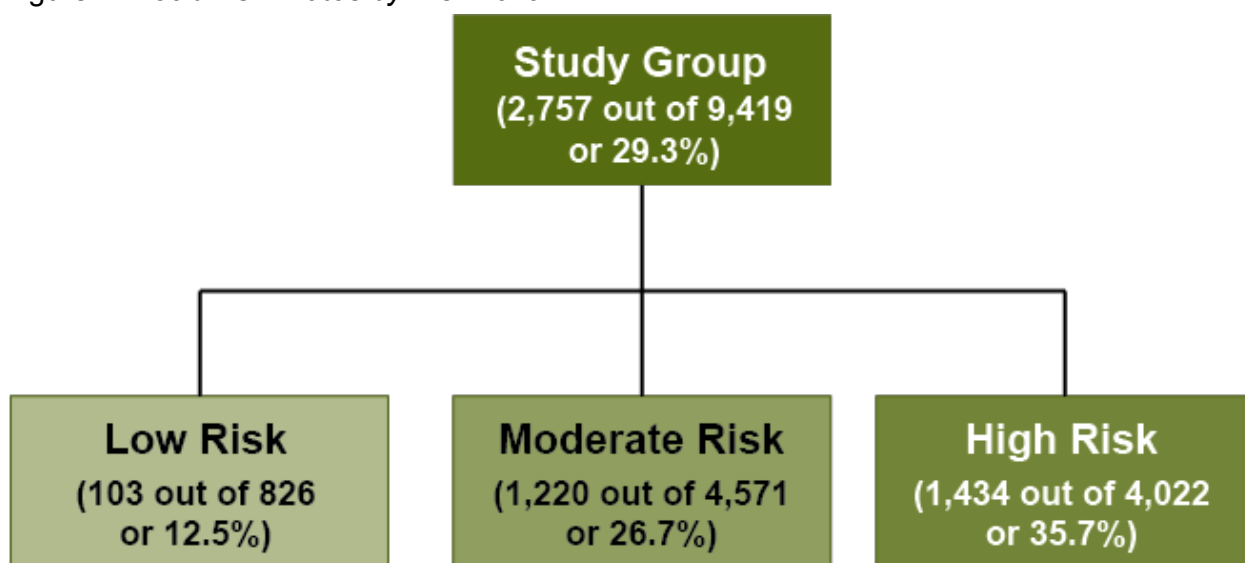
Figure 1: *Study Group Composition and Risk*



Recidivism

Overall, roughly 30% of the study group members had recidivated within two years of release. As shown in Figure 2, it was fairly evident that those within the low-risk category had the lowest recidivism rate by a considerable margin. In fact, the rate of recidivism among low-risk offenders was less than half the rate of moderate-risk offenders and slightly less than one-third of the rate of high-risk offenders. The difference in recidivism rates between the low- and moderate-risk offenders was somewhat larger than the difference between moderate and high risk offenders (14 percentage points as compared to 9 percentage points).

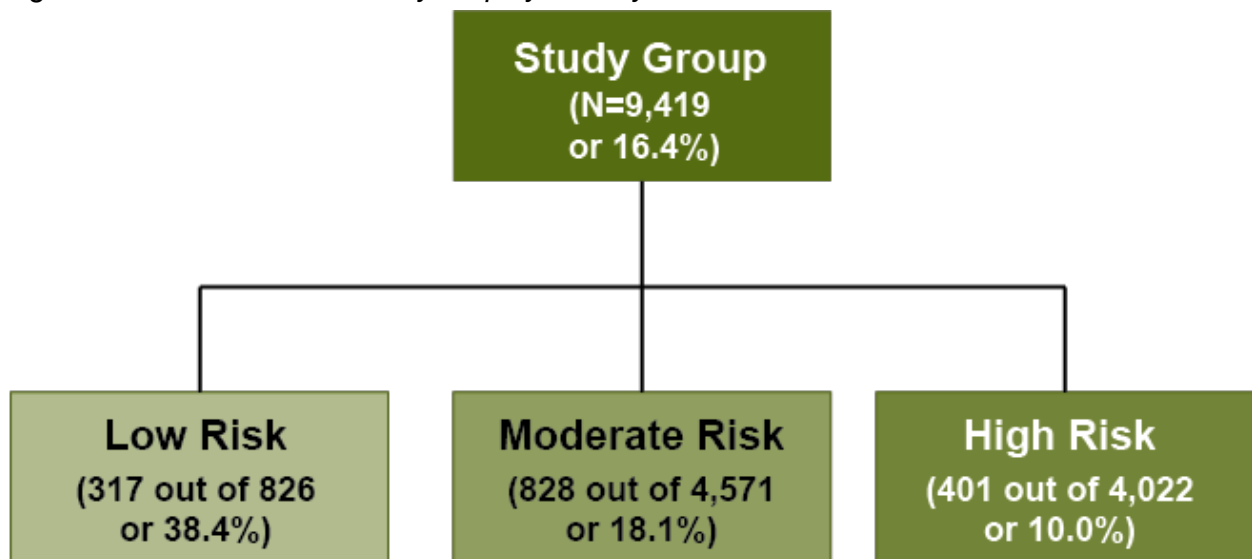
Figure 2: *Recidivism Rates by Risk Level*



Consistent and Quality Employment

In total, 1,546 of the study group members had maintained consistent employment the year following release. Risk also appeared to factor into one's likelihood of obtaining consistent and quality employment upon release. A negative and cascading pattern was evident, in which the likelihood of consistent and quality employment decreased as risk increased. The study group members falling into the low risk category maintained the highest rate of consistent and quality employment at nearly 40%. This was more than double the rate of the moderate risk offenders and nearly four times the rate of high risk offenders. Once again, the difference between the low- and moderate-risk offender was substantially larger than the difference between the moderate- and high-risk offenders.

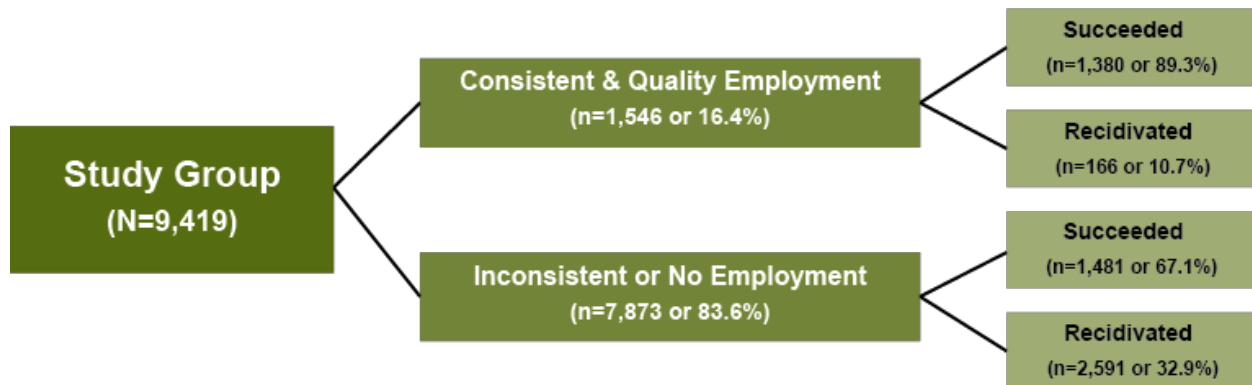
Figure 3: *Consistent and Quality Employment by Risk Level*



Consistent and Quality Employment & Recidivism

Without taking into consideration risk, we considered the interaction of consistent and quality employment and recidivism or its corollary, success. First and foremost, only 16.4% of the entire study group was consistently employed with wages over the poverty threshold. It should be noted that nearly all of the study group members were released during the recession, arguably decreasing employment opportunities for ex-offenders. Also, in terms of risk, the study group was skewed towards moderate- to high-risk. Nonetheless, ex-offenders who were able to meet the employment benchmark had a substantially lower rate of recidivism even without taking into consideration risk. As illustrated in the figure below, nearly nine out of every ten of the study group members maintaining consistent and quality employment succeeded during the two-year time-frame of the study; whereas two-thirds of the study group members who failed to gain consistent and quality employment met that same distinction at the end of the study. As shown in Figure 4, the rate of recidivism for someone failing to maintain consistent employment was fully three times higher that of ex-offenders who gained consistent and quality employment their first year upon release (10.7% to 32.9%).

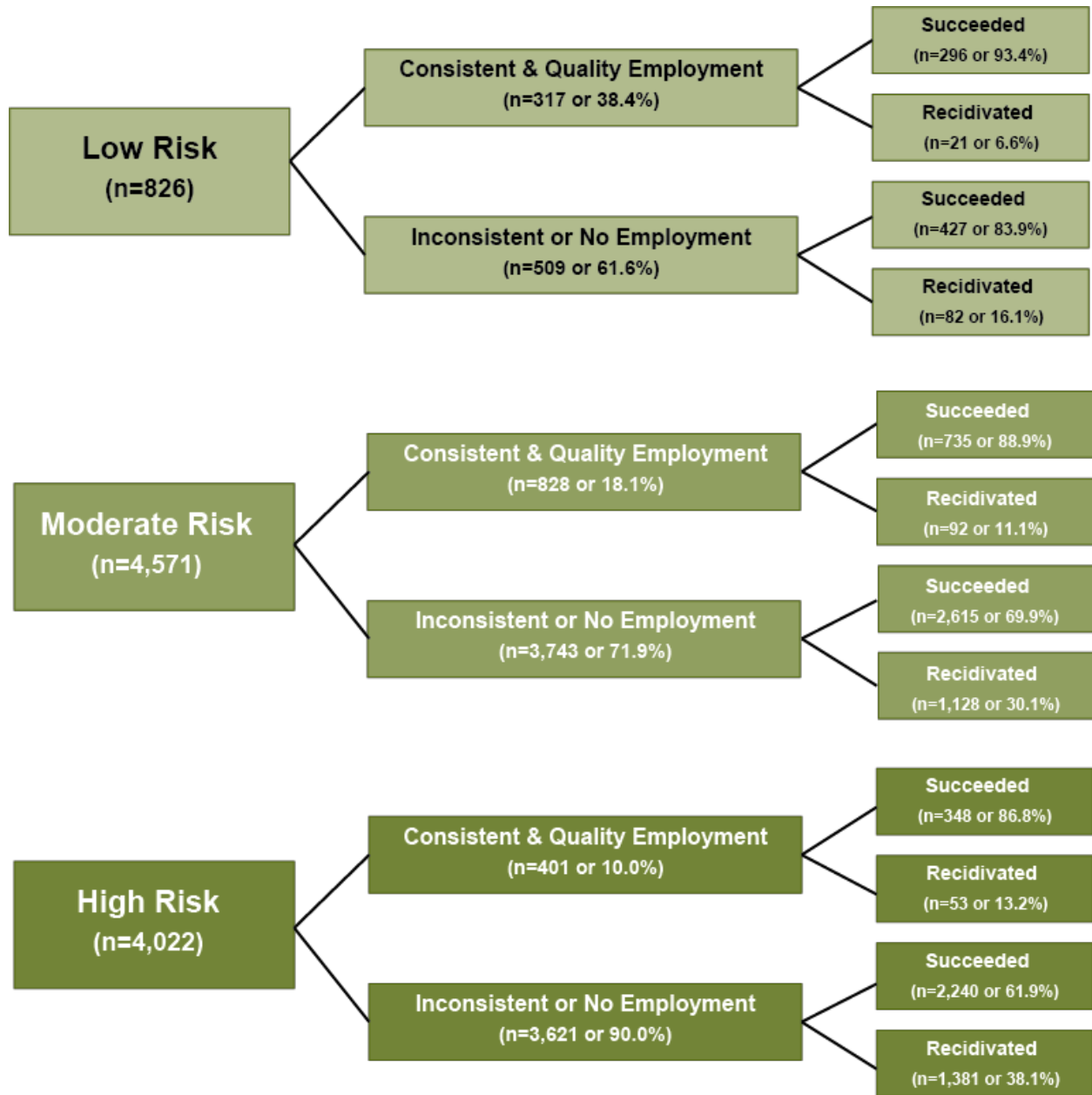
Figure 4: *Interaction of Consistent and Quality Employment and Recidivism*



The next set of figures illustrates the interaction of consistent and quality employment and recidivism for each of the separate risk levels. as illustrated in Figure 5, among the low-risk group, those maintaining consistent and quality employment had a success rate that was nearly 10 percentage points higher than their counterparts without such employment (93.4% compared to 83.9%). Whereas, those in the moderate- and high-risk categories meeting the employment benchmark had somewhat lower rates of success than their consistently employed peers in the low-risk category (88.9% and 86.8% compared to 93.4%), the margin of difference between those gaining employment and those failing to gain employment was substantially higher among the moderate- and high-risk groups. This suggests that failing to gain or maintain consistent employment had a much more detrimental impact on moderate- and high-risk offenders. In fact, the higher the risk level, the larger the negative impact associated with failing to achieve the employment benchmark.

The results also suggested that maintaining consistent and quality employment had a somewhat similarly positive impact across all risk categories, with a slightly greater impact for those in the low risk category; however, as demonstrated earlier, once risk increased, substantially fewer ex-offenders with the given risk category maintained consistent and quality employment and therefore lacked the condition that increased the likelihood of success..

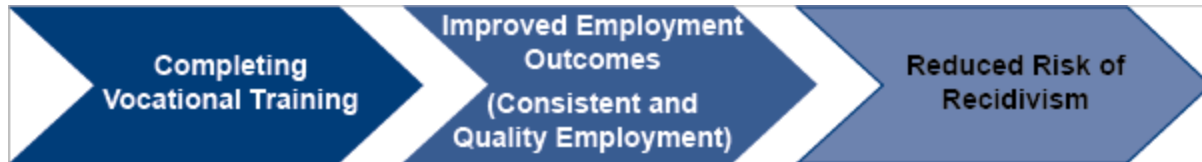
Figure 5: Interaction of Consistent and Quality Employment and Recidivism by Risk Level



Vocational Training

Figure 6:

Relationship between Vocational Training and Recidivism with Employment as a Mediating Factor

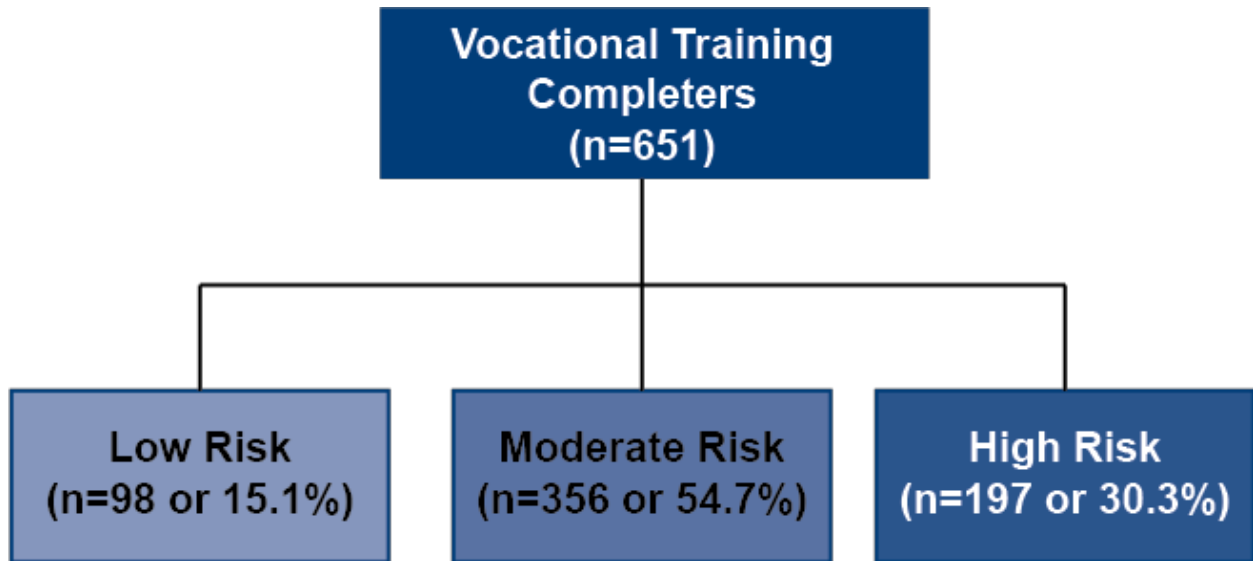


The results presented in the following set of figures demonstrate the effect of completing vocational training, on improved employment outcomes, and ultimately the reduced likelihood of recidivism while taking into consideration risk. The indirect relationship between vocational training and reduced recidivism via improved employment outcomes follows a widely accepted framework that is supported by previous research (Lichtenberger, 2010; Lichtenberger, O'Reilly, Miyazaki, & Kamulladeen, 2010). In the framework, completing vocational training increases the participant's human capital, which in turn expands employment opportunities after release, which then decreases the risk of recidivism. The framework suggests that measuring the direct relationship between vocational program completion and recidivism could mask positive program impacts, especially when pre-existing differences, such as risk, are not taken into consideration. In the following series of analyses, employment and risk are both considered as they relate to recidivism. The relationship between GED completion and a parallel set of outcomes is presented in the next section; therefore completers of vocational training who also completed a GED program were excluded from this analysis to better isolate the impact of each correctional education program. Finally, the outcomes of completers of vocational training, GED completers, and a comparison group of non-participants are provided to provide better context.

Completers of Vocational Training

As shown in Figure 7, there were 651 individuals who had completed vocational training and were subsequently released during the study period: 15% were low risk, around 55% were moderate risk, and the remaining 30% were high risk. This demonstrates that a substantial proportion of the vocational completers are moderate- to high-risk. However, the proportion falling into the low risk category is somewhat higher than that of all ex-offenders released during the same time-frame (six percentage point difference: 15% to 9%). This suggests that vocational training completers, as a group, skew slightly towards the low-risk category.

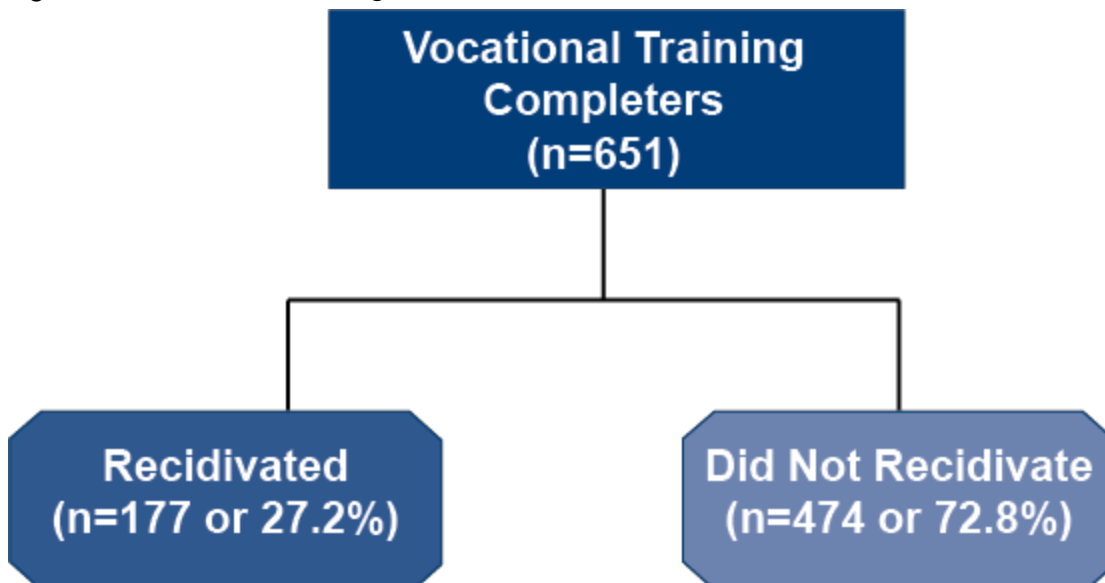
Figure 7: Vocational Training and Risk



Vocational Training and Recidivism

In terms of recidivism, slightly more than one-quarter of the vocational completers recidivated. This rate was slightly lower than that of all ex-offenders released during the same time-frame (29.3%).

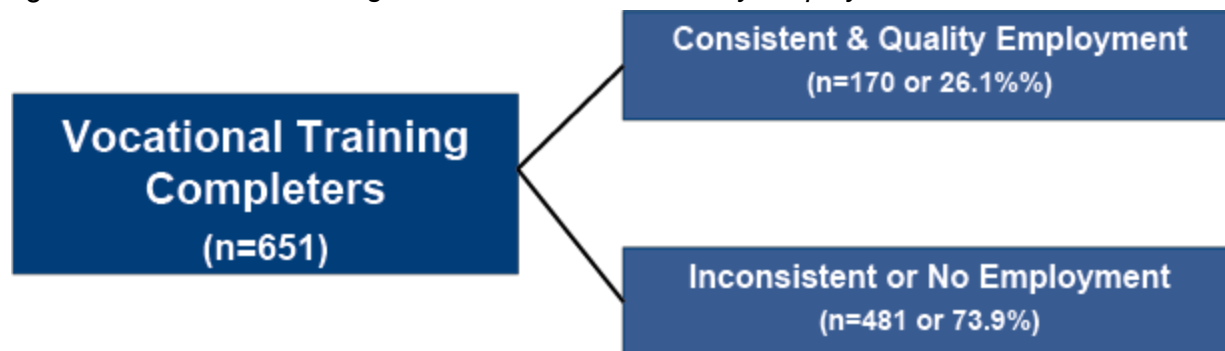
Figure 8: Vocational Training and Recidivism



Vocational Training and Consistent and Quality Employment

As illustrated in Figure 9, slightly more than one quarter of the vocational training completers had maintained consistent and quality employment during their first year following release. This employment rate was considerably higher than that of all ex-offenders released during the same time-frame (16.3%) and suggested that completing vocational training increased one chances of maintaining consistent employment upon release.

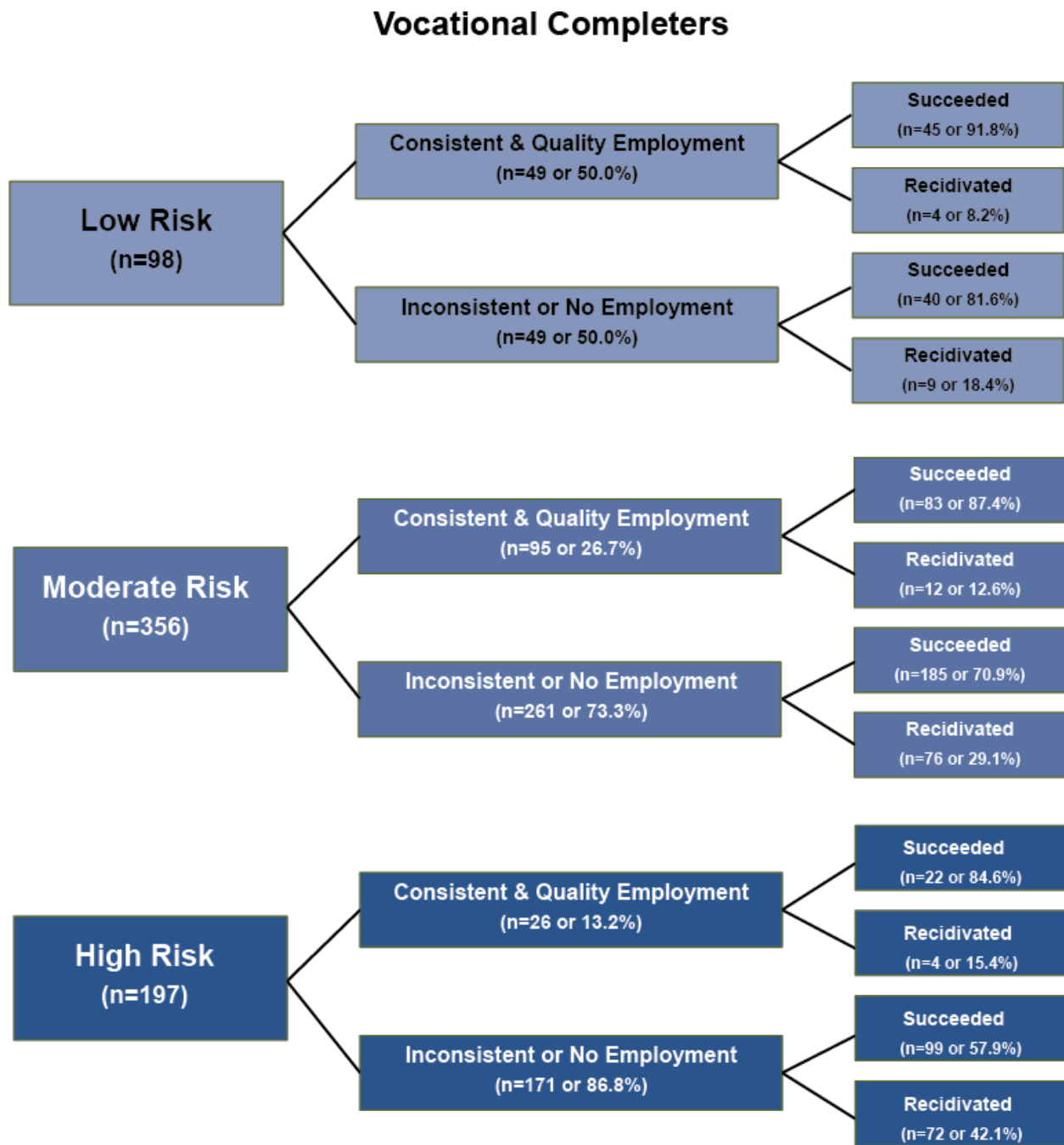
Figure 9: *Vocational Training and Consistent and Quality Employment*



As illustrated in Figure 10, among vocational training completers, risk had a negative relationship with consistent and quality employment—the higher the risk level the lower the rate. While close to one-half of low-risk vocational education completers had obtained such employment, about one-quarter (26.7%) of moderate-risk completers and one-eighth (13.2%) of high-risk offenders met that same distinction. Further, consistent and quality employment appeared to be positively related to success across all risk categories and low-risk vocational training completers with consistent and quality employment had the highest rate of success, followed by moderate-risk completers meeting the employment metric and so on. In fact, the rate of success for moderate- and high-risk offenders gaining such employment was higher than that of low-risk completers with inconsistent or no employment. Also, the gap in terms of the rate of success for vocational training completers gaining consistent and quality employment by risk category was somewhat small—about four percentage points separated the low- and moderate-risk completers meeting the employment metric, and three percentage points separated the moderate- and high-risk completers. This demonstrates that while risk is negatively related to employment, once employment is gained and retained, the likelihood of success, regardless of risk level, is extremely high.

Within risk category differences between those gaining and not gaining consistent and quality employment revealed a roughly 10 percentage point difference among low-risk completers, a 17 percentage point difference among moderate-risk completers, and a 27 percentage point difference among the high-risk completers. As was the case with all study group members, among vocational training completers, failing to maintain consistent employment had a more detrimental impact on the likelihood of success as risk level increased.

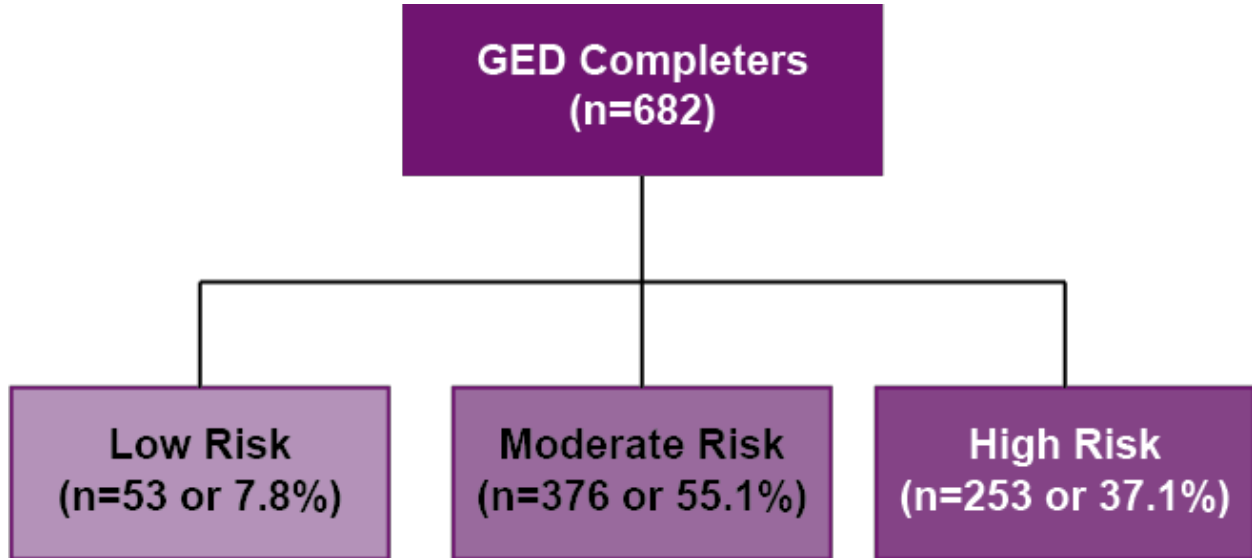
Figure 10: Vocational Training and the Interaction of Consistent and Quality Employment and Recidivism



GED Completers

Next, parallel outcomes for GED completers were examined. With regard to GED completers and risk, slightly less than 8% were categorized as low-risk, the majority fell into the moderate-risk category (55.1%), and the remainder (37.1%) were high-risk. The risk patterns among GED completers closely mirrored the risk distribution of all ex-offenders released during the time-frame of the study.

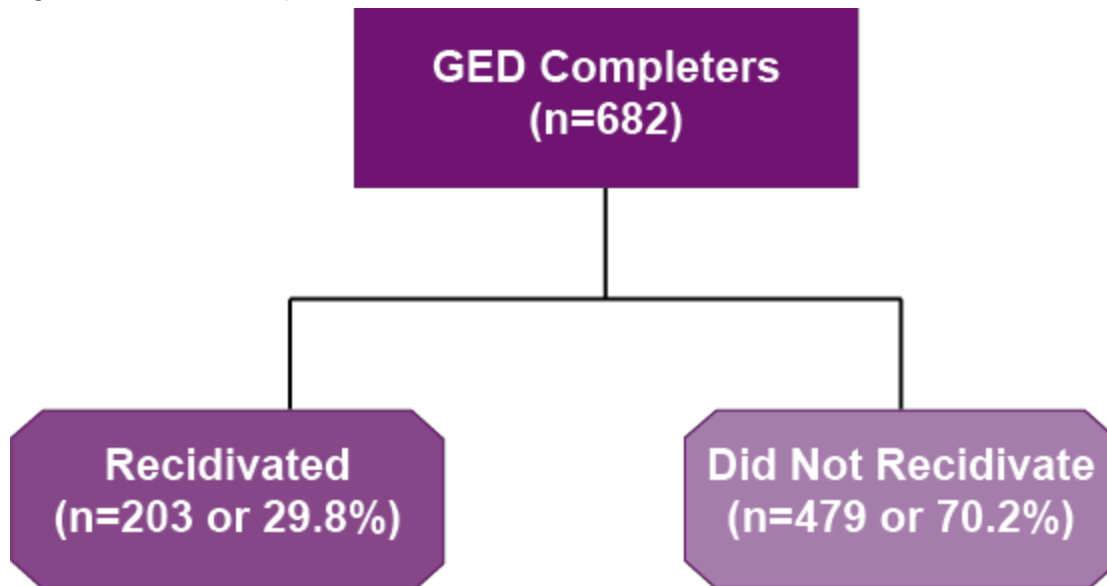
Figure 11: *GED Completion and Risk*



GED Completion and Recidivism

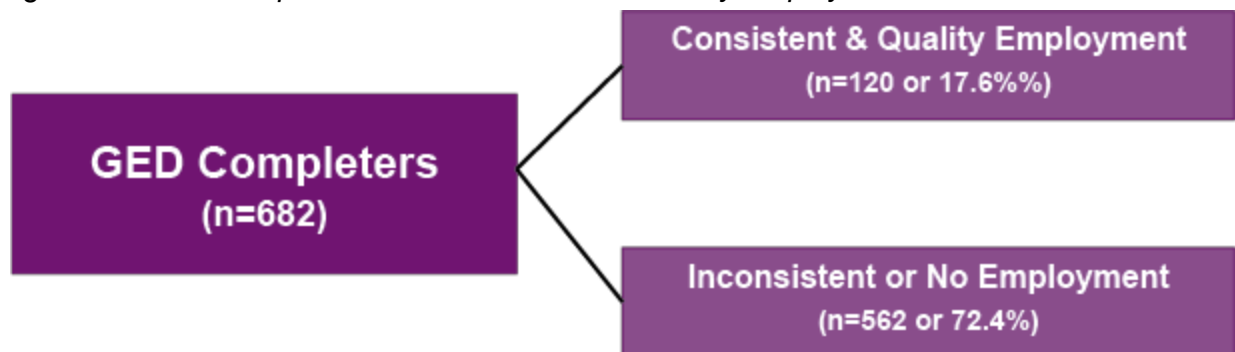
As shown in Figure 12, slightly less than 30% of the GED completers had redividated during the study. This rate was fairly similar to the recidivism rate of all ex-offenders released during a similar time-frame.

Figure 12: *GED Completion and Recidivism*



As illustrated in Figure 13, 17.6% of GED completers maintained consistent and quality employment their first year following release, which was about one percentage point higher than that of the entire study group.

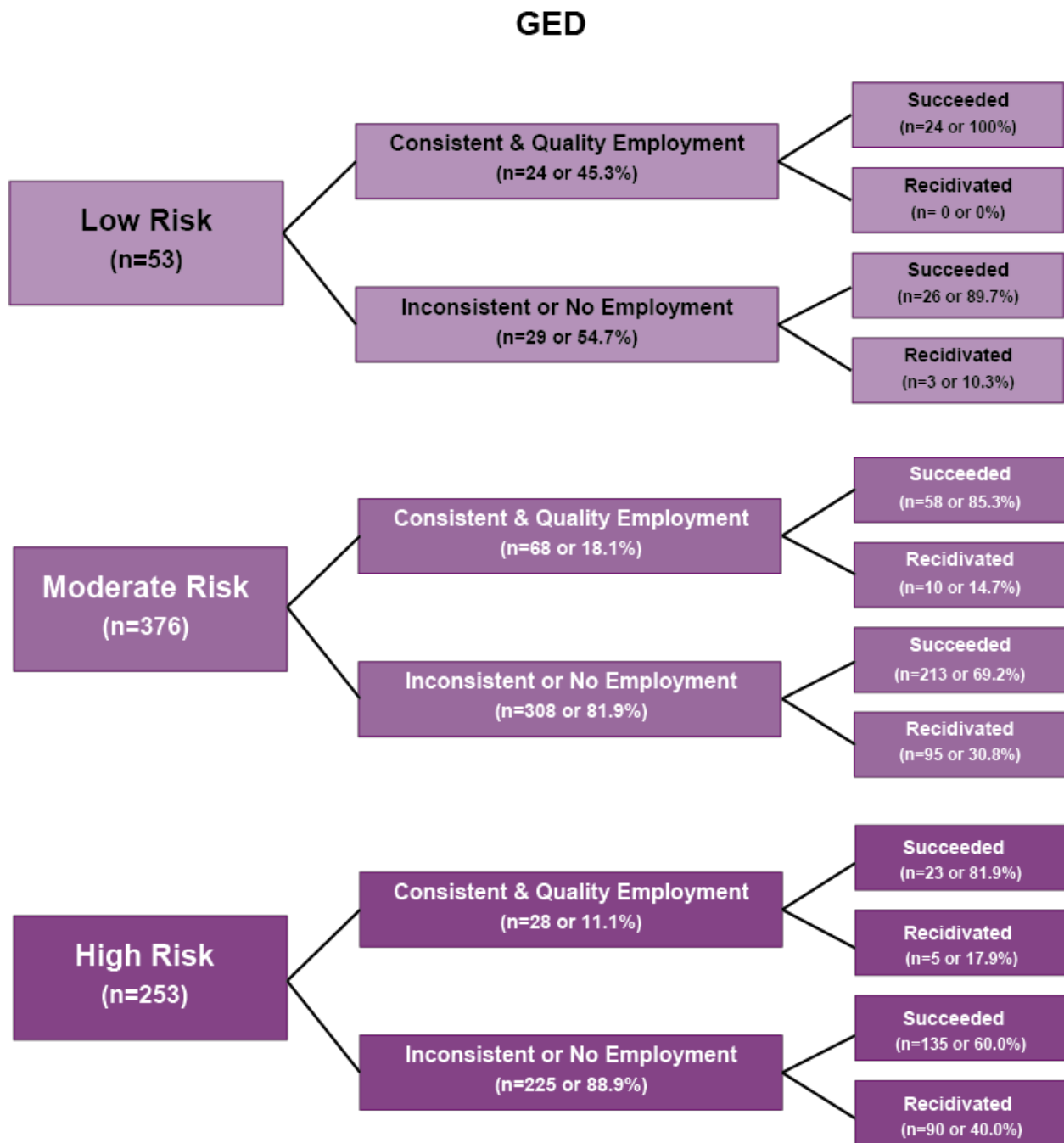
Figure 13: *GED Completion and Consistent and Quality Employment*



GED & Risk and Consistent Employment

As shown in the Figure 14, there appeared to be a negative relationship between risk level and the rate of consistent and quality employment among GED completers. Low-risk GED completers had the highest rate of consistent and quality employment at 45%. This rate was 27 percentage points higher than that of the moderate risk GED completers, and over four times the rate of the high-risk subgroup at 11%. Meeting the employment metric was extremely important in terms of decreasing the likelihood of recidivism for GED completers within all risk categories. The within group comparisons by risk category revealed differences ranging from 10 percentage points within the low-risk category (0% to 10%), sixteen percentage points within the moderate-risk category (15% to 31%), and twenty-two percentage points within the high-risk category (18% to 40%). Interestingly, the difference in the rates of recidivism between moderate- and high-risk GED completers with consistent and quality employment was fairly small, only three percentage points, demonstrating the importance of gaining such employment among the high-risk group. In other words, conditional upon consistent and quality employment, moderate- and high-risk GED completers had relatively similar rates of success slightly favoring the moderate-risk group; however, as previously mentioned, substantially more of the moderate-risk GED completers had gained consistent and quality employment the first year following release. In other words, more of the moderate-risk GED completers met the condition necessary to reduce the likelihood of recidivism.

Figure 14: GED Completion and the Interaction of Consistent and Quality Employment and Recidivism

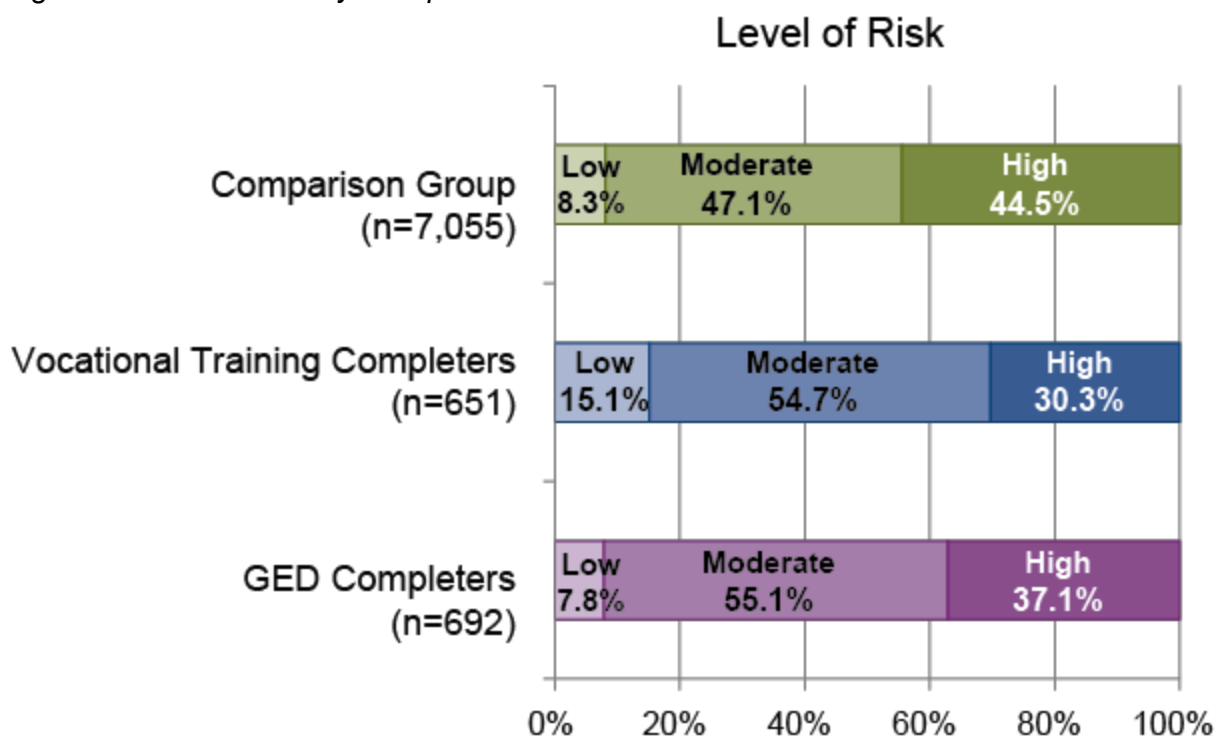


Providing Context

To provide a better context, we created a comparison group limited to study group members who had not participated in vocational training nor a GED program. The results specific to the comparison group are presented along with the outcomes of the vocational training and GED completers.

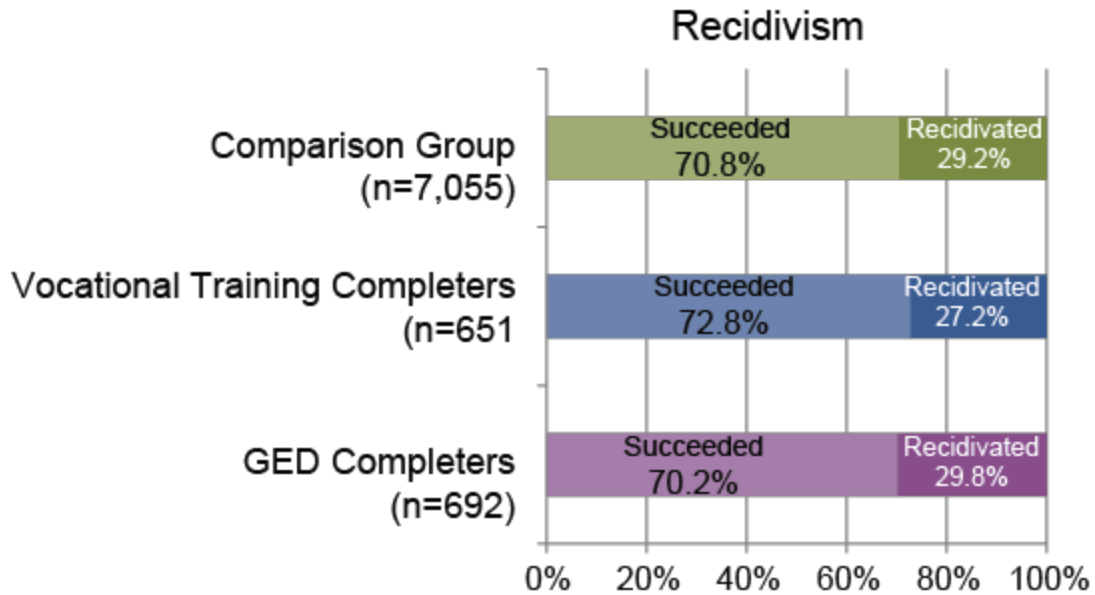
The distribution of GED completers within the three risk categories had two notable differences relative to the distribution among vocational completers. Somewhat fewer of the GED completers fell into the low-risk category, whereas a somewhat higher proportion of GED completers fell into the high-risk category. Both vocational and GED completers had a fairly similar proportion in the moderate-risk category (around 55%). Therefore, as a whole GED completers were at somewhat higher risk than vocational completers. In turn, members of the comparison group were at somewhat higher risk (in aggregate) than the GED completers. Relative to both the vocational training and GED groups, substantially more of the comparison group members were high risk (nearly 45%) and substantially fewer were moderate risk (47.1%); however, a similar proportion of the GED and comparison group members were in the low-risk category.

Figure 15: *Level of Risk by Group Status*



Without considering risk and consistent and quality employment, the vocational training completers experienced a slightly lower rate of recidivism relative to their counterparts in both the GED and comparison groups. As previously stated, the recidivism rates were fairly similar between the GED and comparison groups and only six-tenths of one percentage point separated the two groups.

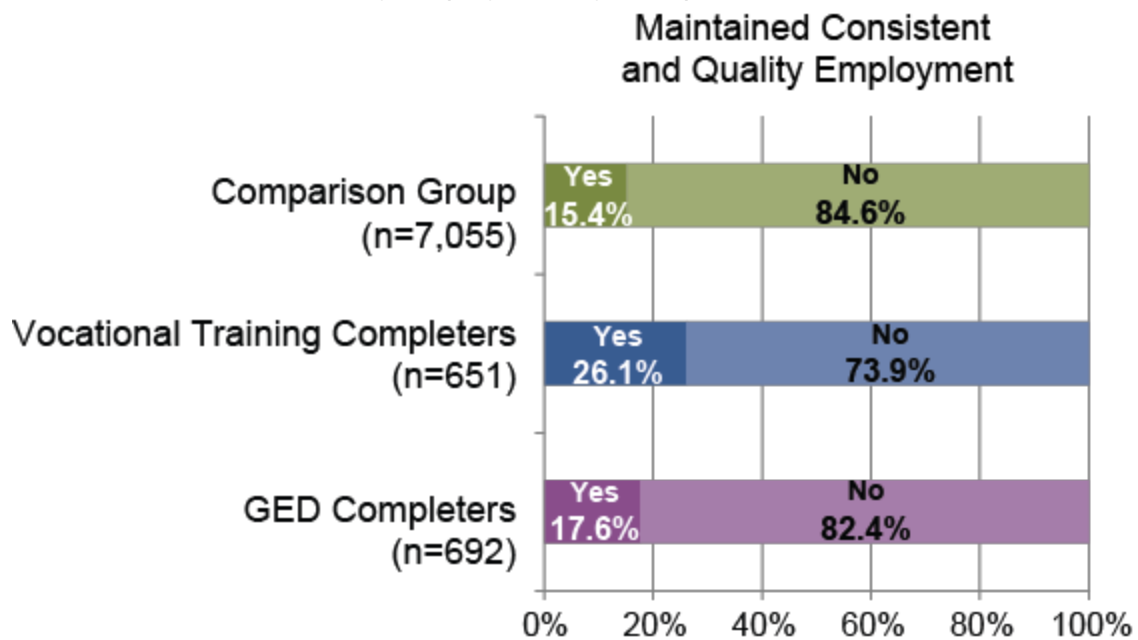
Figure 16: *Recidivism and Groups Status*



Consistent and Quality Employment

In terms of consistent and quality employment without considering risk, the difference between vocational and GED completers was somewhat large—roughly 10 percentage points. Whereas 17.6% of GED completers maintained consistent and quality employment during their first year following release, slightly more than 26% of vocational completers met that same distinction. A similar, but slightly larger difference existed between vocational training completers (26.1%) and comparison group members (15.4%). Relatedly, GED completers maintained a slightly higher rate of consistent employment relative to the comparison group (2.2 percentage points).

Figure 17: *Consistent and Quality Employment by Group Status*



Recidivism by the Interaction of Consistent and Quality Employment and Risk by Study Group

Low-risk study group participants experienced the highest rate of consistent and quality employment upon release. However, there was quite a bit of variation based on correctional education programming. One-half of low-risk vocational training completers had maintained consistent employment and this was five percentage points higher than low-risk GED completers and fully 14 percentage points higher than low-risk comparison group members (non-participants). Nearly all of the low-risk study group members (100% of the low-risk GED completers) gaining consistent employment succeeded by sake of not recidivating within two years of release. It should be noted that proportionally more vocational training completers were low-risk and more gained consistent and quality employment upon release, thus meeting the condition for success. Among the low-risk groups, the difference in rates of success between those gaining and not gaining consistent employment was roughly 10 percentage points. For example, low-risk GED completers gaining consistent employment had a success rate of 100%, whereas low-risk GED completers without consistent employment had a success rate of 90%. Both rates are extremely high, but the ten percentage point difference between the two groups was fairly large.

Among the moderate-risk study group members, the vocational completers had the highest rate of consistent employment—about 10 percentage points higher than GED completers and comparison group members. Among the consistently employed moderate-risk study group members between 85%-89% succeeded, as compared to roughly 70% of their moderate risk peers who failed to gain consistent employment. Conditional upon consistent employment, the rates of success for moderate-risk offenders were fairly similar across the three groups: comparison, GED, and Vocational Training. Yet, once again, proportionally more of the vocational training completers met the condition—gaining consistent employment—that facilitated success (lack of recidivism).

With regards to consistent and quality employment, differences between the high-risk study group members were somewhat more muted. Yet, once again, the vocational training completers maintained a higher rate of consistent employment than their high-risk counterparts in the GED and comparison group members. The importance of maintaining consistent employment among the high-risk group cannot be understated. In fact, high-risk study group members with consistent employment had only a slightly lower rate of success relative to their moderate-risk counterparts (only two to three percentage points separated the high and moderate-risk groups). The negative impact of failing to maintain consistent employment was greater among the high-risk group and greatest for high-risk vocational training completers, as evidenced by the large differences in success rates between those gaining consistent employment and those failing to maintain consistent employment.

Figure 18: Group Status and the Interaction of Consistent and Quality Employment and Recidivism

Comparison Group (n=7,055)											
Low Risk (8.3%)				Moderate Risk (47.1%)				High Risk (44.5%)			
Consistent and Quality Employment 36%		Inconsistent or No Employment 64%		Consistent and Quality Employment 17%		Inconsistent or No Employment 83%		Consistent and Quality Employment 10%		Inconsistent or No Employment 90%	
Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated
92%	8%	845	15%	90%	10%	70%	30%	87%	13%	62%	38%

Vocational Training Completers Group (n=651)											
Low Risk (15.1%)				Moderate Risk (54.7%)				High Risk (30.3%)			
Consistent and Quality Employment 50%		Inconsistent or No Employment 50%		Consistent and Quality Employment 26.7%		Inconsistent or No Employment 73.3%		Consistent and Quality Employment 13.2%		Inconsistent or No Employment 86.8%	
Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated
92%	8%	82%	18%	87%	13%	71%	29%	85%	15%	58%	42%

GED Completers (n=692)											
Low Risk (7.8%)				Moderate Risk (55.1%)				High Risk (37.1%)			
Consistent and Quality Employment 45%		Inconsistent or No Employment 55%		Consistent and Quality Employment 18%		Inconsistent or No Employment 82%		Consistent and Quality Employment 11%		Inconsistent or No Employment 89%	
Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated	Succeeded	Recidivated
100%	0%	90%	10%	85%	15%	69%	31%	82%	18%	60%	40%

Conclusions

- Risk—as measured by the LSI-R—was negatively related to the more desirable post-release outcomes: maintaining consistent and quality employment, in addition to success (not recidivating).
- Conditional upon consistent employment, rates of success were fairly similar between vocational training completers, GED completers, and comparison group members.
 - However, program completion was related to a substantial increase in the rate of consistent and quality employment even after taking into consideration risk.
 - More importantly, completing vocational training increased the likelihood of consistent and quality employment across all risk levels, but particularly for low- and moderate-risk offenders.
 - A similar positive impact was evident for low-risk GED completers, but to a slightly lesser extent.
- Maintaining consistent and quality employment during the first year following release dramatically increased the likelihood of success (no recidivism) regardless of risk level. Substantially more of the vocational training completers, across all risk categories, met that condition, better enabling success.
- Conditional upon consistent employment, rates of success were fairly similar for moderate- and high-risk study group members (moderate-risk offenders experienced slightly higher rates of success).
- Failing to maintain consistent and quality employment had a much more negative impact on the high-risk study group—and most notably for high-risk vocational training completers.

Policy Implications

- A holistic approach with an emphasis on both job placement and employment retention is required if the benefits of completing vocational training or a GED program are to be maximized. Active assistance and support in finding and retaining employment must be available throughout the re-entry process and maintained until the risk of job-loss dissipates.
- Early indicators of an increased likelihood of recidivism should be established and shared with both offenders and KDOC staff. Based on the current results, failing to maintain consistent employment from quarter to quarter could be one such indicator. This and/or other indicators should be tracked and reported on a real-time basis, so that interventions could be immediately introduced.
- It would also be beneficial to develop a profile of successful ex-offenders, but more particularly successful ex-offenders within the high-risk category. Modeling their correctional program completion patterns, in addition to their personal characteristics, would provide some insight into the correlates of success.
- Workforce Development, Employment, and Retention specialists should establish and foster relationships with employers with a history of hiring ex-offenders, in addition to employers that do not currently hire ex-offenders but might take it under consideration under the right circumstances.

- Ideally, workforce development agencies and organizations in the community should be apprised of the ex-offenders' skills and employment interests prior to release. This would allow them to perform individualized job development activities and facilitate more expedient and higher quality post-release employment.
- Although a lower proportion of high-risk offenders obtained consistent employment during the study period, doing so greatly increased their likelihood of success. Further, failing to obtain such employment had a much more detrimental impact on high-risk study group members (regardless of program completion) than it did for their low- and moderate-risk counterparts. Because of this, perhaps providing more in-depth job placement and job retention services to high-risk offenders could be considered.

Recommendations for Further Investigation

- Rather than relying on all non-participants within the same risk category, it would be useful to use more sophisticated methods, such as propensity score matching, to create comparison groups to better isolate the impact of program completion.
- It would also be beneficial to control for geographic area of release in tracking post-release outcomes, as employment opportunities vary widely across the state of Kansas. We established the importance of employment as it relates to recidivism (or the lack thereof); yet if certain ex-offenders are provided greater employment opportunities as a function of where they are released, it would be reasonable to conclude that geography would also have an impact on recidivism.

Works Cited

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